Cellular Antenna

Product Catalogue

AlanDick

CELLULAR SOLUTIONS

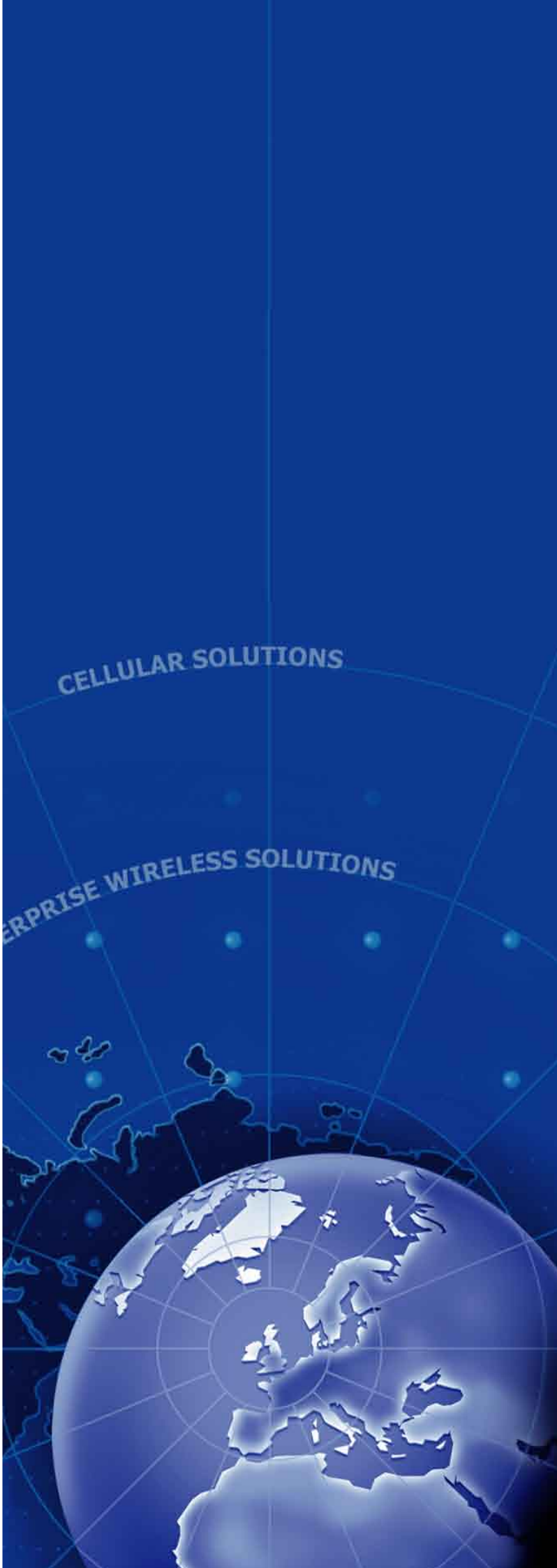
ENTERPRISE WIRELESS SOLUTIONS

RADAR / SURVEILLANCE SOLUTIONS

BROADCAST SOLUTIONS

Cellular Antenna

Product Catalogue



To obtain the latest product information, please contact our local representative or log onto the the AlanDick website at www.alandick.com

Issue No. 1.1A

Contents

Company Overview

AlanDick is unique in its ability to provide services, products and solutions on a global basis to satisfy the communication network infrastructure needs of the cellular, broadcast, radar/surveillance and enterprise wireless markets throuout the world.

With offices across 5 continents, AlanDick is a world leading organisation with the ability to plan, design, deploy, develop, maintain, manage, upgrade, support, integrate and optimise communication networks across the globe.

With over 30 years experience in global communications infrastructure, AlanDick provides innovative products, services and solutions to support the highest standards of performance and reliability demanded by international network operators, service operators, service providers, technology manufacturers and integrators.

■ Cellular Antennas

Since the outset, AlanDick has been manufacturing antennas that have brought quality-engineered designs to the cellular market. AlanDick was the pioneer of Cross Polar technology, creating an antenna system, which has subsequently become an industry standard product.

■ Product Range

The AlanDick Cellular Antenna range comprises of both Cross and Vertically Polarised antennas with variable or fixed electrical downtilt. These are available in AMPS, CDMA, GSM900, GSM1800, PCS and UMTS frequencies for single, broadband, dual and multi-band applications.

Due to today's stringent environmental constraints, AlanDick has designed a number of aesthetic, low impact antenna systems. The success of this has been evident, with the world's major cellular service providers adopting such environmentally friendly systems.

■ Commitment to Customer Needs

AlanDick has a strong connection with the industry and through this link has developed a sound understanding of today's network provider.

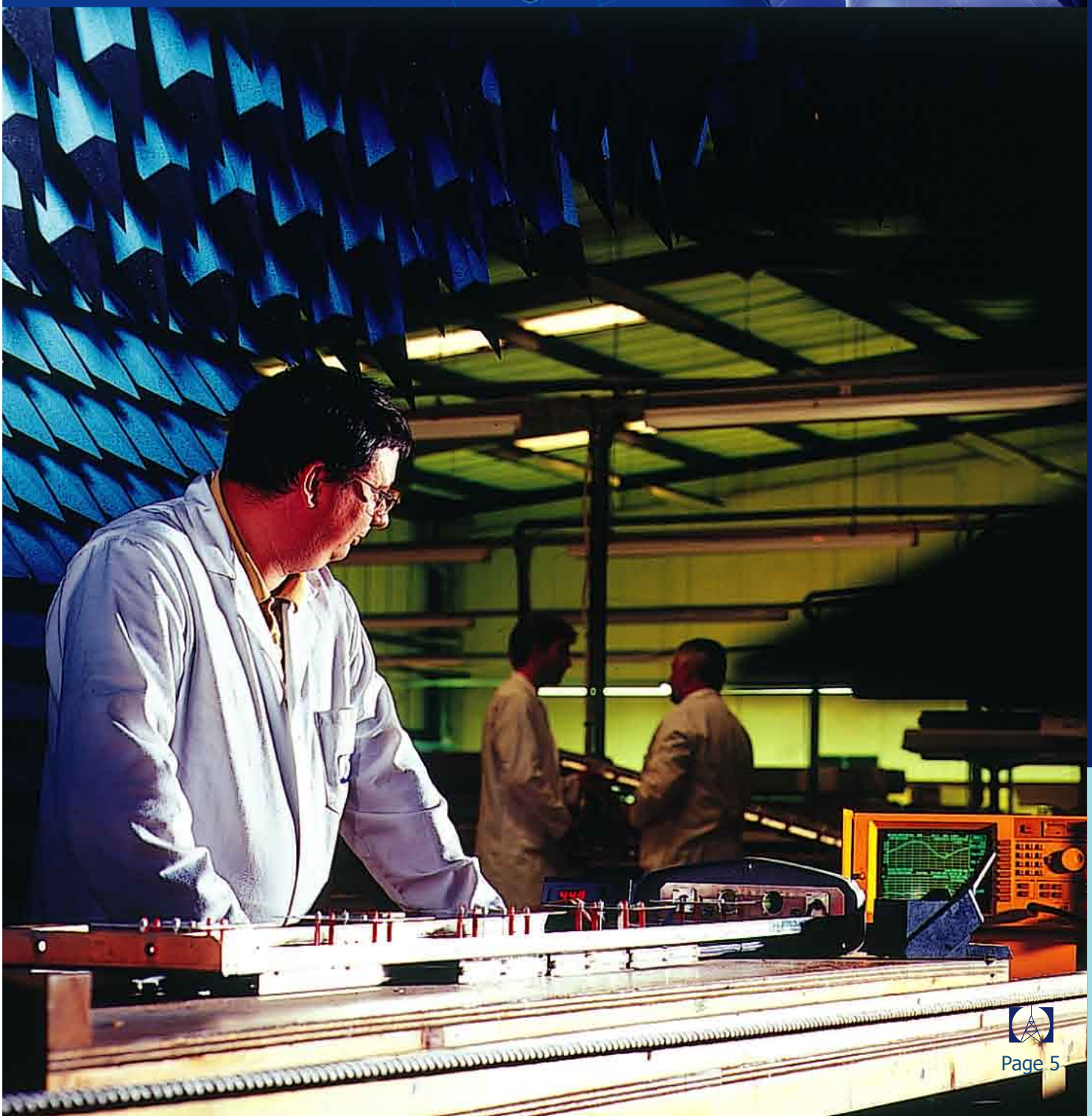
AlanDick work together with the client to create the best overall solution for the situation. This flexibility enables the client to benefit from a unique package that is developed to suit the often tight constraints of today's industry.

The in-house development team has produced many bespoke products to meet individual client specifications. AlanDick's commitment to research and development is shown by a continued program to produce new solutions for both current and future market demands.

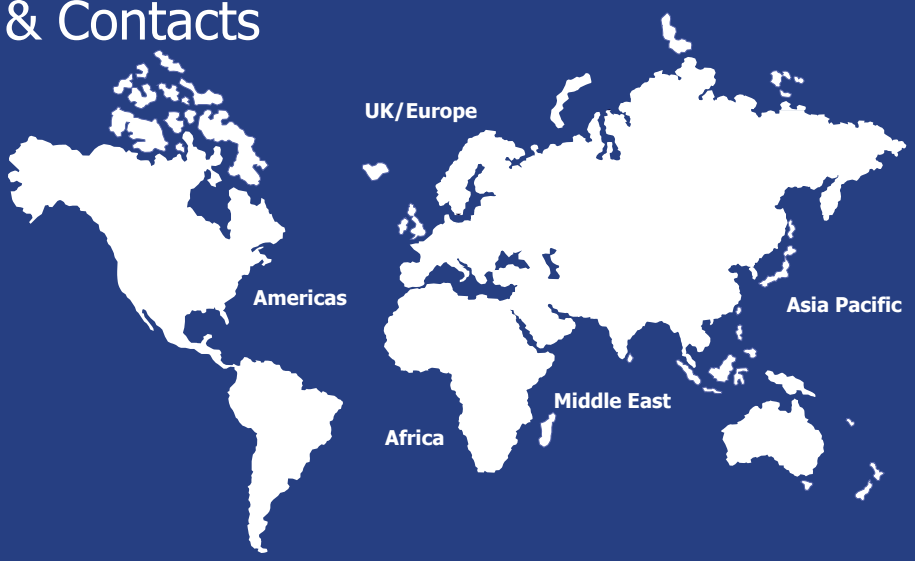
Constantly aware of the short lead-times required AlanDick strive to meet client roll out plans by adopting a flexible manufacturing and warehousing approach where required.

AlanDick's strong commitment to customer needs is also illustrated by the client-focused management service that is offered. With much experience, our global team of experts can offer advice related to all aspects of modern network requirements.

AlanDick



Global Locations & Contacts



AlanDick

Head Office
AlanDick
The Barlands, London Road
Cheltenham, GL52 6UT
United Kingdom

t: +44 1242 518500
f: +44 1242 510191
e: sales@uk.alandickgroup.com

Africa

Algeria
SARL Alan Dick & Company
t: +213 216 91108
f: +213 216 91108
e: sales@dz.alandickgroup.com

Cameroon
Alan Dick & Company (Cameroon) SA
t: +237 343 9537
f: +237 343 9541
e: sales@cm.alandickgroup.com

Egypt
Al.An for Antenna Support SAE
t: +202 836 8670/71
f: +202 836 8672
e: sales@eg.alandickgroup.com

Egypt
Alan Dick & Company North Africa
t: +202 836 8670/71
f: +202 836 8672
e: sales@eg.alandickgroup.com

Kenya
Alan Dick & Co (East Africa) Ltd
t: +254 20 374 2821 / 5981
f: +254 20 374 4586
e: sales@ke.alandickgroup.com

Nigeria
Alan Dick & Co (West Africa) Ltd
t: +234 1 461 9401
f: +234 1 461 9829
e: sales@ng.alandickgroup.com

South Africa
Alan Dick & Co (South Africa) (PTY) Ltd
t: +27 11 758 5780
f: +27 11 675 2375
e: sales@za.alandickgroup.com

Americas

Mexico
Alan Dick Mexico S. de R.L. de C.V
t: +52 55 5517 3193
f: +52 55 5537 1957
e: sales@mx.alandickgroup.com

USA East Coast
Alan Dick & Company (USA) Inc
t: +1 508 640 0032
f: +1 508 640 0035
e: sales@us.alandickgroup.com

USA West Coast
Alan Dick & Company (USA) Inc
t: +1 503 540 0730
f: +1 503 540 0734
e: sales@us.alandickgroup.com

Asia Pacific

Australia
Alan Dick (Australia) PTY Ltd
t: +61 2 9389 6211
f: +61 2 9389 6200
e: sales@au.alandickgroup.com

China
Alan Dick & Co Ltd (China)
t: +86 10 6849 2727
f: +86 10 6849 2221
e: sales@cn.alandickgroup.com

India
Alan Dick & Company (India) Private Ltd
t: +91 11 2615 4100
f: +91 11 2615 4600
e: sales@in.alandickgroup.com

Indonesia
PT AlanDick Indonesia
t: +61 21 7884 0701
f: +62 21 7884 0702
e: sales@id.alandickgroup.com

Malaysia
Alan Dick & Company (Malaysia) Sdn Bhd
t: +603 7494 3200
f: +603 7494 0252
e: sales@my.alandickgroup.com

Philippines
Alan Dick (Philippines) Corp
t: +63 2 914 0300
f: +63 2 914 0301
e: sales@ph.alandickgroup.com

Singapore
Alan Dick & Co (Singapore) Pte Ltd
t: +65 6372 3522
f: +65 6372 3529
e: sales@sg.alandickgroup.com

Thailand
Alan Dick (Thailand) Co Ltd
t: +662 712 3200
f: +662 712 3201
e: sales@th.alandickgroup.com

Europe

Netherlands
ADNL Telecom BV
t: +31 294 410703
f: +31 294 417448
e: sales@nl.alandickgroup.com

Romania
Alan Dick Romania SRL
t: +40 21 233 8759
f: +40 21 233 8758
e: sales@ro.alandickgroup.com

United Kingdom
Alan Dick & Co Ltd (Cheltenham)
t: +44 1242 518500
f: +44 1242 510191
e: sales@uk.alandickgroup.com

United Kingdom
Alan Dick (Newbury)
t: +44 1635 264200
f: +44 1635 264264
e: sales@uk.alandickgroup.com

United Kingdom
Alan Dick (Scunthorpe)
t: +44 1724 292224
f: +44 1724 851217
e: sales@uk.alandickgroup.com

United Kingdom
Alan Dick (Warrington)
t: +44 1925 535200
f: +44 1925 535300
e: sales@uk.alandickgroup.com

Middle East

Lebanon
Alan Dick & Company
t: +961 4 92 3279
f: +961 4 92 3279
e: sales@lb.alandickgroup.com

Qatar
Alan Dick Middle East (Qatar)
t: +974 431 2534
f: +974 443 5460
e: sales@qa.alandickgroup.com

Saudi Arabia
Alan Dick Middle East (KSA)
t: +966 1 476 4986
f: +966 1 478 1535
e: sales@sa.alandickgroup.com

UAE
Al Bawardi Alan Dick
t: +971 4 881 8262
f: +971 4 881 8292
e: sales@ae.alandickgroup.com

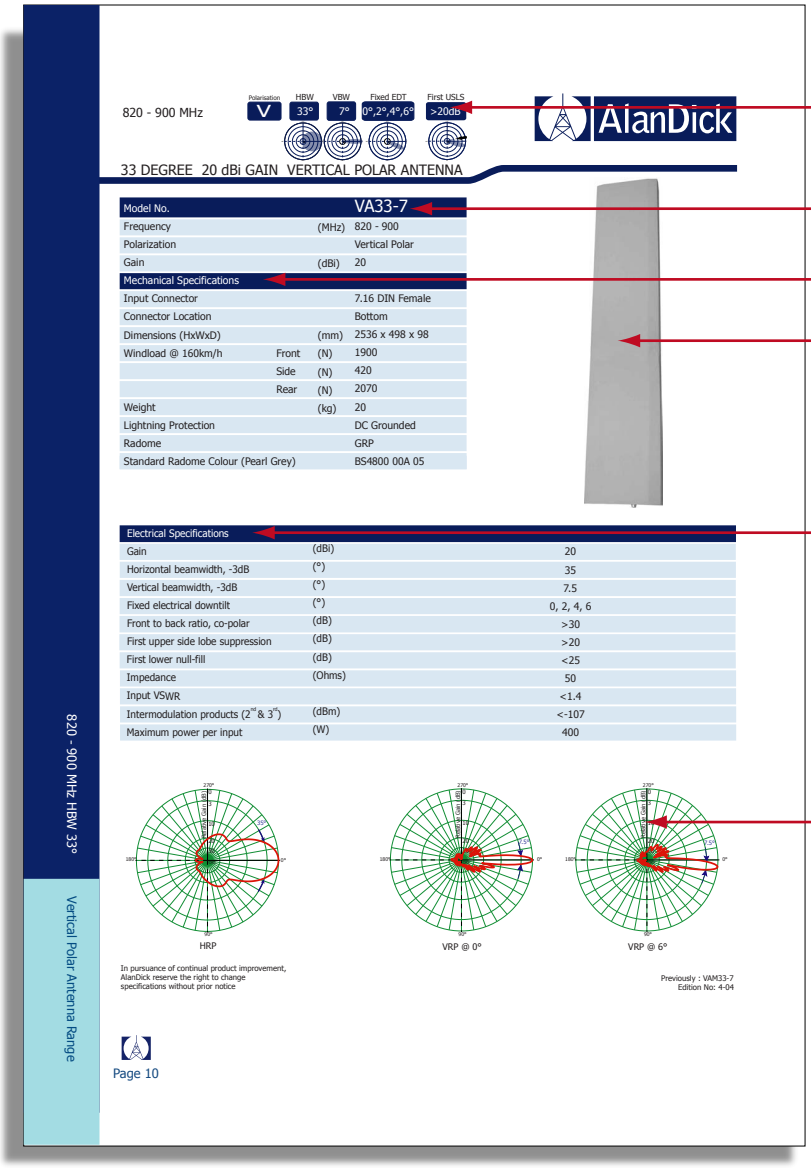
UAE
Alan Dick Middle East
t: +971 4 881 8300
f: +971 4 881 8292
e: sales@ae.alandickgroup.com

How to Use This Catalogue

In an effort to make this catalogue as user friendly as possible, we have included the following references for you to navigate your way to correct choice of product.

Find the product you need by:

- Contents
- Index by Frenquency Cellular Antenna


820 - 900 MHz

Polarization: V | HBW: 33° | VBW: 7° | Fixed EDT: 0°,2°,4°,6° | First USLS: >20dB

AlanDick

33 DEGREE 20 dBi GAIN VERTICAL POLAR ANTENNA

Model No.		VA33-7
Frequency	(MHz)	820 - 900
Polarization		Vertical Polar
Gain	(dBi)	20
Mechanical Specifications		
Input Connector		7.16 DIN Female
Connector Location		Bottom
Dimensions (HxWxD)	(mm)	2536 x 498 x 98
Windload @ 160km/h Front	(N)	1900
Side	(N)	420
Rear	(N)	2070
Weight	(kg)	20
Lightning Protection		DC Grounded
Radome		GRP
Standard Radome Colour (Pearl Grey)		BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	20
Horizontal beamwidth, -3dB	(°)	35
Vertical beamwidth, -3dB	(°)	7.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400

HRP VRP @ 0° VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : VAM33-7
Edition No: 4-04

Page 10

820 - 900 MHz HBW 33°

Vertical Polar Antenna Range

Each page has the following references:

The range name, frequency and horizontal beamwidth

Model number

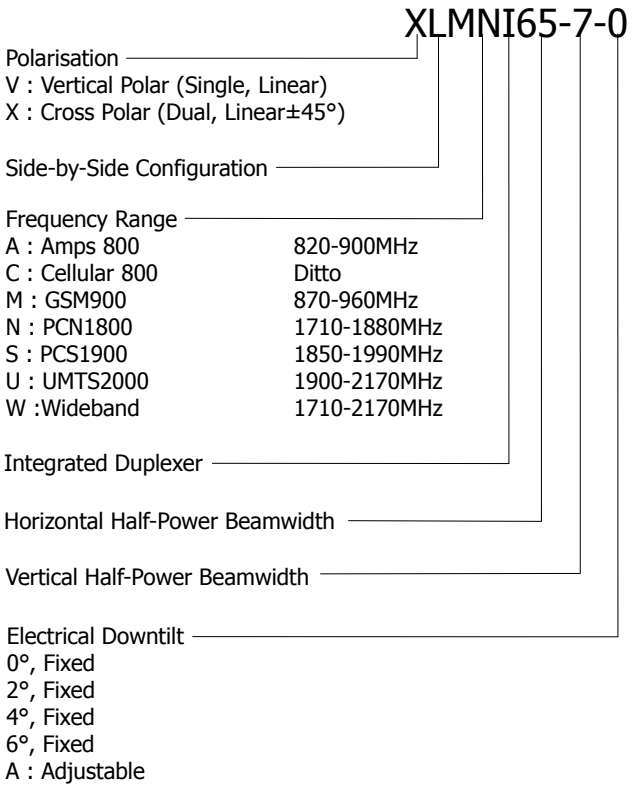
Mechanical specifications

Colour product photograph

Electrical specifications

Detailed polar plots

Product Part Number Description



Code	Description	Code	Description
A	AMPS/CDMA 850 MHz	I	Integrated duplexer
M	GSM 900 MHz	L	Side by side antennas
N	GSM 1800 MHz	t	Top fed connectors
S	PCS 1900 MHZ	b	Bottom fed connectors
U	UMTS 2170 MHZ	SL	Side lobe suppression
N/U	Broadband 1710-2170 MHz	AA	Variable Electrical Downtilt
S/U	Broadband 1850-2170 MHz		

Product Range Description	
VPD	Vertical polar, single band antenna
XPD	High specification antenna
MAX	Industry standard specifications, single band, cross poloar antenna
DFX	Mutli-band cross polar antenna
FLEX	Variable electrical downtilt range

Vertical Polar Antenna Range

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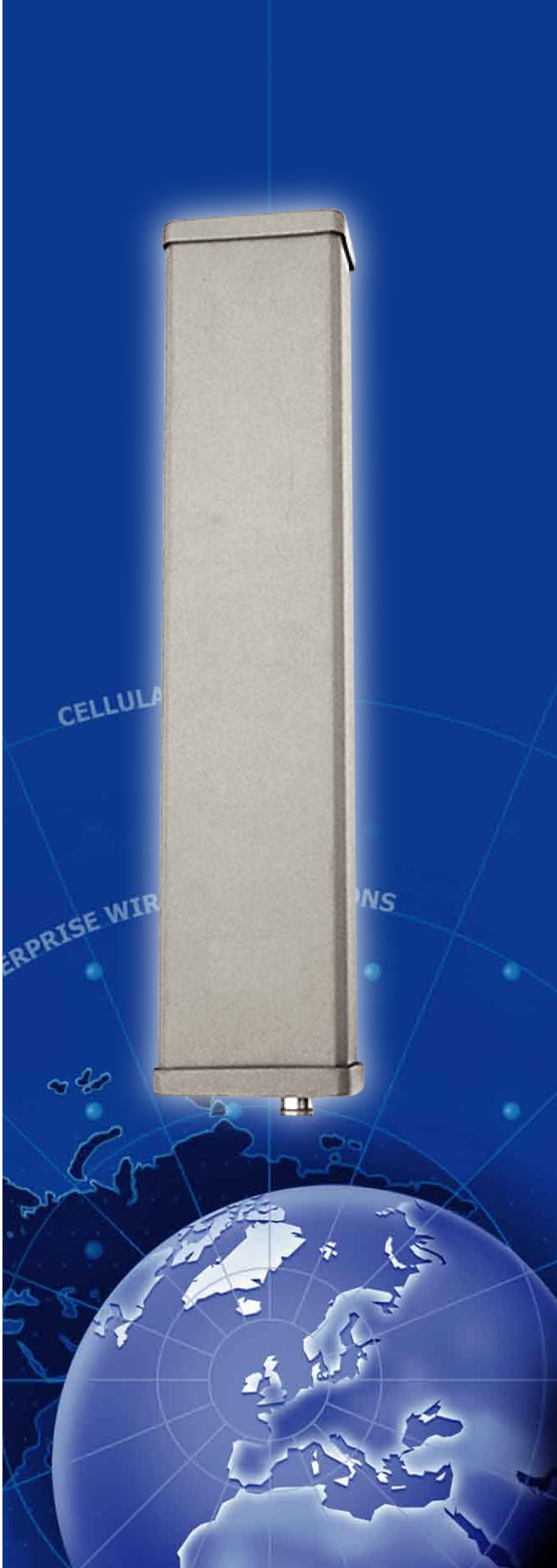
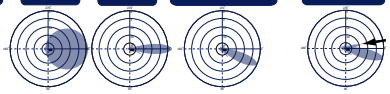


820 - 900 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
V	33°	7°	0°,2°,4°,6°	>20dB

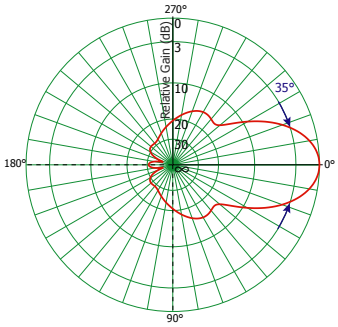


AlanDick

33 DEGREE 20 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VA33-7
Frequency		(MHz)	820 - 900
Polarization			Vertical Polar
Gain		(dBi)	20
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2536 x 498 x 98
Windload @ 160km/h	Front	(N)	1900
	Side	(N)	420
	Rear	(N)	2070
Weight		(kg)	20
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	20
Horizontal beamwidth, -3dB	(°)	35
Vertical beamwidth, -3dB	(°)	7.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



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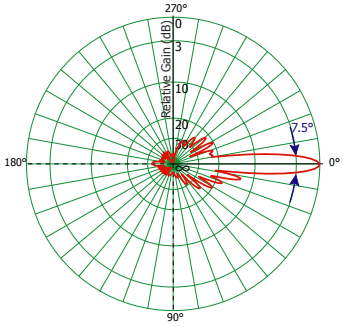
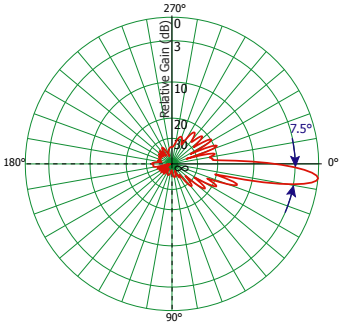


VRP @ 0°



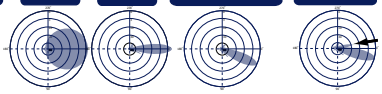
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : VAM33-7
Edition No: 4-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
V	33°	7°	0°,2°,4°,6°	>20dB



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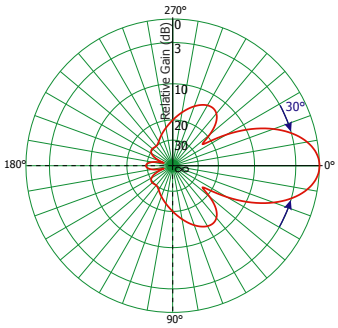
30 DEGREE 20.5 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VM33-7
Frequency		(MHz)	870 - 960
Polarization			Vertical Polar
Gain		(dBi)	20.5
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2536 x 498 x 98
Windload @ 160km/h	Front	(N)	1900
	Side	(N)	420
	Rear	(N)	2070
Weight		(kg)	20
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	20.5
Horizontal beamwidth, -3dB	(°)	30
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



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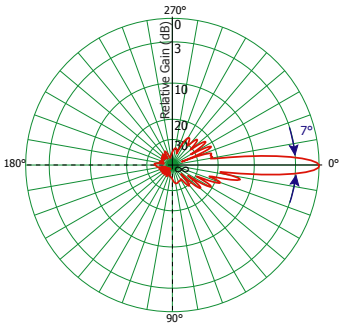
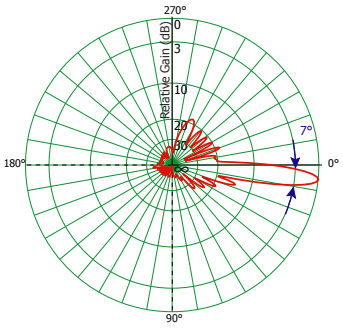


VRP @ 0°



VRP @ 6°

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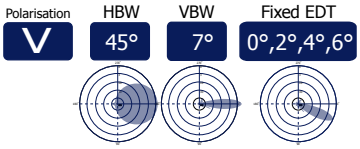
Previously : VAM33-7
Edition No: 4-04

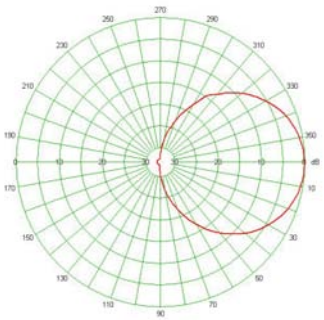
870 - 960 MHz



45 DEGREE 19.5 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VM45-7
Frequency		(MHz)	870 - 960
Polarization			Vertical Polar
Gain		(dBi)	19.5
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2565 x 513 x 185
Windload @ 160km/h	Front	(N)	2010
	Side	(N)	490
	Rear	(N)	2165
Weight		(kg)	32
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	19.5
Horizontal beamwidth, -3dB	(°)	45
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



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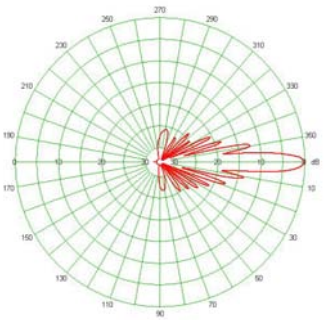

VRP @ 0

In pursuance of continual product improvement,
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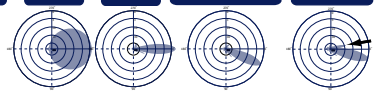
specifications without prior notice

Edition No: 3-04

820 - 900 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
V	65°	7°	0°,2°,4°,6°	>20dB



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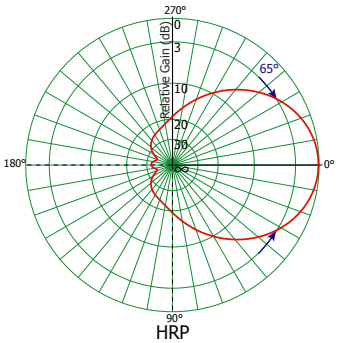
65 DEGREE 17.7 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VA65-7
Frequency		(MHz)	820 - 900
Polarization			Vertical Polar
Gain		(dBi)	17.7
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2535 x 255 x 100
Windload @ 160km/h	Front	(N)	1060
	Side	(N)	380
	Rear	(N)	1150
Weight		(kg)	15
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	17.7
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	7.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-110
Maximum power per input	(W)	400



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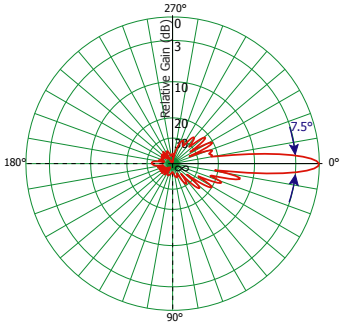
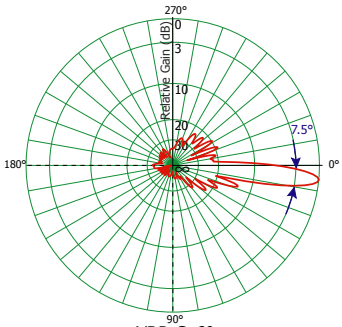


VRP @ 0°



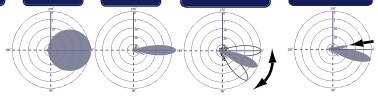
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : VAM65-7
Edition No: 3-04

820 - 900 MHz

Polarisation	HBW	VBW	Variable EDT	First USLS
V	65°	8°	2°- 8°	>18dB

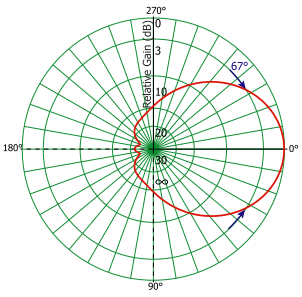


65 DEGREE 16.7 dBi GAIN VERTICAL POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

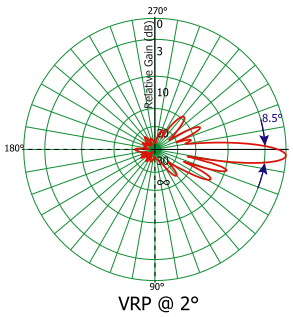
Model No.			VA65-8-A
Frequency		(MHz)	820 - 900
Polarization			Vertical Polar
Gain		(dBi)	16.7
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2300 x 258 x 157
Windload @ 160km/h	Front	(N)	817
	Side	(N)	428
	Rear	(N)	817
Weight		(kg)	19
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	16.7
Horizontal beamwidth, -3dB	(°)	67
Vertical beamwidth, -3dB	(°)	8.5
Variable electrical downtilt	(°)	2 - 8
Front to back ratio, co-polar	(dB)	>30
First upper side lobe suppression*	(dB)	>18
First lower null-fill*	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400

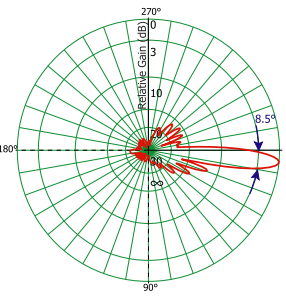
* Measured at centre of downtilt adjustment range



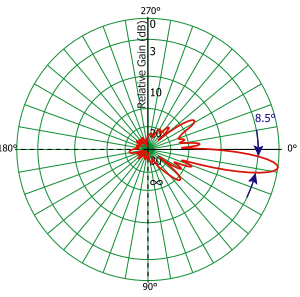
HRP



VRP @ 2°



VRP @ 5°



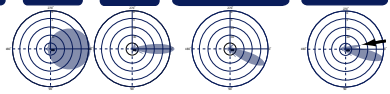
VRP @ 8°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : FLV-AM65-8-A
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
V	65°	7°	0°,2°,4°,6°	>20dB

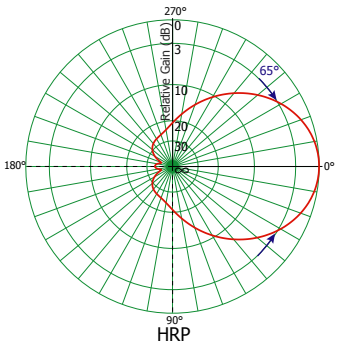


AlanDick

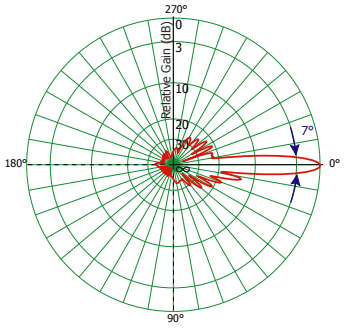
65 DEGREE 18 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VM65-7
Frequency		(MHz)	870 - 960
Polarization			Vertical Polar
Gain		(dBi)	18
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2535 x 255 x 100
Windload @ 160km/h	Front	(N)	1060
	Side	(N)	380
	Rear	(N)	1150
Weight		(kg)	15
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

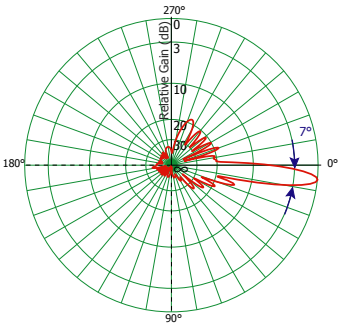
Electrical Specifications		
Gain	(dBi)	18
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-110
Maximum power per input	(W)	400



HRP



VRP @ 0°



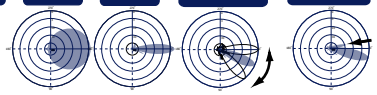
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : VAM65-7
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Variable EDT	First USLS
V	65°	8°	2°- 8°	>18dB

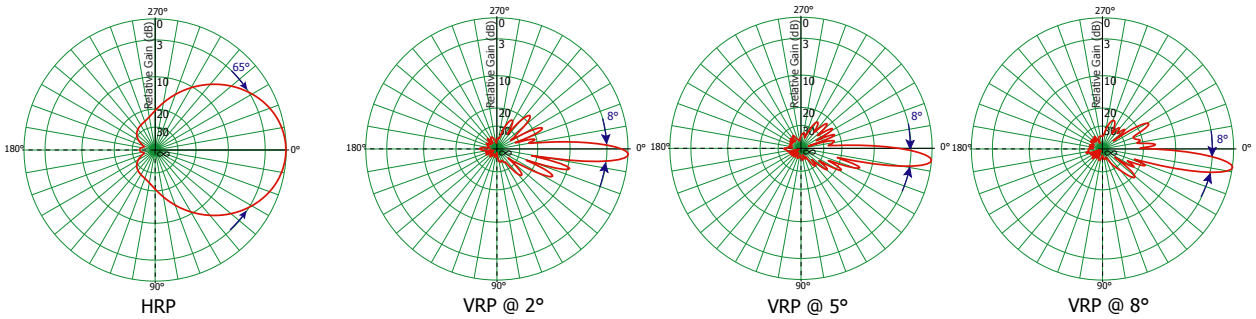


65 DEGREE 17 dBi GAIN VERTICAL POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

Model No.			VM65-8-A
Frequency		(MHz)	870 - 960
Polarization			Vertical Polar
Gain		(dBi)	17
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2300 x 258 x 157
Windload @ 160km/h	Front	(N)	817
	Side	(N)	428
	Rear	(N)	817
Weight		(kg)	19
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	17
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	8
Variable electrical downtilt	(°)	2 - 8
Front to back ratio, co-polar	(dB)	>30
First upper side lobe suppression*	(dB)	>18
First lower null-fill*	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400

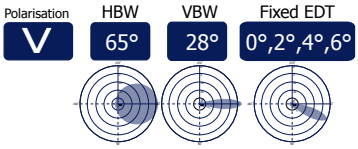
* Measured at centre of downtilt adjustment range



HRP | VRP @ 2° | VRP @ 5° | VRP @ 8°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : FLV-AM65-8-A
Edition No: 3-04

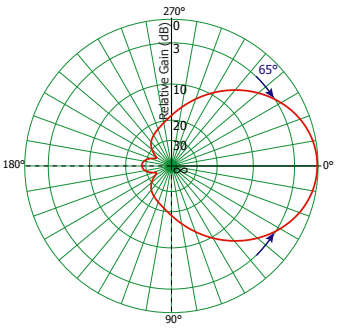


AlanDick

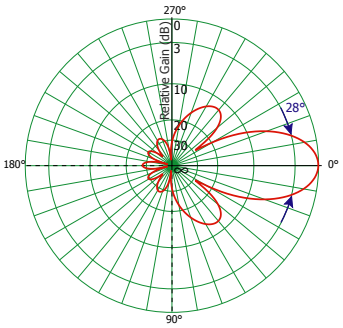
65 DEGREE 12.2 dBi GAIN VERTICAL POLAR MICRO ANTENNA

Model No.			VM65-28
Frequency		(MHz)	870 - 960
Polarization			Vertical Polar
Gain		(dBi)	12.2
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	590 x 256 x 110
Windload @ 160km/h	Front	(N)	210
	Side	(N)	75
	Rear	(N)	230
Weight		(kg)	3
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

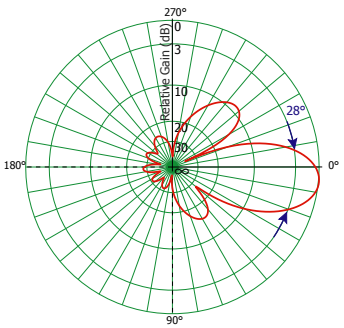
Electrical Specifications		
Gain	(dBi)	12.2
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	28
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>27
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-110
Maximum power per input	(W)	150



HRP



VRP @ 0°



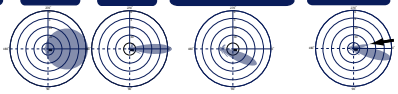
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

1710 - 1880 MHz

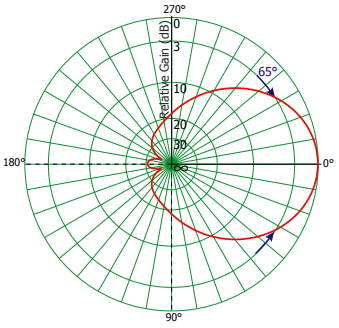
Polarisation	HBW	VBW	Fixed EDT	First USLS
V	65°	7°	0°,2°,4°,6°	>14dB



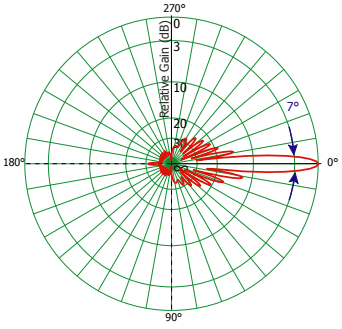
65 DEGREE 18 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VN65-7
Frequency		(MHz)	1710 - 1880
Polarization			Vertical Polar
Gain		(dBi)	18
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1350 x 160 x 80
Windload @ 160km/h	Front	(N)	325
	Side	(N)	133
	Rear	(N)	355
Weight		(kg)	4.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

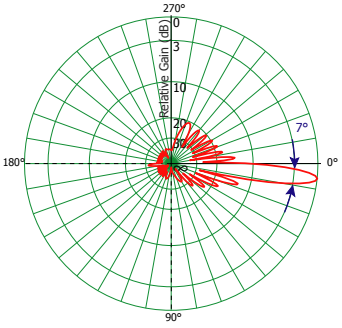
Electrical Specifications		
Gain	(dBi)	18
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
First upper side lobe suppression	(dB)	>14
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	200



HRP



VRP @ 0°



VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

1710 - 1880 MHz

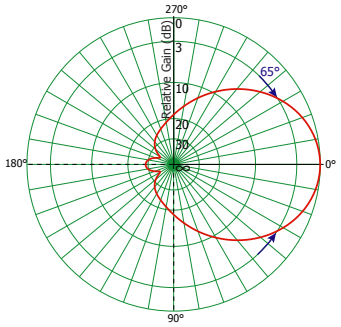
Polarisation	HBW	VBW	Fixed EDT
V	65°	13°	0°,2°,4°,6°

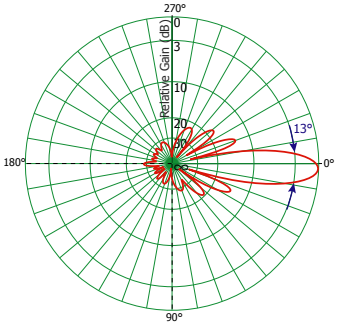
AlanDick

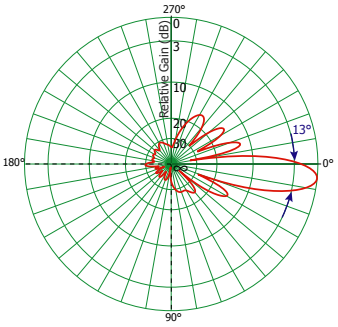
65 DEGREE 15.5 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VN65-13
Frequency		(MHz)	1710 - 1880
Polarization			Vertical Polar
Gain		(dBi)	15.5
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	752 x 156 x 90
Windload @ 160km/h	Front	(N)	175
	Side	(N)	72
	Rear	(N)	190
Weight		(kg)	2.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	15.5
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	13
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	200







VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

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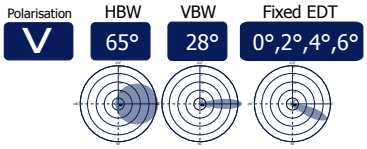
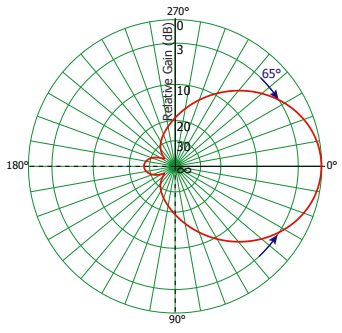


AlanDick

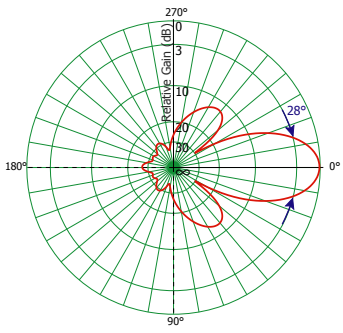
65 DEGREE 12 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VN65-28
Frequency		(MHz)	1710 - 1880
Polarization			Vertical Polar
Gain		(dBi)	12
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	315 x 156 x 90
Windload @ 160km/h	Front	(N)	72
	Side	(N)	30
	Rear	(N)	78
Weight		(kg)	1.4
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

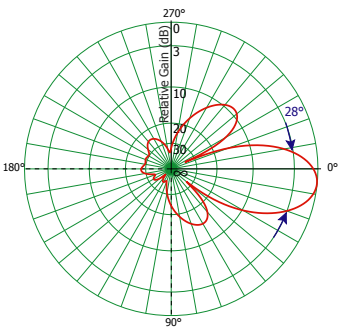
Electrical Specifications		
Gain	(dBi)	12
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	28
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>27
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	100



HRP



VRP @ 0°



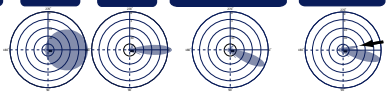
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications wi

Edition No: 3-04

820 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
V	85°	7°	0°,2°,4°,6°	>20dB

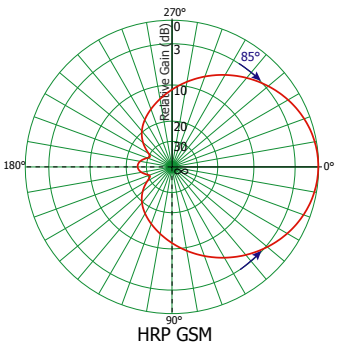


AlanDick

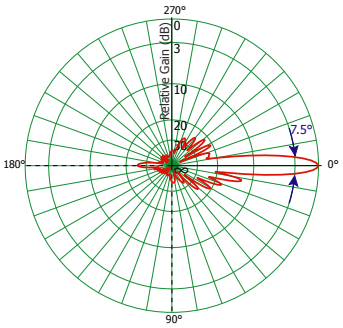
85 DEGREE 16.5 dBi GAIN VERTICAL POLAR ANTENNA

Model No.			VAM85-7
Frequency		(MHz)	820 - 960
Polarization			Vertical Polar
Gain		(dBi)	16.5
Mechanical Specifications			
Input Connector			7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2535 x 255 x 100
Windload @ 160km/h	Front	(N)	1060
	Side	(N)	380
	Rear	(N)	1150
Weight		(kg)	14
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

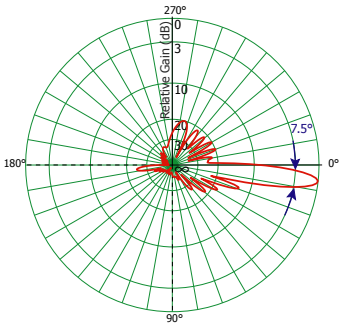
Electrical Specifications		820 - 900	870 - 960
Gain	(dBi)	16.3	16.5
Horizontal beamwidth, -3dB	(°)	87	85
Vertical beamwidth, -3dB	(°)	8	7.5
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>25
First upper side lobe suppression	(dB)	>20	>20
First lower null-fill	(dB)	<25	<25
Impedance	(Ohms)	50	50
Input VSWR		<1.3	<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-107	<-107
Maximum power per input	(W)	400	400



HRP GSM



VRP GSM @ 0°



VRP GSM @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

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Cross Polar Antenna Range

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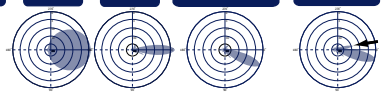
820 - 900 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	33°	7°	0°,2°,4°,6°	>20dB

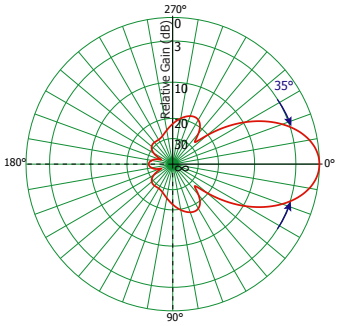


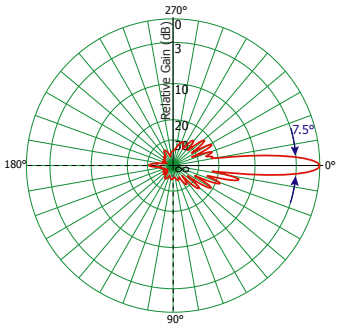
AlanDick

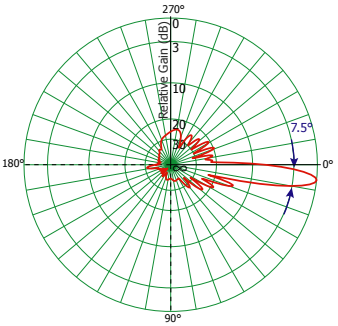
33 DEGREE 20 dBi GAIN CROSS POLAR ANTENNA

Model No.			XA33-7
Frequency		(MHz)	820 - 900
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	20
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2536 x 498 x 121
Windload @ 160km/h	Front	(N)	2290
	Side	(N)	330
	Rear	(N)	2300
Weight		(kg)	41.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	20
Horizontal beamwidth, -3dB	(°)	35
Vertical beamwidth, -3dB	(°)	7.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>25
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400





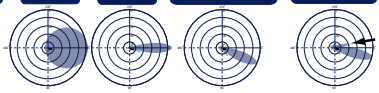


In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-A33-07
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	33°	7°	0°,2°,4°,6°	>20dB

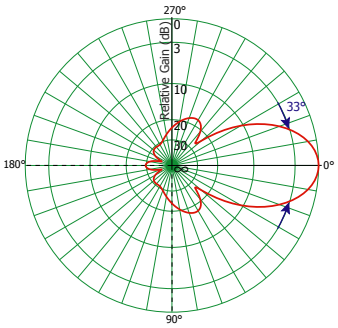


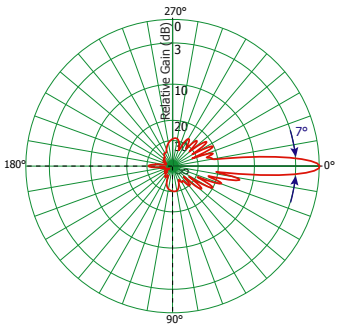
AlanDick

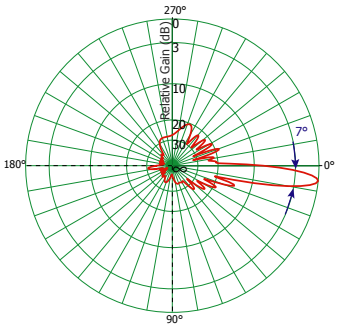
33 DEGREE 20.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM33-7
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	20.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2536 x 498 x 121
Windload @ 160km/h	Front	(N)	2290
	Side	(N)	330
	Rear	(N)	2300
Weight		(kg)	41.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	20.5
Horizontal beamwidth, -3dB	(°)	33
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>25
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400





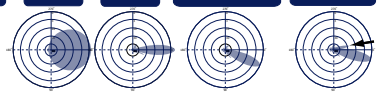


In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M33-07
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	33°	15°	0°,2°,4°,6°	>20dB

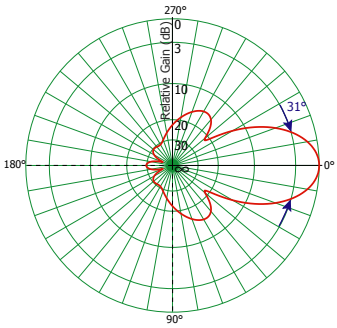


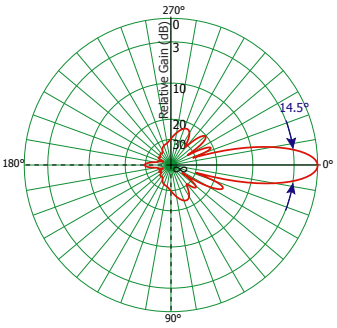
AlanDick

33 DEGREE 18.5 dBi GAIN CROSS POLAR ANTENNA

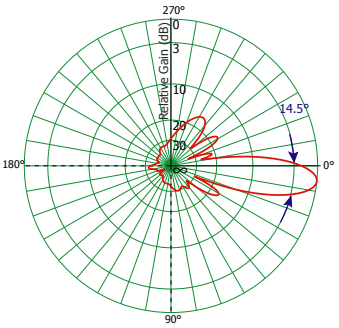
Model No.			XM33-15
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	18.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1295 x 520 x 118
Windload @ 160km/h	Front	(N)	1150
	Side	(N)	218
	Rear	(N)	1277
Weight		(kg)	18
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	18.5
Horizontal beamwidth, -3dB	(°)	31
Vertical beamwidth, -3dB	(°)	14.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>20
Impedance	(Ohms)	50
Input VSWR		<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400





VRP @ 0°

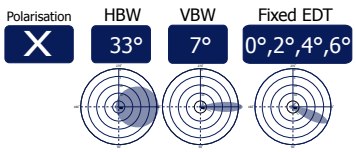


VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 2-04

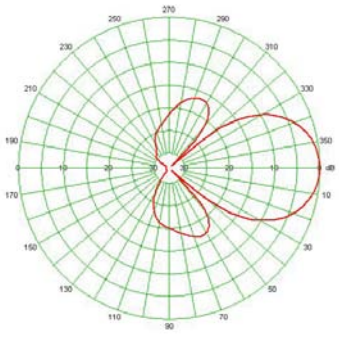
1710 - 1880 MHz



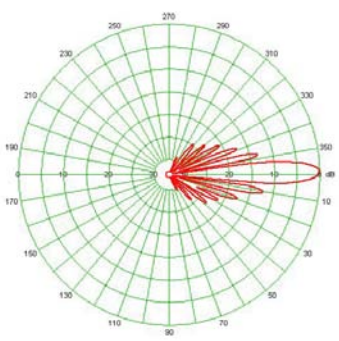
33 DEGREE 20.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XN33-7
Frequency		(MHz)	1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	20.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1370 x 370 x 100
Windload @ 160km/h	Front	(N)	710
	Side	(N)	170
	Rear	(N)	850
Weight		(kg)	13
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	20.5
Horizontal beamwidth, -3dB	(°)	33
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	250



HRP



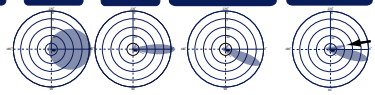
VRP @ 0°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

1710 - 2170 MHz

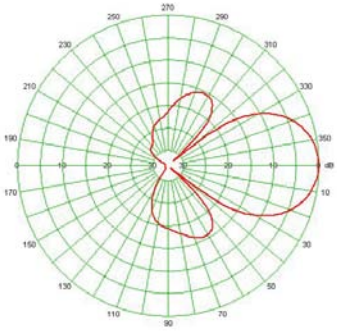
Polarisation	HBW	VBW	Fixed EDT	First USLS
X	33°	7°	0°,2°,4°,6°	>18dB



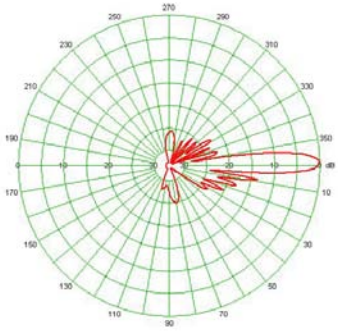
33 DEGREE 20.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XW33-7
Frequency		(MHz)	1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	20.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1350 x 284 x 112
Windload @ 160km/h	Front	(N)	580
	Side	(N)	160
	Rear	(N)	580
Weight		(kg)	9
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

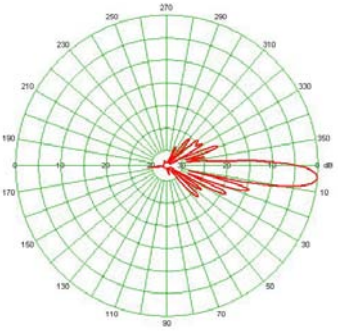
Electrical Specifications		
Gain	(dBi)	20.5
Horizontal beamwidth, -3dB	(°)	33
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	250



HRP PCN



VRP PCN @ 0°



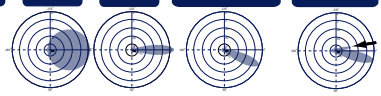
VRP PCN @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-W33-7
Edition No: 3-04

820 - 900 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	45°	8.5°	0°,2°,4°,6°	>17dB

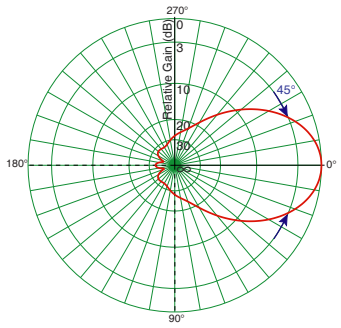


AlanDick

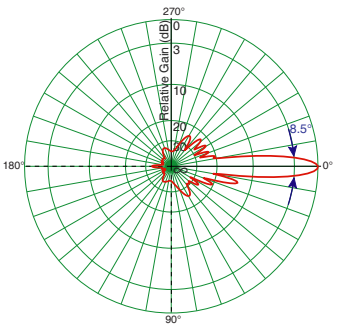
45 DEGREE 18.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XA45-8.5
Frequency		(MHz)	820 - 900
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	18.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2312 x 513 x 185
Windload @ 160km/h	Front	(N)	1795
	Side	(N)	435
	Rear	(N)	1940
Weight		(kg)	38
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

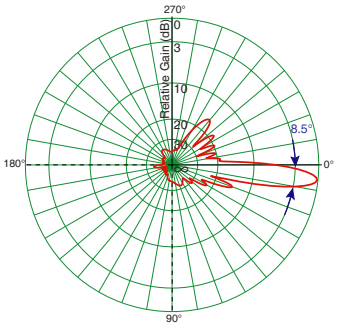
Electrical Specifications		
Gain	(dBi)	18.5
Horizontal beamwidth, -3dB	(°)	45
Vertical beamwidth, -3dB	(°)	8.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30 (>25 @ 0° EDT)
First upper side lobe suppression	(dB)	>17
Impedance	(Ohms)	50
Input VSWR		<1.4 (<1.5 @ 0° EDT)
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



HRP



VRP @ 0°



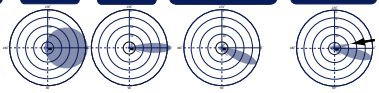
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX A45-8.5
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	45°	7°	0°,2°,4°,6°	>18dB

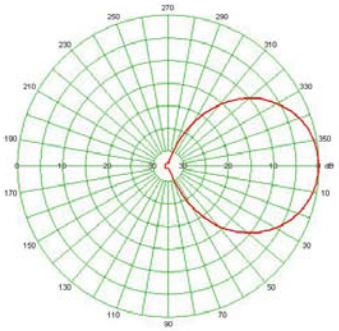


AlanDick

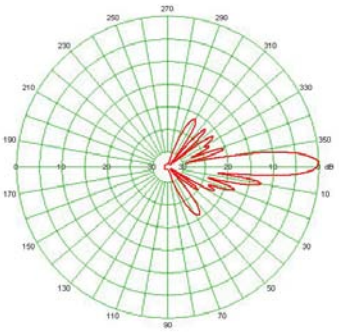
45 DEGREE 19 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM45-7
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	19
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2565 x 513 x 145
Windload @ 160km/h	Front	(N)	2010
	Side	(N)	490
	Rear	(N)	2165
Weight		(kg)	42
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	19
Horizontal beamwidth, -3dB	(°)	45
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30 (>25 @ 0° EDT)
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107
Maximum power per input	(W)	400



HRP



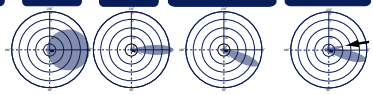
VRP @ 0°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

820 - 900 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°	0°,2°,4°,6°	>20dB

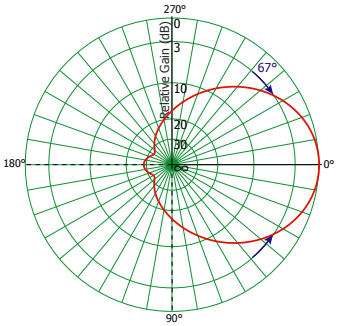


AlanDick

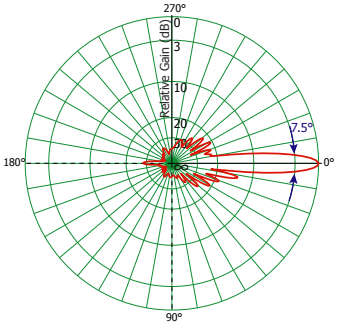
65 DEGREE 17.6 dBi GAIN CROSS POLAR ANTENNA

Model No.			XA65-7
Frequency		(MHz)	820 - 900
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.6
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2530 x 276 x 120
Windload @ 160km/h	Front	(N)	1060
	Side	(N)	380
	Rear	(N)	1140
Weight		(kg)	20
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

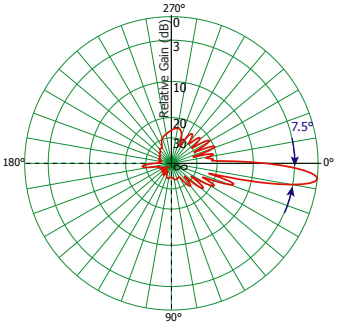
Electrical Specifications		
Gain	(dBi)	17.6
Horizontal beamwidth, -3dB	(°)	67
Vertical beamwidth, -3dB	(°)	7.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



HRP



VRP @ 0°



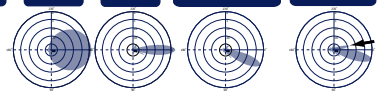
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-A65-07
Edition No: 3-04

820 - 900 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	10°	0°,2°,4°,6°	>18dB

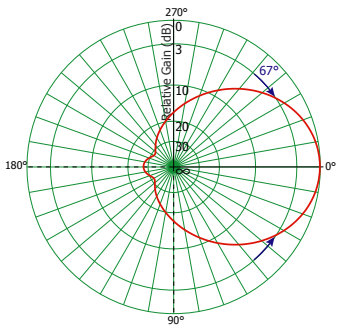


AlanDick

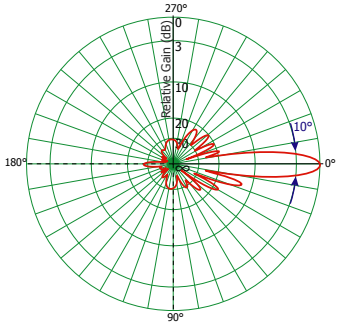
65 DEGREE 16.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XA65-10
Frequency		(MHz)	820 - 900
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1922 x 276 x 120
Windload @ 160km/h	Front	(N)	874
	Side	(N)	258
	Rear	(N)	896
Weight		(kg)	16
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

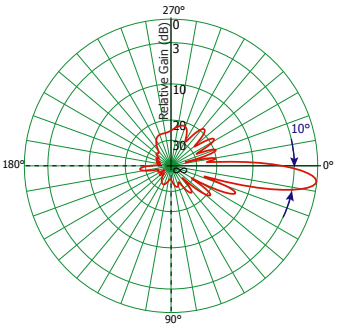
Electrical Specifications		
Gain	(dBi)	16.5
Horizontal beamwidth, -3dB	(°)	67
Vertical beamwidth, -3dB	(°)	10
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107
Maximum power per input	(W)	400



HRP



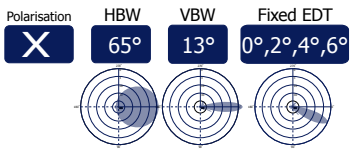
VRP @ 0°



VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

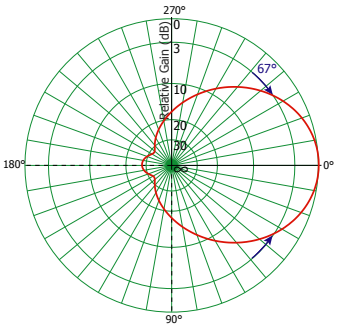
Previously : MAX-A65-10
Edition No: 3-04

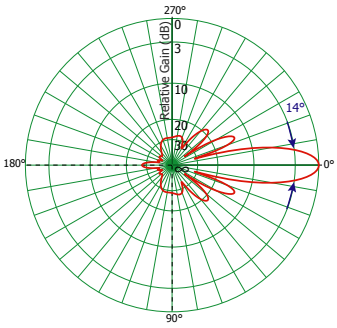


65 DEGREE 15 dBi GAIN CROSS POLAR ANTENNA

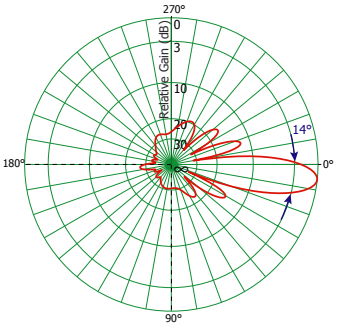
Model No.			XA65-13
Frequency		(MHz)	820 - 900
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1295 x 276 x 120
Windload @ 160km/h	Front	(N)	460
	Side	(N)	160
	Rear	(N)	510
Weight		(kg)	11
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	15
Horizontal beamwidth, -3dB	(°)	67
Vertical beamwidth, -3dB	(°)	14
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>28
Isolation between polarizations	(dB)	>30
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400





VRP @ 0°

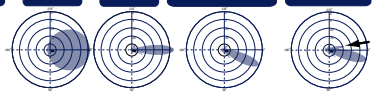


VRP @ 6°

Previously : MAX-A65-13
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°	0°,2°,4°,6°	>20dB

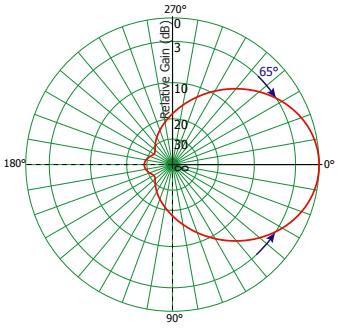


AlanDick

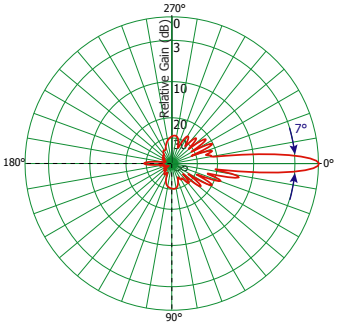
65 DEGREE 18 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM65-7
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	18
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2530 x 276 x 120
Windload @ 160km/h	Front	(N)	1060
	Side	(N)	380
	Rear	(N)	1140
Weight		(kg)	20
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

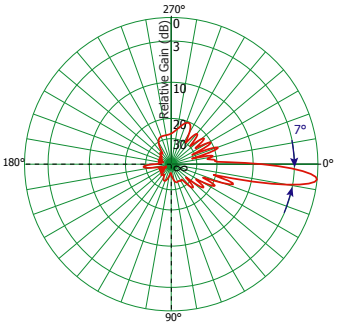
Electrical Specifications		
Gain	(dBi)	18
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



HRP



VRP @ 0°



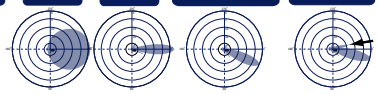
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M65-07
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	10°	0°,2°,4°,6°	>18dB

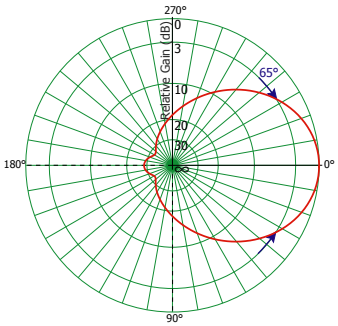


AlanDick

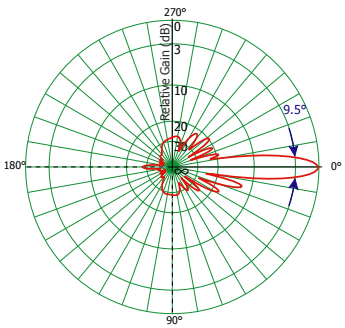
65 DEGREE 16.8 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM65-10
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.8
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1922 x 276 x 120
Windload @ 160km/h	Front	(N)	874
	Side	(N)	258
	Rear	(N)	896
Weight		(kg)	16
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

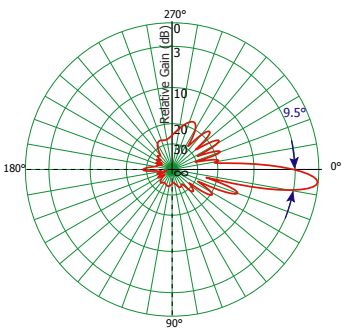
Electrical Specifications		
Gain	(dBi)	16.8
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	9.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



HRP



VRP @ 0°

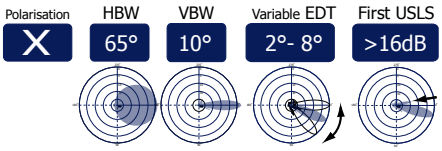


VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M65-10
Edition No: 3-04

870 - 960 MHz

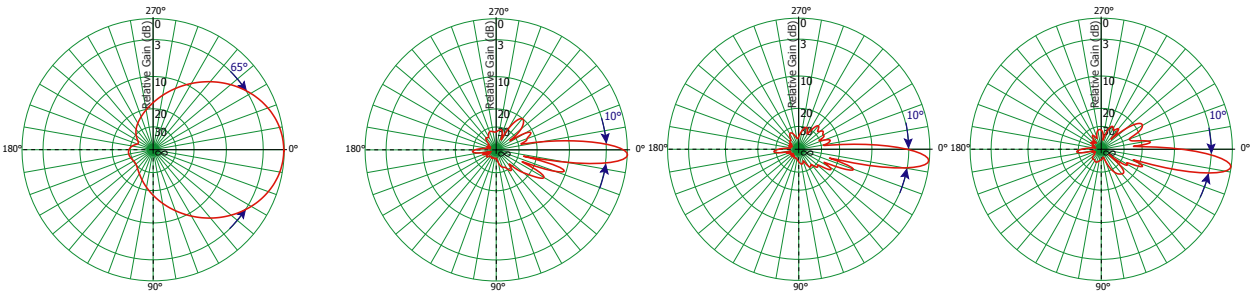


65 DEGREE 16 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

Model No.			XM65-10-A
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1996 x 268 x 180
Windload @ 160km/h	Front	(N)	735
	Side	(N)	580
	Rear	(N)	880
Weight		(kg)	18
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	6
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	10
Variable electrical downtilt	(°)	2 - 8
Front to back ratio, co-polar	(dB)	>27
Isolation between polarizations	(dB)	>27
First upper side lobe suppression*	(dB)	>16
First lower null-fill*	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.5
Intermodulation products (2nd & 3rd)	(dBm)	<-100
Maximum power per input	(W)	400

* Measured at centre of downtilt adjustment range



HRP | VRP @ 2° | VRP @ 5° | VRP @ 8°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

870 - 960 MHz

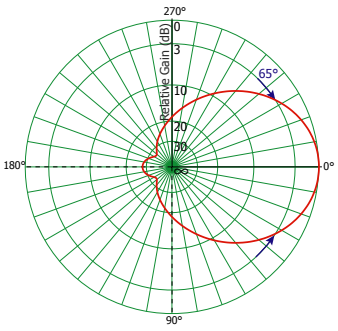
Polarisation	HBW	VBW	Fixed EDT
X	65°	13°	0°,2°,4°,6°

AlanDick

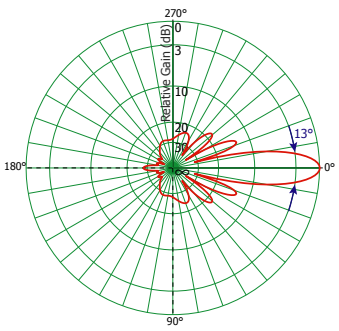
65 DEGREE 15.4 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM65-13
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15.4
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1295 x 276 x 120
Windload @ 160km/h	Front	(N)	460
	Side	(N)	160
	Rear	(N)	510
Weight		(kg)	11
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

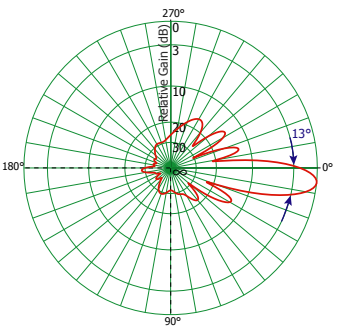
Electrical Specifications		
Gain	(dBi)	15.4
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	13
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



HRP



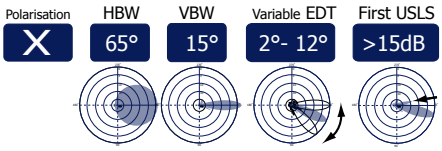
VRP @ 0°



In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M65-13
Edition No: 3-04

870 - 960 MHz

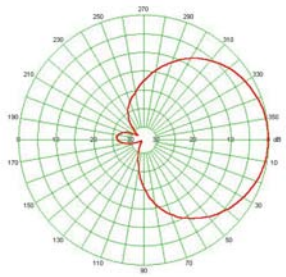


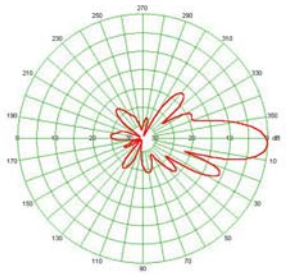
65 DEGREE 14.5 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

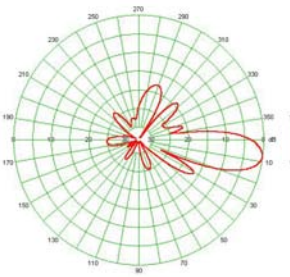
Model No.			XM65-15-A
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	14.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1300 x 241 x 160
Windload @ 160km/h	Front	(N)	465
	Side	(N)	260
	Rear	(N)	503
Weight		(kg)	10
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

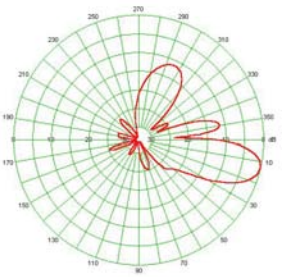
Electrical Specifications		
Gain	(dBi)	14.5
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	15
Variable electrical downtilt	(°)	2 - 12
Front to back ratio, co-polar	(dB)	>22
Isolation between polarizations	(dB)	>27
First upper side lobe suppression*	(dB)	>15
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100
Maximum power per input	(W)	400

* Measured at centre of downtilt adjustment range


HRP


VRP @ 2°


VRP @ 7°

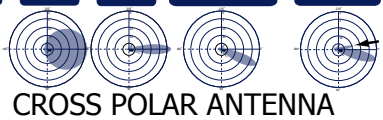

VRP @ 12°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : FLX-M65-15-AA
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	21°	0°,2°,4°,6°	>16dB

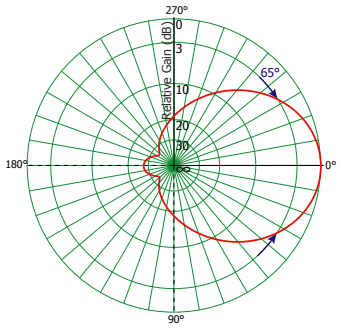


AlanDick

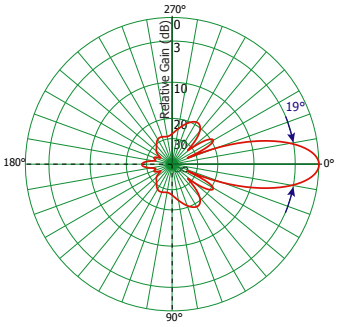
65 DEGREE 14 dBi GAIN CROSS POLAR ANTENNA

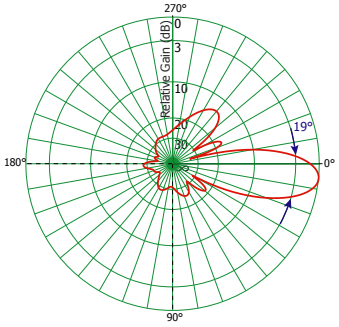
Model No.			XM65-21
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	14
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	996 x 276 x 120
Windload @ 160km/h	Front	(N)	355
	Side	(N)	125
	Rear	(N)	385
Weight		(kg)	8.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	14
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	19
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>28
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>16
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	250



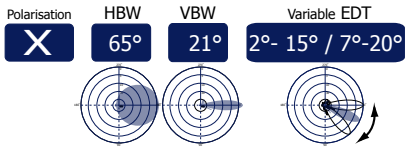
HRP





In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

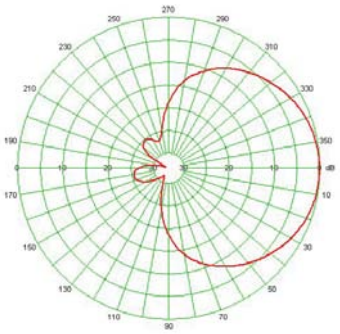
870 - 960 MHz



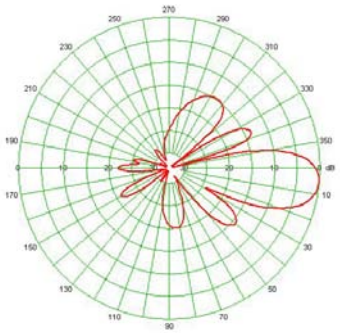
65 DEGREE 13 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

Model No.			XM65-21-AA / XM65-21-BB
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	13
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	900 x 241 x 160
Windload @ 160km/h	Front	(N)	265
	Side	(N)	165
	Rear	(N)	290
Weight		(kg)	8
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		XM65-21-AA	XM65-21-BB
Gain	(dBi)	13	13
Horizontal beamwidth, -3dB	(°)	65	65
Vertical beamwidth, -3dB	(°)	21	21
Variable electrical downtilt	(°)	2 - 15	7 - 20
Front to back ratio, co-polar	(dB)	>22	>22
Isolation between polarizations	(dB)	>30	>30
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100
Maximum power per input	(W)	250	250



HRP



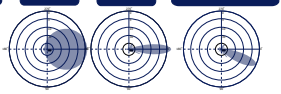
VRP @ 7°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : FLX-M65-21-AA
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT
X	65°	33°	0°,2°,4°,6°

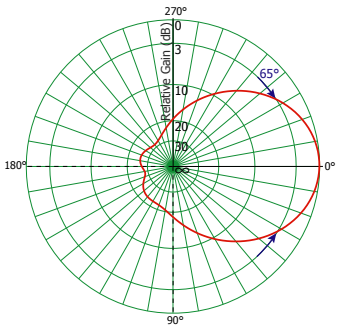


AlanDick

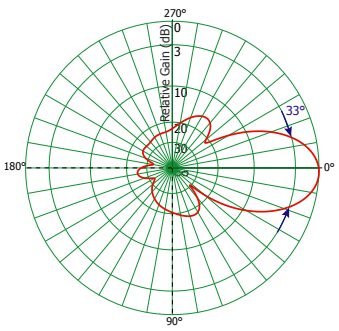
65 DEGREE 11.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM65-35
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	11.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	486 x 276 x 120
Windload @ 160km/h	Front	(N)	175
	Side	(N)	65
	Rear	(N)	195
Weight		(kg)	4.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

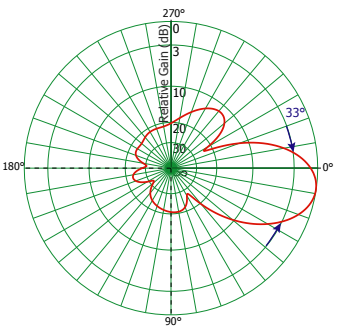
Electrical Specifications		
Gain	(dBi)	11.5
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	33
Fixed electrical downtilt	(°)	0, 2, 4, 6, 8
Front to back ratio, co-polar	(dB)	>27
Isolation between polarizations	(dB)	>27
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-100
Maximum power per input	(W)	150



HRP



VRP @ 0°



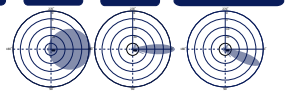
VRP @ 8°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M65-35
Edition No: 3-04

1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT
X	65°	7°	0°,2°,4°,6°

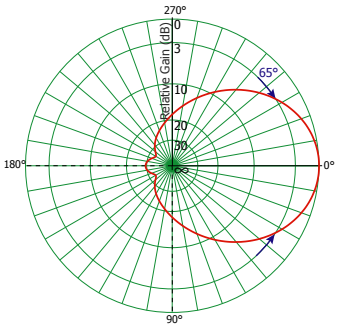


AlanDick

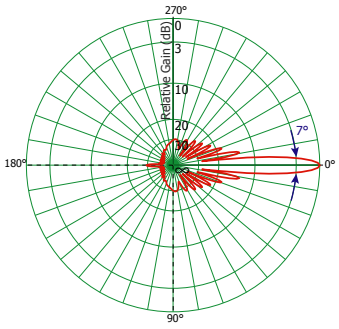
65 DEGREE 18 dBi GAIN CROSS POLAR ANTENNA

Model No.			XN65-7
Frequency		(MHz)	1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	18
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1372 x 160 x 80
Windload @ 160km/h	Front	(N)	330
	Side	(N)	135
	Rear	(N)	354
Weight		(kg)	7.4
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

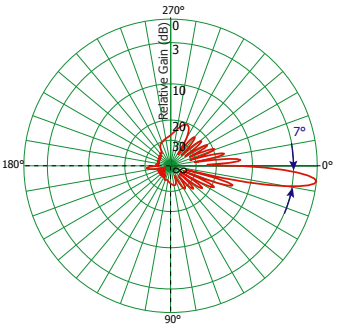
Electrical Specifications		
Gain	(dBi)	18
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	200



HRP



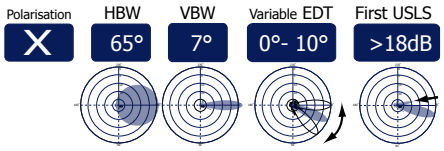
VRP @ 0°



VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-N65-7
Edition No: 3-04



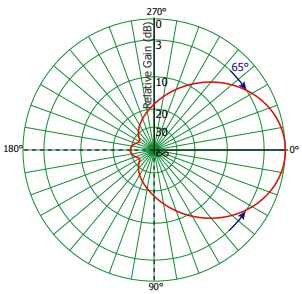
AlanDick

65 DEGREE 17.5 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

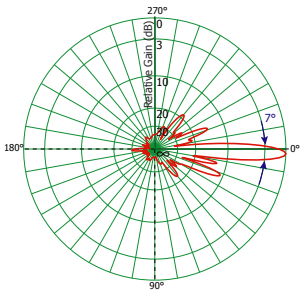
Model No.			XN65-7-A
Frequency		(MHz)	1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1301 x 178 x 143
Windload @ 160km/h	Front	(N)	280
	Side	(N)	230
	Rear	(N)	340
Weight		(kg)	9
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	17.5
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	7
Variable electrical downtilt	(°)	0 - 10
Front to back ratio, co-polar	(dB)	>28
Isolation between polarizations	(dB)	>25
First upper side lobe suppression*	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	160

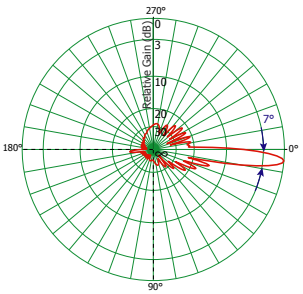
* Measured at centre of downtilt adjustment range



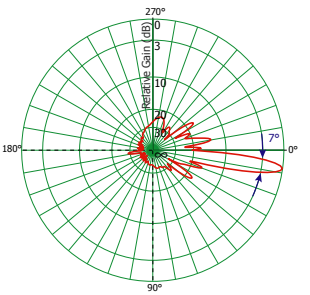
HRP



VRP @ 2°



VRP @ 5°



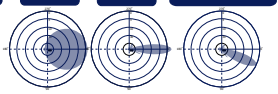
VRP @ 8°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : FLX-N65-07-AA
Edition No: 3-04

1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT
X	65°	13°	0°,2°,4°,6°

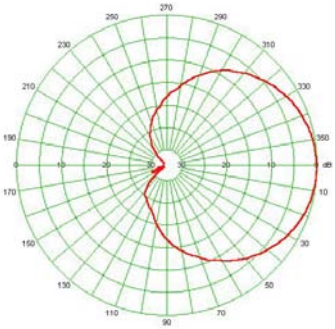


AlanDick

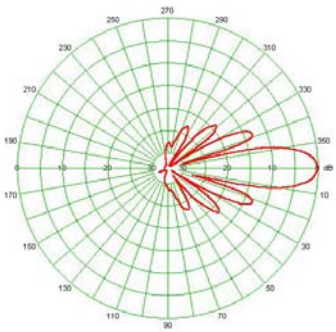
65 DEGREE 15 dBi GAIN CROSS POLAR ANTENNA

Model No.			XN65-13
Frequency		(MHz)	1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	749 x 160 x 80
Windload @ 160km/h	Front	(N)	170
	Side	(N)	70
	Rear	(N)	185
Weight		(kg)	4
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	15
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	13
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>28
Isolation between polarizations	(dB)	>30
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	200



HRP



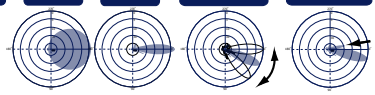
VRP @ 0°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-N65-13
Edition No: 3-04

1710 - 1880 MHz

Polarisation	HBW	VBW	Variable EDT	First USLS
X	65°	13°	0°- 10°	>18dB

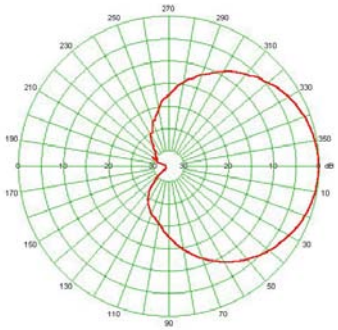


65 DEGREE 14 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

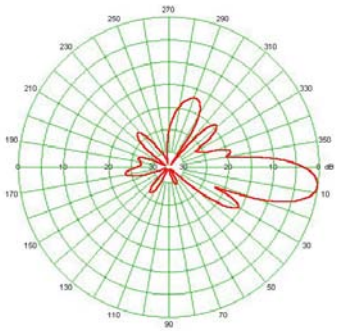
Model No.			XN65-13-A
Frequency		(MHz)	1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	14
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	750 x 241 x 120
Windload @ 160km/h	Front	(N)	235
	Side	(N)	88
	Rear	(N)	256
Weight		(kg)	6
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	14
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	13
Variable electrical downtilt	(°)	0 - 10
Front to back ratio, co-polar	(dB)	>25
Isolation between polarizations	(dB)	>25
First upper side lobe suppression*	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.45
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107
Maximum power per input	(W)	200

* Measured at centre of downtilt adjustment range



HRP

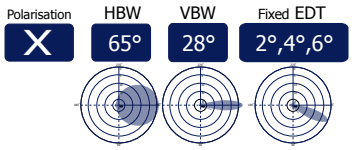


VRP @ 7°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

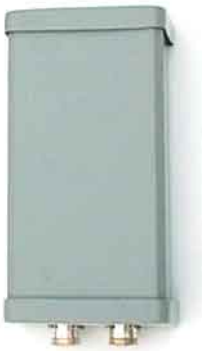
Edition No: 3-04

1850 - 1990 MHz

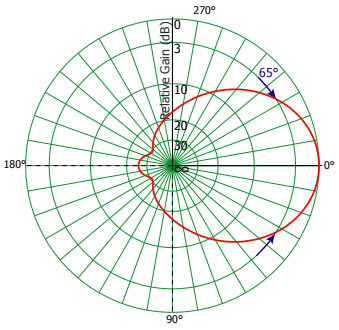


65 DEGREE 12.1 dBi GAIN CROSS POLAR ANTENNA

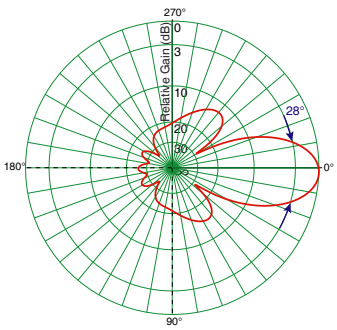
Model No.			XS65-28
Frequency		(MHz)	1850 - 1990
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	12.1
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	300 x 178 x 100
Windload @ 160km/h	Front	(N)	75
	Side	(N)	28
	Rear	(N)	83
Weight		(kg)	1.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05



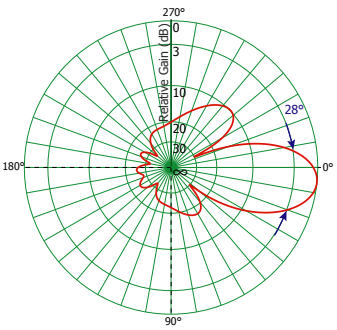
Electrical Specifications		1850 - 1990
Gain	(dBi)	12.1
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	28
Fixed electrical downtilt	(°)	2, 4, 6
Front to back ratio, co-polar	(dB)	>28
Isolation between polarizations	(dB)	>30
Impedance	(Ohms)	50
Input VSWR		<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	150



HRP PCS



VRP PCS @ 2°



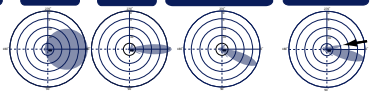
VRP PCS @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-W65-28
Edition No: 2-04

1710 - 2170 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	5°	0°,2°,4°,6°	>20dB

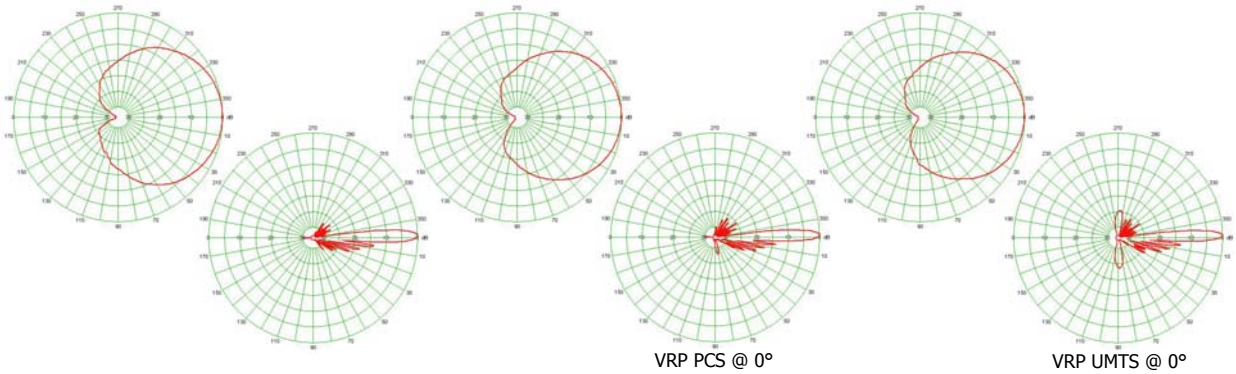


AlanDick

65 DEGREE 18.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XW65-5
Frequency		(MHz)	1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	18/18.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1780 x 178 x 100
Windload @ 160km/h	Front	(N)	445
	Side	(N)	160
	Rear	(N)	485
Weight		(kg)	9
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		1710 - 1880	1850 - 1990	1900 - 2170
Gain	(dBi)	18.0	18.5	18.5
Horizontal beamwidth, -3dB	(°)	68	65	63
Vertical beamwidth, -3dB	(°)	5	5	5
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30	>30	>30
Isolation between polarizations	(dB)	>30	>30	>30
First upper side lobe suppression	(dB)	>20	>20	>20
First lower null-fill	(dB)	<25	<25	<25
Impedance	(Ohms)	50	50	50
Input VSWR		<1.4	<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107	<-107	<-107
Maximum power per input	(W)	200	200	200



VRP PCS @ 0°

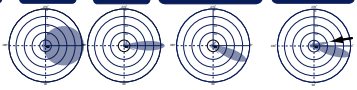
VRP UMTS @ 0°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-NU65-5
Edition No: 3-04

1710 - 2170 MHz

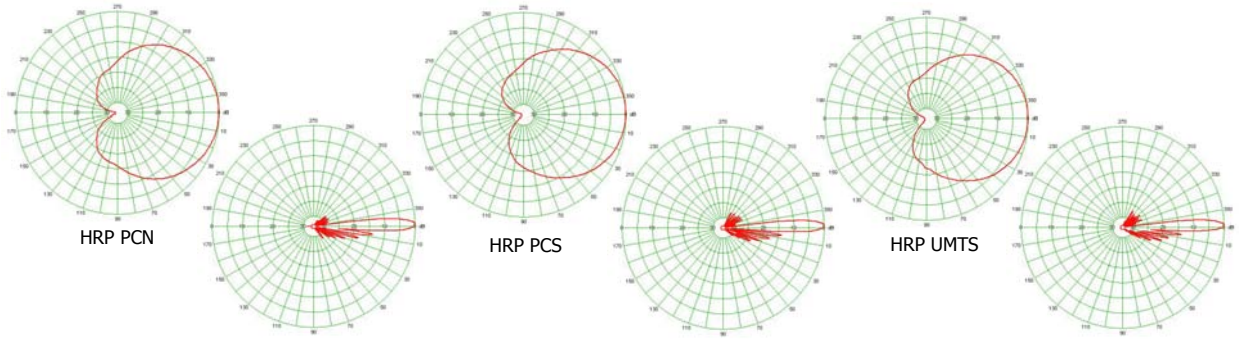
Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°	0°,2°,4°,6°	>18dB



65 DEGREE 17.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XW65-7
Frequency		(MHz)	1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.5/17.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1300 x 178 x 100
Windload @ 160km/h	Front	(N)	325
	Side	(N)	116
	Rear	(N)	354
Weight		(kg)	6
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		1710 - 1880	1850 - 1990	1900 - 2170
Gain	(dBi)	16.5	17.0	17.5
Horizontal beamwidth, -3dB	(°)	68	65	63
Vertical beamwidth, -3dB	(°)	7.3	7	6.7
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30	>30	>30
Isolation between polarizations	(dB)	>30	>30	>30
First upper side lobe suppression	(dB)	>18	>18	>18
First lower null fill	(dB)	<25	<25	<25
Impedance	(Ohms)	50	50	50
Input VSWR		<1.4	<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107	<-107	<-107
Maximum power per input	(W)	200	200	200

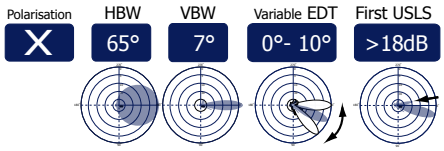


HRP PCN | HRP PCS | HRP UMTS

VRP PCN @ 0° | VRP PCS @ 0° | VRP UMTS @ 0°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

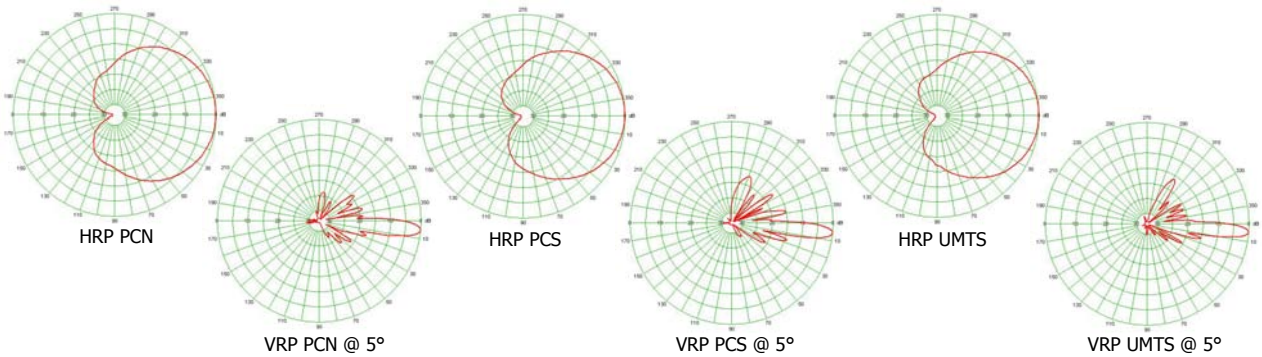


65 DEGREE 17.5 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

Model No.			XW65-7-A
Frequency		(MHz)	1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1300 x 152 x 100
Windload @ 160km/h	Front	(N)	275
	Side	(N)	240
	Rear	(N)	330
Weight		(kg)	8
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	17.5
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	7
Variable electrical downtilt	(°)	0 - 10
Front to back ratio, co-polar	(dB)	>25
Isolation between polarizations	(dB)	>25
First upper side lobe suppression*	(dB)	>18
First lower null-fill*	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.5
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100
Maximum power per input	(W)	160

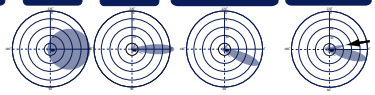
* Measured at centre of downtilt adjustment range



In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 4-04

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	10°	0°,2°,4°,6°	>18dB

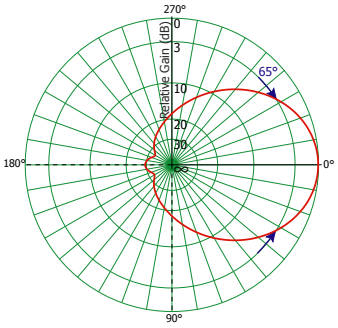


AlanDick

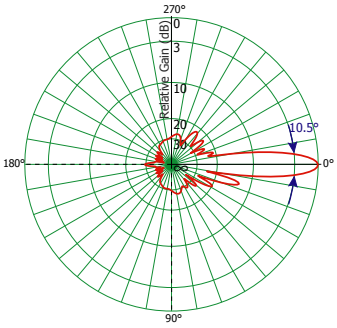
65 DEGREE 16.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XW65-10
Frequency		(MHz)	1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	910 x 178 x 100
Windload @ 160km/h	Front	(N)	228
	Side	(N)	82
	Rear	(N)	248
Weight		(kg)	5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

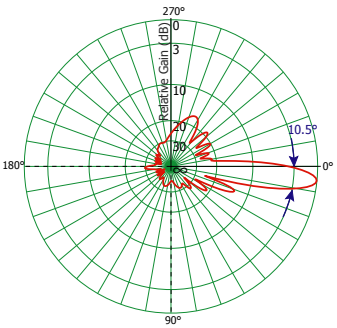
Electrical Specifications		1710 - 1880	1850 - 1990	1900 - 2170
Gain	(dBi)	16.2	16.5	16.7
Horizontal beamwidth, -3dB	(°)	67	65	63
Vertical beamwidth, -3dB	(°)	11	10.5	10
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30	>30	>30
Isolation between polarizations	(dB)	>30	>30	>30
First upper side lobe suppression	(dB)	>18	>18	>18
Impedance	(Ohms)	50	50	50
Input VSWR		<1.4	<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107	<-107	<-107
Maximum power per input	(W)	200	200	200



HRP



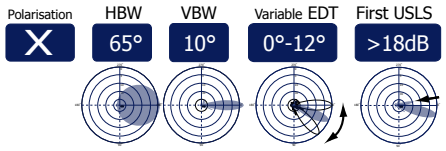
VRP @ 0°



VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously: XNU65-10
Edition No: 3-04



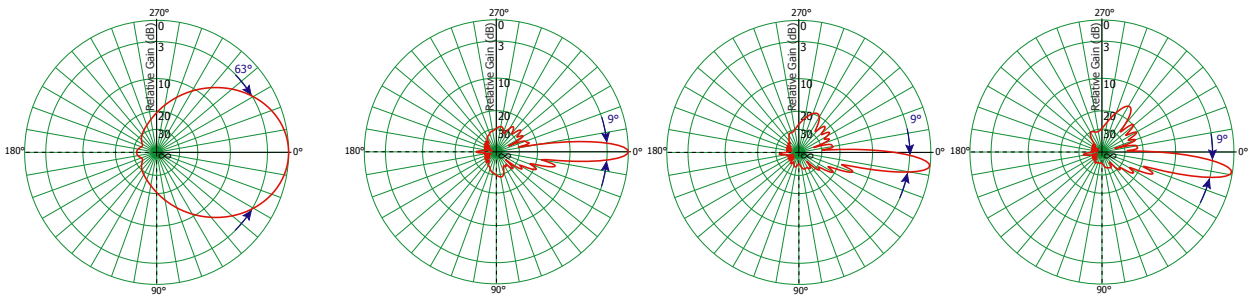
AlanDick

65 DEGREE 16 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

Model No.			XW65-10-A
Frequency		(MHz)	1710 - 2170
Polarisation			Cross Polar ±45°Slant
Gain		(dBi)	15.6/16.2
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	996 x 145 x 105
Windload @ 160km/h	Front	(N)	211
	Side	(N)	184
	Rear	(N)	253
Weight		(kg)	6.5
Lightning Protection			DC Grounded
Radome			UPVC
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		1710 - 1880	1850 - 1990	1900 - 2170
Gain	(dBi)	15.6	15.9	16.2
Horizontal beamwidth, -3dB	(°)	68	65	63
Vertical beamwidth, -3dB	(°)	10	9.5	9
Variable electrical downtilt	(°)	0 – 12	0 - 12	0 - 12
Front to back ratio, co-polar	(dB)	>30	>30	>30
Isolation between polarizations	(dB)	>25	>25	>25
First upper side lobe suppression*	(dB)	>18	>18	>18
First lower null-fill*	(dB)	<20	<20	<20
Impedance	(Ohms)	50	50	50
Input VSWR		<1.5	<1.5	<1.5
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100	<-100
Maximum power per input	(W)	160	160	160

* Measured at centre of downtilt adjustment range



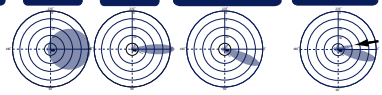
VRP UMTS @ 0° VRP UMTS @ 6° VRP UMTS @ 9°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 4-04

1710 - 2170 MHz

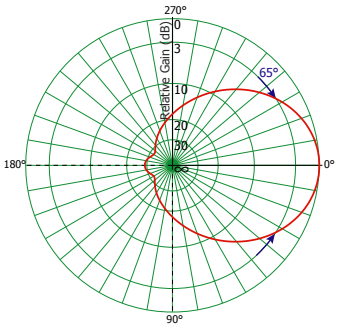
Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	13°	0°,2°,4°,6°	>18dB

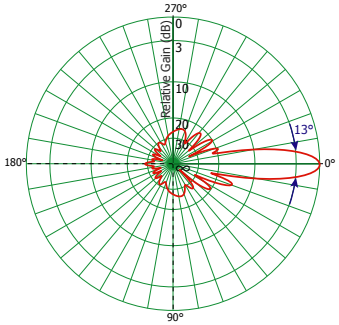


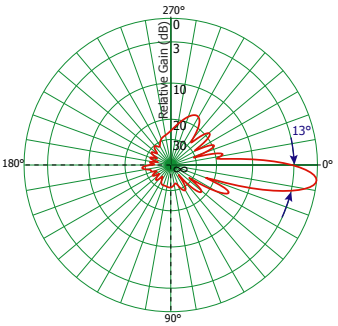
65 DEGREE 15/16 dBi GAIN CROSS POLAR ANTENNA

Model No.			XW65-13
Frequency		(MHz)	1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15/16
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	733 x 178 x 100
Windload @ 160km/h	Front	(N)	105
	Side	(N)	67
	Rear	(N)	200
Weight		(kg)	3.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		1710 - 1880	1850 - 1990	1900 - 2170
Gain	(dBi)	15	15.5	16
Horizontal beamwidth, -3dB	(°)	68	65	63
Vertical beamwidth, -3dB	(°)	14	13	12.5
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30	>30	>30
Isolation between polarizations	(dB)	>30 (>25 @ 0° EDT)	>30 (>25 @ 0° EDT)	>30 (>25 @ 0° EDT)
First upper side lobe suppression	(dB)	>18	>18	>18
First lower null fill	(dB)	<25	<25	<25
Impedance	(Ohms)	50	50	50
Input VSWR		<1.4	<1.4	<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107	<-107	<-107
Maximum power per input	(W)	200	200	200





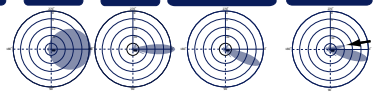


In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-N65-13
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	68°	8°	0°,2°,4°,6°	>18dB

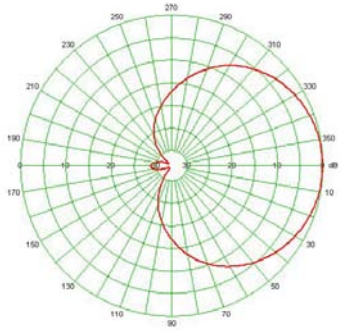


AlanDick

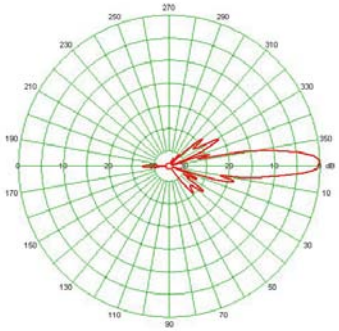
68 DEGREE 17.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM68-8
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2452 x 250 x 90
Windload @ 160km/h	Front	(N)	905
	Side	(N)	245
	Rear	(N)	1070
Weight		(kg)	12.3
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

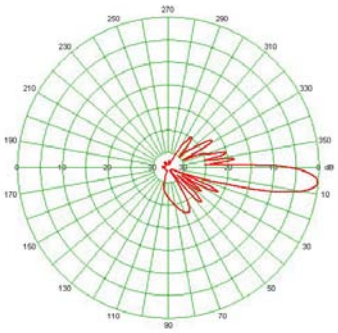
Electrical Specifications		
Gain	(dBi)	17.5
Horizontal beamwidth, -3dB	(°)	68
Vertical beamwidth, -3dB	(°)	8
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-105
Maximum power per input	(W)	400



HRP



VRP @ 0°



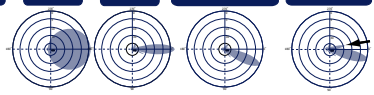
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M68-8
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	72°	10°	0°,2°,4°,6°	>18dB

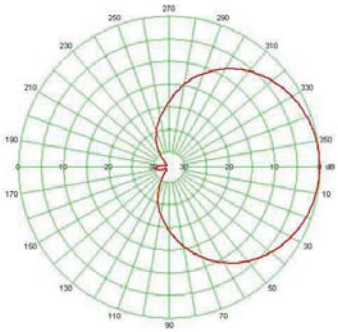


AlanDick

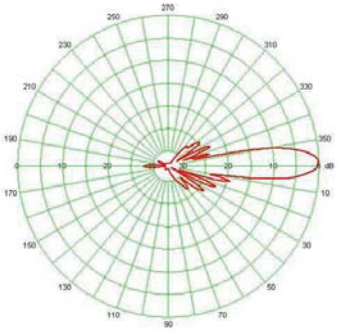
72 DEGREE 16.3 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM72-10
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.3
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2340 x 232 x 84
Windload @ 160km/h	Front	(N)	700
	Side	(N)	215
	Rear	(N)	750
Weight		(kg)	8.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

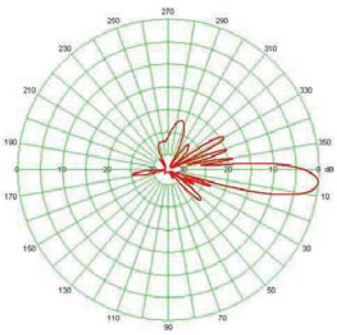
Electrical Specifications		
Gain	(dBi)	16.3
Horizontal beamwidth, -3dB	(°)	72
Vertical beamwidth, -3dB	(°)	10
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>26
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-105
Maximum power per input	(W)	400



HRP



VRP @ 0°



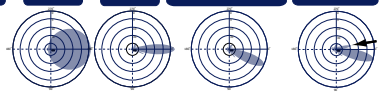
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M72-10
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	72°	13°	0°,4°,6°,12°	>18dB

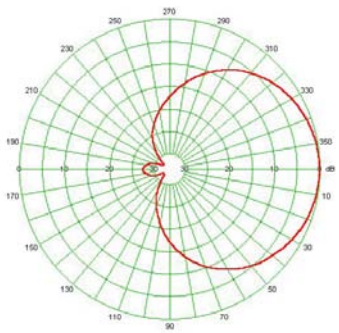


AlanDick

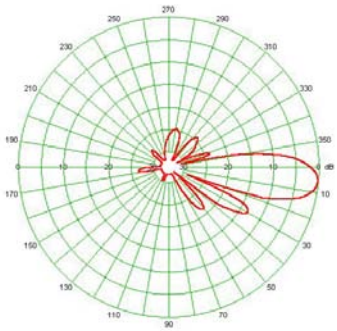
72 DEGREE 15 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM72-13
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom, Top
Dimensions (HxWxD)		(mm)	1454 x 231 x 93
Windload @ 160km/h	Front	(N)	480
	Side	(N)	145
	Rear	(N)	560
Weight		(kg)	6
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

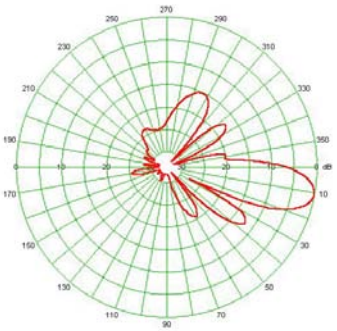
Electrical Specifications		
Gain	(dBi)	15
Horizontal beamwidth, -3dB	(°)	72
Vertical beamwidth, -3dB	(°)	13
Fixed electrical downtilt	(°)	0, 4, 6, 12
Front to back ratio, co-polar	(dB)	>25
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-105
Maximum power per input	(W)	400



HRP



VRP @ 6°



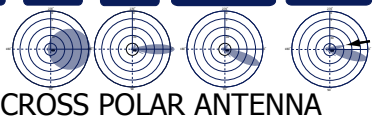
VRP @ 12°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M72-13
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	72°	21°	4°,8°,15°	>18dB

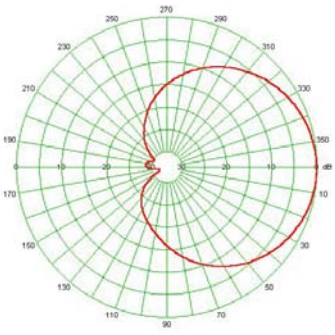


AlanDick

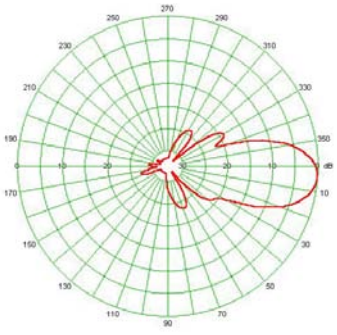
72 DEGREE 13 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM72-21
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	13
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom,Top
Dimensions (HxWxD)		(mm)	964 x 230 x 102
Windload @ 160km/h	Front	(N)	305
	Side	(N)	100
	Rear	(N)	360
Weight		(kg)	4.4
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

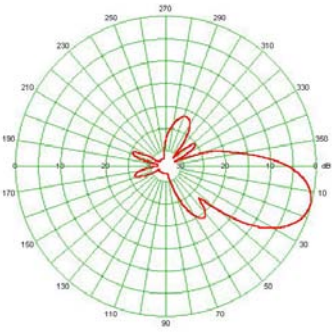
Electrical Specifications		
Gain	(dBi)	13
Horizontal beamwidth, -3dB	(°)	72
Vertical beamwidth, -3dB	(°)	21
Fixed electrical downtilt	(°)	4, 7, 15
Front to back ratio, co-polar	(dB)	>25
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-105
Maximum power per input	(W)	250



HRP



VRP @ 4°

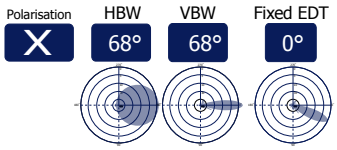


VRP @ 15°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M72-21
Edition No: 3-04

870 - 960 MHz

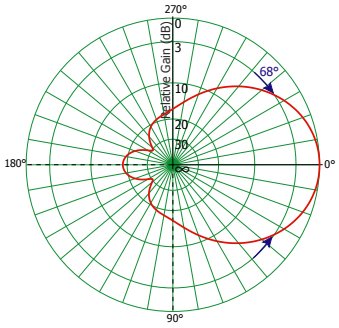


AlanDick

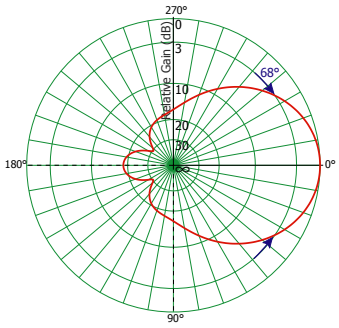
75 DEGREE 8.7 dBi GAIN CROSS POLAR ANTENNA

Model No.		XM75-75
Frequency	(MHz)	870 - 960
Polarization		Cross Polar ±45°Slant
Gain	(dBi)	8.7
Mechanical Specifications		
Input Connector		2 x 7.16 DIN Female
Connector Location		Bottom
Dimensions (HxWxD)	(mm)	227 x 229 x 55
Weight	(kg)	0.8
Lightning Protection		DC Grounded
Radome		Plastic
Standard Radome Colour (Pearl Grey)		BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	8.7
Horizontal beamwidth, -3dB	(°)	68
Vertical beamwidth, -3dB	(°)	68
Fixed electrical downtilt	(°)	0
Front to back ratio, co-polar	(dB)	>20
Isolation between polarizations	(dB)	>25
Impedance	(Ohms)	50
Input VSWR		<1.4
Maximum power per input	(W)	150



HRP



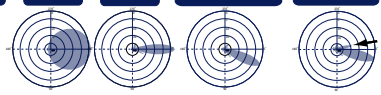
VRP @ 0°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : MAX-M75-75
Edition No: 3-04

820 - 900 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	85°	7°	0°,2°,4°,6°	>20dB

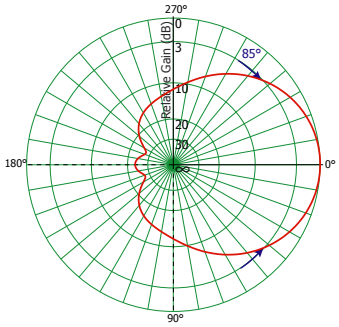


AlanDick

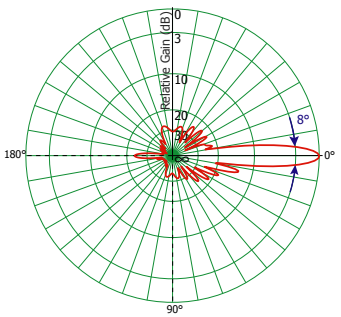
85 DEGREE 16.2 dBi GAIN CROSS POLAR ANTENNA

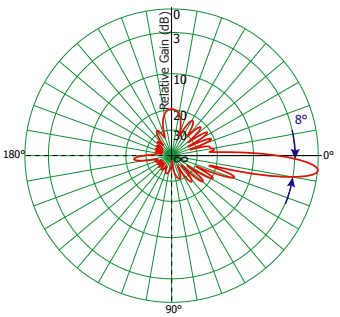
Model No.			XA85-7
Frequency		(MHz)	820 - 900
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.2
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2350 x 256 x 120
Windload @ 160km/h	Front	(N)	1060
	Side	(N)	380
	Rear	(N)	1150
Weight		(kg)	16.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	16.2
Horizontal beamwidth, -3dB	(°)	85
Vertical beamwidth, -3dB	(°)	8
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



HRP



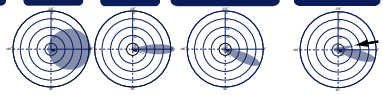


In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-A85-7
Edition No: 3-04

820 - 900 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	85°	10°	0°,2°,4°,6°	>18dB

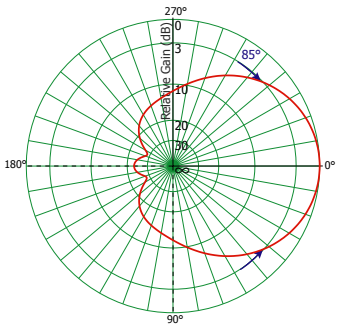


AlanDick

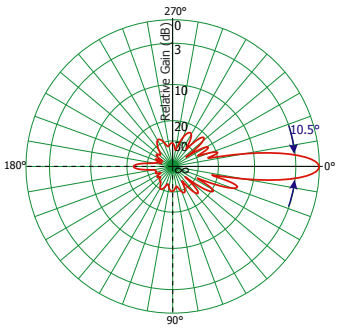
85 DEGREE 15 dBi GAIN CROSS POLAR ANTENNA

Model No.			XA85-10
Frequency		(MHz)	820 - 900
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1800 x 256 x 120
Windload @ 160km/h	Front	(N)	760
	Side	(N)	275
	Rear	(N)	810
Weight		(kg)	13
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

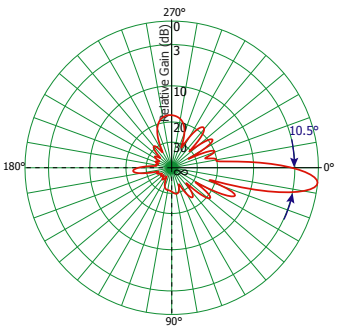
Electrical Specifications		
Gain	(dBi)	15
Horizontal beamwidth, -3dB	(°)	85
Vertical beamwidth, -3dB	(°)	10.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



HRP



VRP @ 6°



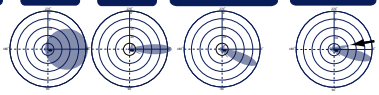
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-A85-10
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	85°	7°	0°,2°,4°,6°	>20dB

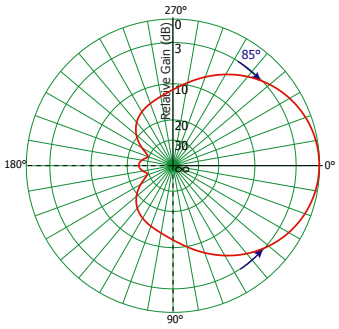


AlanDick

85 DEGREE 16.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM85-7
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2350 x 256 x 120
Windload @ 160km/h	Front	(N)	1060
	Side	(N)	380
	Rear	(N)	1150
Weight		(kg)	16.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	16.5
Horizontal beamwidth, -3dB	(°)	85
Vertical beamwidth, -3dB	(°)	7.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>27
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.33
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



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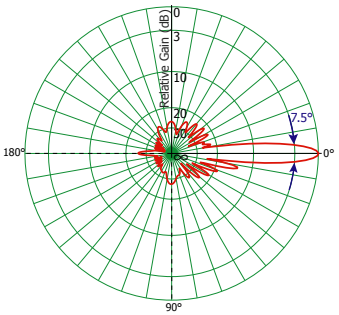
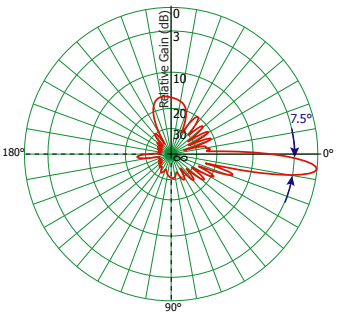


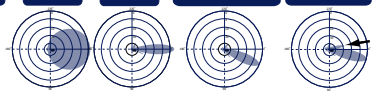


In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M85-7
Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	85°	8°	0°,2°,4°,6°	>15dB

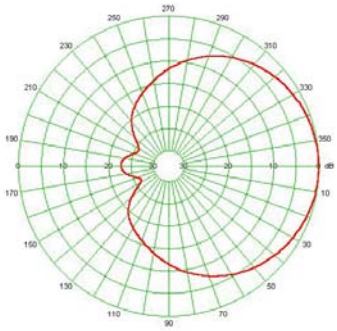


AlanDick

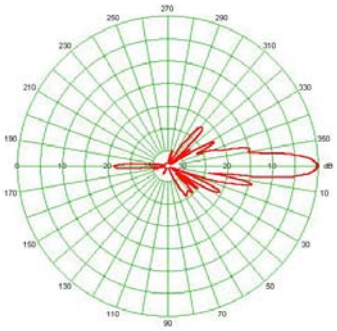
85 DEGREE 16.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM85-8
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.5
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2452 x 250 x 90
Windload @ 160km/h	Front	(N)	915
	Side	(N)	245
	Rear	(N)	1070
Weight		(kg)	11.3
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	16.5
Horizontal beamwidth, -3dB	(°)	85
Vertical beamwidth, -3dB	(°)	8
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>20
Isolation between polarizations	(dB)	>30 (>25 @ 0° EDT)
First upper side lobe suppression	(dB)	>15
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-105
Maximum power per input	(W)	400



HRP



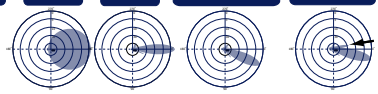
VRP @ 0°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	85°	10°	0°,2°,4°,6°	>18dB

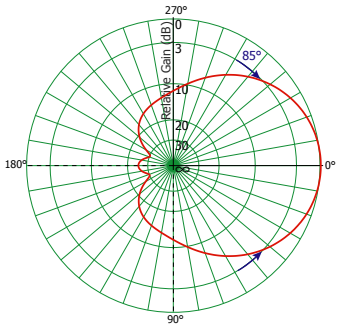


AlanDick

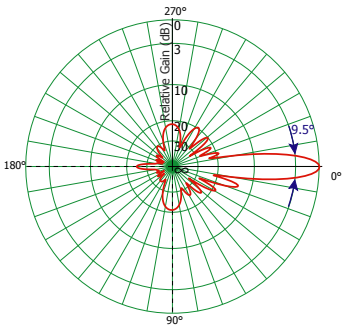
85 DEGREE 15.3 dBi GAIN CROSS POLAR ANTENNA

Model No.			XM85-10
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1800 x 256 x 120
Windload @ 160km/h	Front	(N)	760
	Side	(N)	275
	Rear	(N)	810
Weight		(kg)	13
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

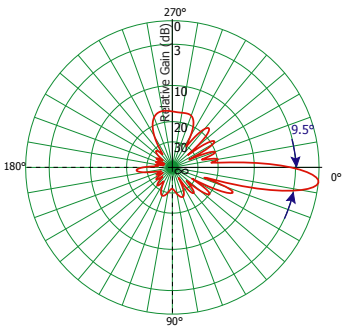
Electrical Specifications		
Gain	(dBi)	15.3
Horizontal beamwidth, -3dB	(°)	85
Vertical beamwidth, -3dB	(°)	9.5
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>27
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>18
Impedance	(Ohms)	50
Input VSWR		<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400



HRP



VRP @ 0°

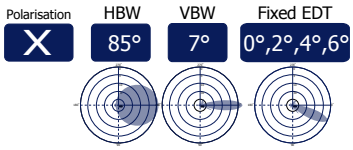


VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : MAX-M85-10
Edition No: 3-04

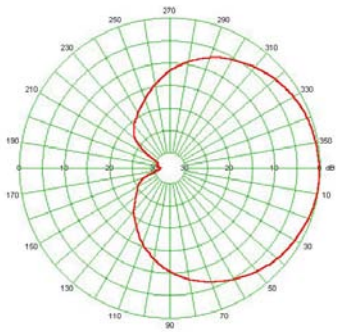
1710 - 1880 MHz



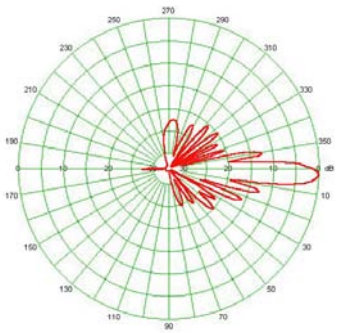
85 DEGREE 16 dBi GAIN CROSS POLAR ANTENNA

Model No.			XN85-7
Frequency		(MHz)	1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1300 x 145 x 105
Windload @ 160km/h	Front	(N)	300
	Side	(N)	125
	Rear	(N)	325
Weight		(kg)	5
Lightning Protection			DC Grounded
Radome			UPVC
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	16
Horizontal beamwidth, -3dB	(°)	85
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25
Isolation between polarizations	(dB)	>30 (>25 @ 0° EDT)
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	200



HRP



VRP @ 2°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : MAX-N85-7
Edition No: 3-04

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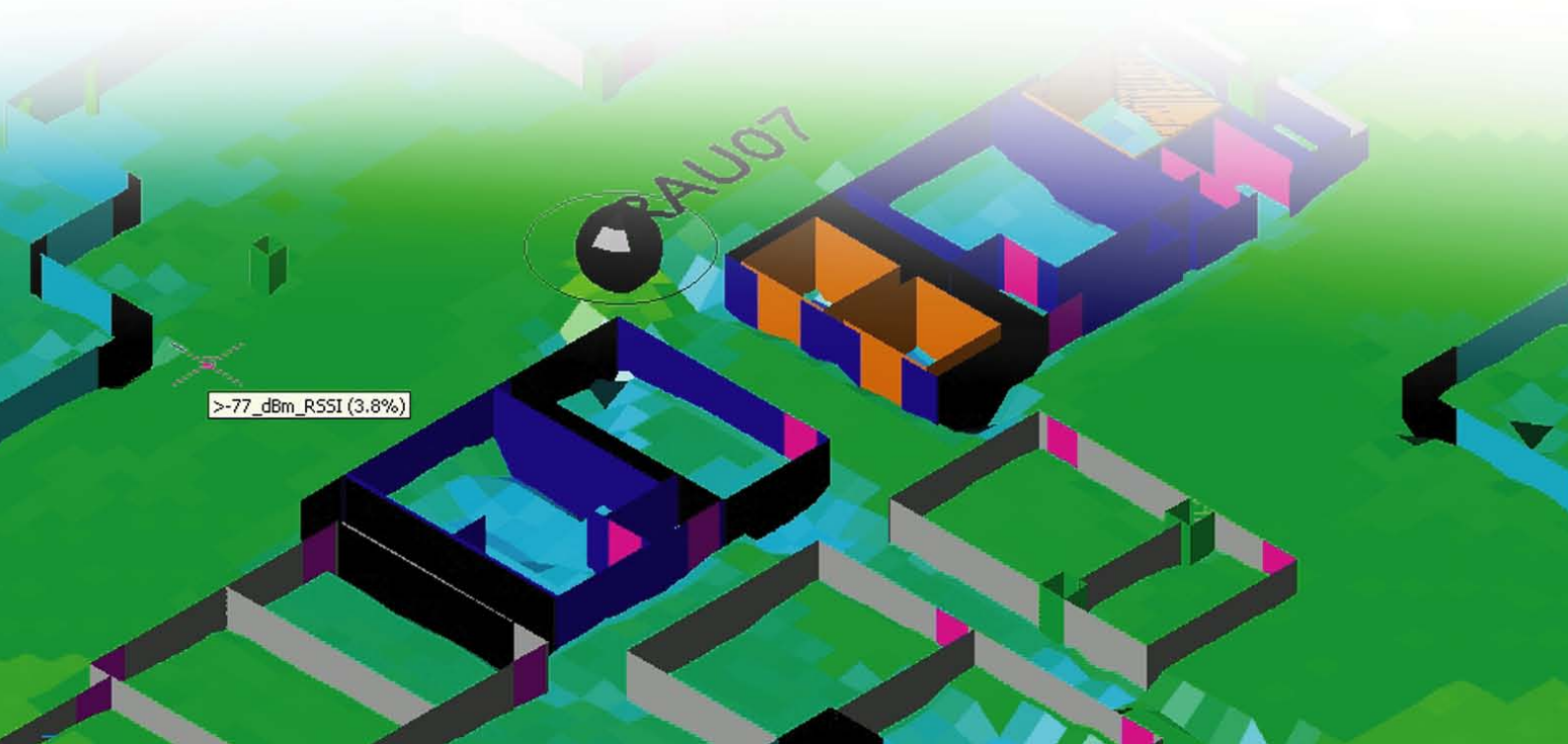
AlanDick

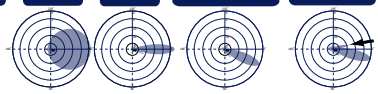


Quad Pole Antenna Range

AlanDick

870 - 960 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°	0°,2°,4°,6°	>20dB

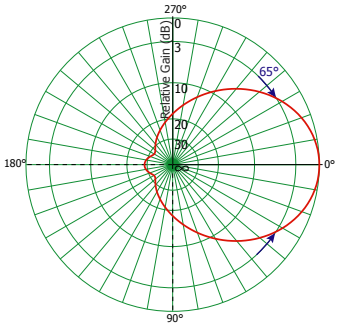


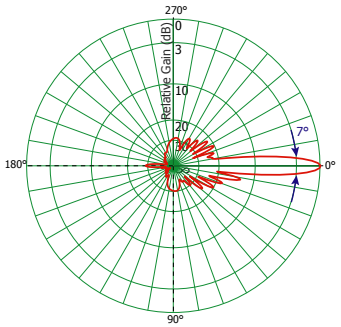
AlanDick

65 DEGREE 18 dBi GAIN CROSS POLAR 4 PORT ANTENNA

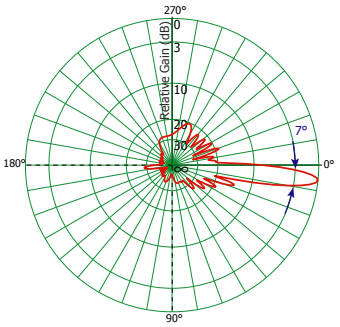
Model No.			QXM65-7
Frequency		(MHz)	870 - 960
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	18
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2536 x 498 x 111
Windload @ 160km/h	Front	(N)	2290
	Side	(N)	310
	Rear	(N)	2300
Weight		(kg)	41
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		
Gain	(dBi)	18
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	7
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30
First upper side lobe suppression	(dB)	>20
First lower null-fill	(dB)	<25
Impedance	(Ohms)	50
Input VSWR		<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	400





VRP @ 0°



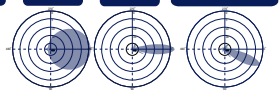
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : XLMM65-07
Edition No: 3-04

1850 - 1990 MHz

Polarisation	HBW	VBW	Fixed EDT
X	65°	14°	0°,2°,4°,6°

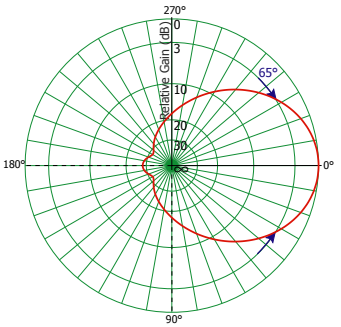


AlanDick

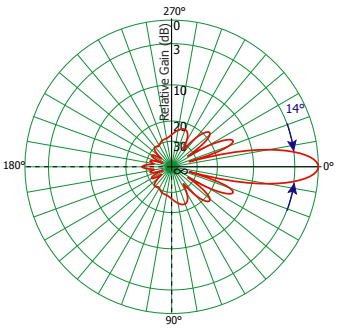
65 DEGREE 15 dBi GAIN CROSS POLAR ANTENNA

Model No.			QSX65-14
Frequency		(MHz)	1850 - 1990
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	603 x 326 x 127
Windload @ 160km/h	Front	(N)	277
	Side	(N)	77
	Rear	(N)	290
Weight		(kg)	4.2
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

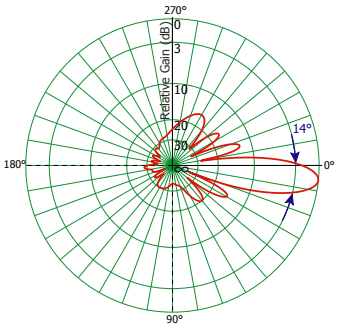
Electrical Specifications		.
Gain	(dBi)	15
Horizontal beamwidth, -3dB	(°)	65
Vertical beamwidth, -3dB	(°)	14
Fixed electrical downtilt	(°)	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30
Isolation between polarizations	(dB)	>30 (>25 @ 0° EDT)
Impedance	(Ohms)	50
Input VSWR		<1.3
Intermodulation products (2nd & 3rd)	(dBm)	<-107
Maximum power per input	(W)	150



HRP



VRP @ 0°



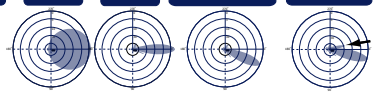
VRP @ 6°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Previously : QSX65-14
Edition No: 1-04

1710 - 2170 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°	0°,2°,4°,6°	>18dB

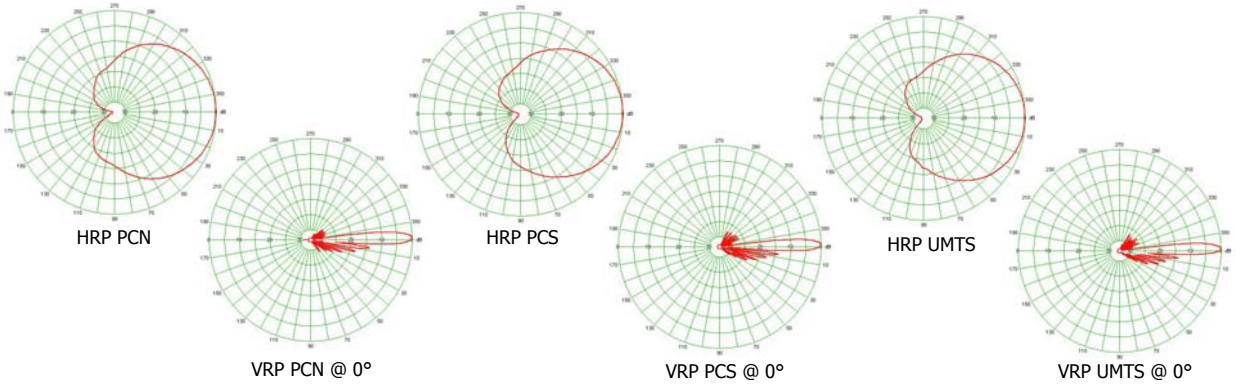


AlanDick

65 DEGREE 17 dBi GAIN CROSS POLAR ANTENNA

Model No.			QXW65-7
Frequency		(MHz)	1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1370 x 327 x 127
Windload @ 160km/h	Front	(N)	748
	Side	(N)	180
	Rear	(N)	896
Weight		(kg)	10
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		1710 - 1880	1850 - 1990	1900 - 2170
Gain	(dBi)	16.5	17	17.5
Horizontal beamwidth, -3dB	(°)	67	65	63
Vertical beamwidth, -3dB	(°)	7.3	7	6.7
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>30	>30	>30
Isolation between polarizations	(dB)	>30 (>27 @ 0° EDT)	>30 (>27 @ 0° EDT)	>30 (>27 @ 0° EDT)
First upper side lobe suppression	(dB)	>18	>18	>18
Impedance	(Ohms)	50	50	50
Input VSWR		<1.4	<1.4	<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107	<-107	<-107
Maximum power per input	(W)	200	200	200



HRP PCN HRP PCS HRP UMTS

VRP PCN @ 0° VRP PCS @ 0° VRP UMTS @ 0°

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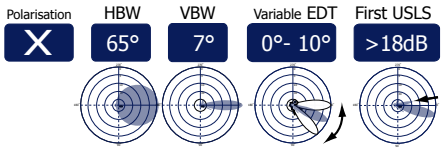
specifications without prior notice

Previously : XLWW65-07
Edition No: 3-04

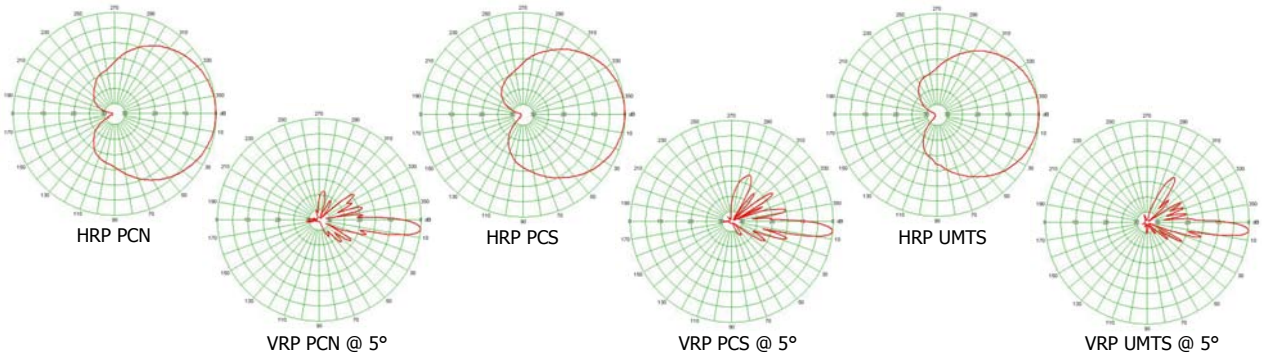


65 DEGREE 17.5 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

Model No.			QXW65-7-A
Frequency		(MHz)	1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17/17.5
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1300 x 326 x 127
Windload @ 160km/h	Front	(N)	710
	Side	(N)	170
	Rear	(N)	850
Weight		(kg)	14
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		1710 - 1880	1850 - 1990	1900 - 2170
Gain	(dBi)	17.0	17.5	17.5
Horizontal beamwidth, -3dB	(°)	68	65	62
Vertical beamwidth, -3dB	(°)	8.0	7.3	6.9
Variable electrical downtilt	(°)	0 - 10	0 - 10	0 - 10
Front to back ratio, co-polar	(dB)	>30	>30	>30
Isolation between polarizations	(dB)	>25	>25	>25
First upper side lobe suppression*	(dB)	>18	>18	>18
First lower null-fill*	(dB)	<25	<25	<25
Impedance	(Ohms)	50	50	50
Input VSWR		<1.5	<1.5	<1.5
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100	<-100
Maximum power per input	(W)	160	160	160

* Measured at centre of downtilt adjustment range



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Edition No: 2-04

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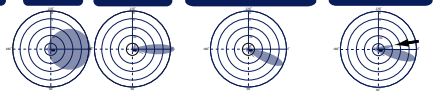
AlanDick

Dual Band Antenna Range

AlanDick

820 - 900 MHz
1850 - 1990 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	13°/6°	0°, 2°, 4°, 6°	>20dB

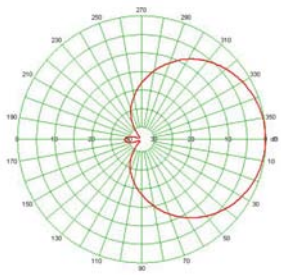


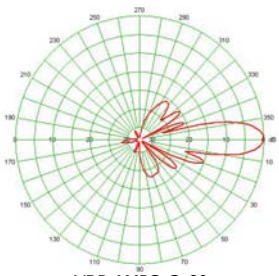
AlanDick

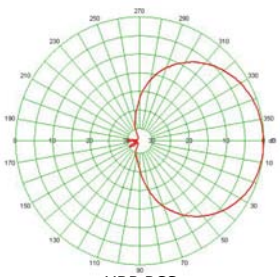
65 DEGREE 16/16.5 dBi GAIN CROSS POLAR ANTENNA

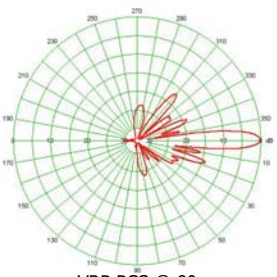
Model No.			XCS65-13/6
Frequency		(MHz)	820 - 900 & 1850 - 1990
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16/16.5
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1476 x 326 x 127
Windload @ 160km/h	Front	(N)	808
	Side	(N)	194
	Rear	(N)	967
Weight		(kg)	9.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		820 - 900	1850 - 1990
Gain	(dBi)	16.0	16.5
Horizontal beamwidth, -3dB	(°)	65	65
Vertical beamwidth, -3dB	(°)	13	6
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>25
Isolation between polarizations	(dB)	>25	>25
First upper side lobe suppression	(dB)	>20	>20
Impedance	(Ohms)	50	50
Input VSWR		<1.33	<1.33
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107	<-107
Maximum power per input	(W)	250	150


HRP AMPS


VRP AMPS @ 0°


HRP PCS


VRP PCS @ 0°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : DFX-CS65-13/6
Edition No: 3-04

820 - 900 MHz
1850 - 1990 MHz

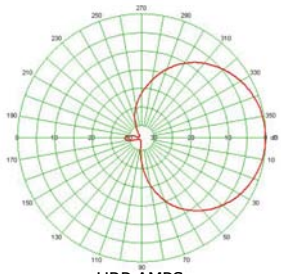
Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	32°/18°	0°, 2°, 4°, 6°	>15dB

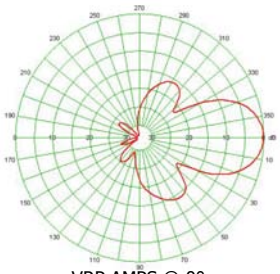
AlanDick

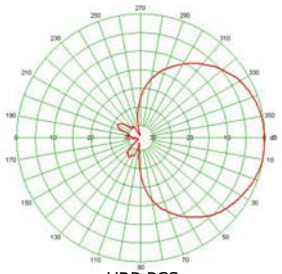
65 DEGREE 11/13 dBi GAIN CROSS POLAR ANTENNA

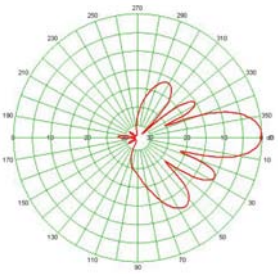
Model No.			XCS65-32/18
Frequency		(MHz)	820 - 900 & 1850 - 1990
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	11/13
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	610 x 326 x 127
Windload @ 160km/h	Front	(N)	333
	Side	(N)	80
	Rear	(N)	400
Weight		(kg)	5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		820 - 900	1850 - 1990
Gain	(dBi)	11	13
Horizontal beamwidth, -3dB	(°)	65	65
Vertical beamwidth, -3dB	(°)	32	18
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>25
Isolation between polarizations	(dB)	>25	>25
First upper side lobe suppression	(dB)	>15	>15
Impedance	(Ohms)	50	50
Input VSWR		<1.33	<1.33
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100
Maximum power per input	(W)	200	150


HRP AMPS


VRP AMPS @ 0°


HRP PCS


VRP PCS @ 0°

In pursuance of continual product improvement,
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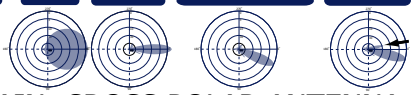
specifications without prior notice

Previously : DFX-CS65-32/18
Edition No: 3-04

870 - 960 MHz
1710 - 1880 MHz

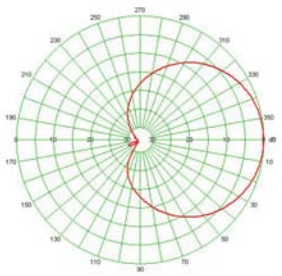
Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°	0°, 2°, 4°, 6°	>16dB



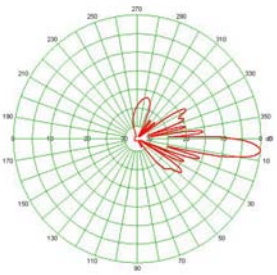
65 DEGREE 17.7 dBi GAIN CROSS POLAR ANTENNA

Model No.			XLMN65-7
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.7
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2530 x 409 x 142
Windload @ 160km/h	Front	(N)	1480
	Side	(N)	380
	Rear	(N)	1730
Weight		(kg)	23
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

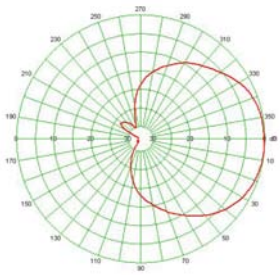
Electrical Specifications		870 - 960	1710 - 1880
Gain	(dBi)	17.7	17.7
Horizontal beamwidth, -3dB	(°)	65	65
Vertical beamwidth, -3dB	(°)	7	7
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>27	>30
Isolation between polarizations	(dB)	>30	>30
First upper side lobe suppression	(dB)	>16	>16
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107	<-107
Maximum power per input	(W)	400	250



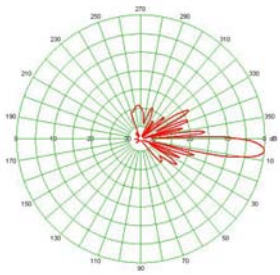
HRP GSM



VRP GSM @ 6°



HRP PCN



VRP PCN @ 6°

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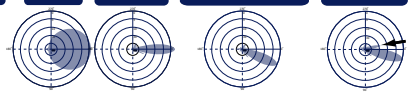
Previously : DFX-L-MN65-7
Edition No: 3-04

870 - 960 MHz
1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°	0°, 2°, 4°, 6°	>16dB

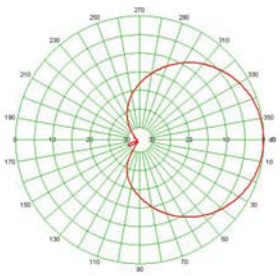


AlanDick

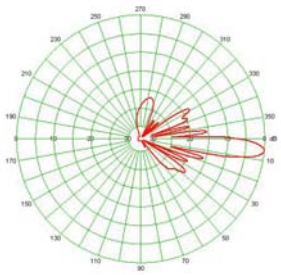
65 DEGREE DUPLEXED 17.7 dBi GAIN CROSS POLAR ANTENNA

Model No.			XLMNI65-7
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.7
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2530 x 409 x 142
Windload @ 160km/h	Front	(N)	1480
	Side	(N)	380
	Rear	(N)	1730
Weight		(kg)	23
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

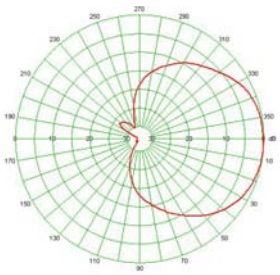
Electrical Specifications		870 - 960	1710 - 1880
Gain	(dBi)	17.7	17.7
Horizontal beamwidth, -3dB	(°)	65	65
Vertical beamwidth, -3dB	(°)	7	7
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>27	>30
Isolation between polarizations	(dB)	>30	>30
First upper side lobe suppression	(dB)	>16	>16
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-100	<-100
Maximum power per input	(W)	250	200



HRP GSM



VRP GSM @ 6°



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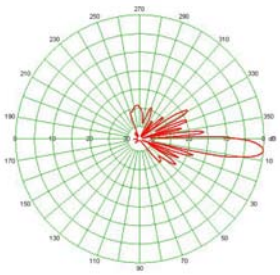

VRP PCN @ 6°

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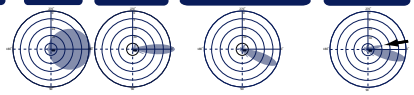
Previously : DFX-L-MNI65-7
Edition No: 3-04

870 - 960 MHz
1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°/5°	0°, 2°, 4°, 6°	>18dB

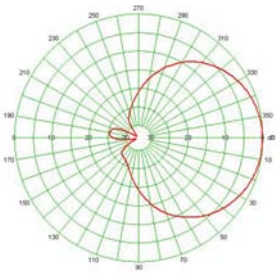


AlanDick

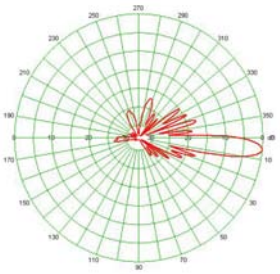
65 DEGREE 17.8/17 dBi GAIN CROSS POLAR MICRO ANTENNA

Model No.			XMN65-7/5
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.8/17
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2500 x 276 x 120
Windload @ 160km/h	Front	(N)	960
	Side	(N)	325
	Rear	(N)	1040
Weight		(kg)	17
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

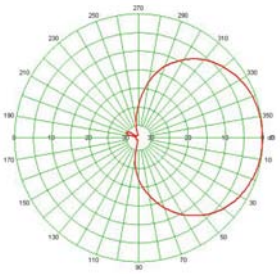
Electrical Specifications		870 - 960	1710 - 1880
Gain	(dBi)	17.8	17
Horizontal beamwidth, -3dB	(°)	68	65
Vertical beamwidth, -3dB	(°)	7	5
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>30
Isolation between polarizations	(dB)	>25	>25
First upper side lobe suppression	(dB)	>18	>18
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-100	<-100
Maximum power per input	(W)	250	200



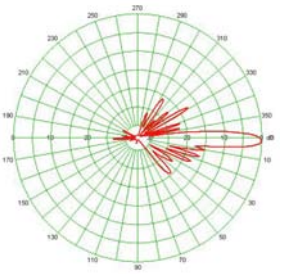
HRP GSM



VRP GSM @ 6°



HRP PCN



VRP PCN @ 2°

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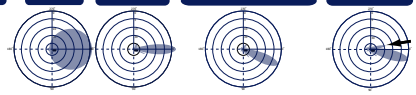
specifications without prior notice

Previously : DFX-MN65-7
Edition No: 3-04

870 - 960 MHz
1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	7°/5°	0°, 2°, 4°, 6°	>18dB

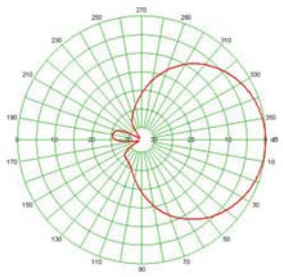


AlanDick

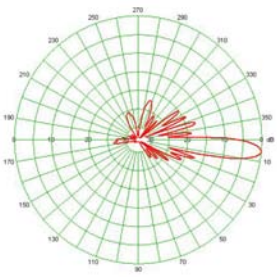
65 DEGREE DUPLEXED 17.8/17 dBi GAIN CROSS POLAR ANTENNA

Model No.			XMNI65-7/5
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.8/17
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2500 x 276 x 120
Windload @ 160km/h	Front	(N)	960
	Side	(N)	325
	Rear	(N)	1040
Weight		(kg)	17
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

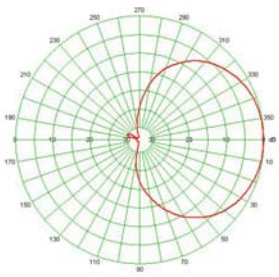
Electrical Specifications		870 - 960	1710 - 1880
Gain	(dBi)	17.8	17
Horizontal beamwidth, -3dB	(°)	68	65
Vertical beamwidth, -3dB	(°)	7	5
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>30
Isolation between polarizations	(dB)	>25	>25
First upper side lobe suppression	(dB)	>18	>18
Impedance	(Ohms)	50	50
Input VSWR		<1.5	<1.5
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100
Maximum power per input	(W)	250	200



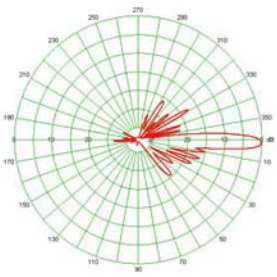
HRP GSM



VRP GSM @ 6°



HRP PCN



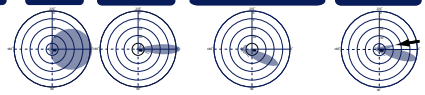
VRP PCN @ 2°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : DFX-MNI65-7
Edition No: 3-04

870 - 960 MHz
1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	21°/13°	0°, 2°, 4°, 6°	>18dB

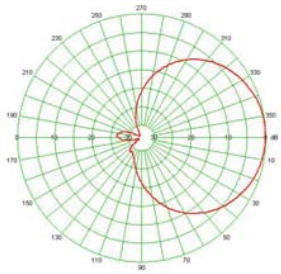


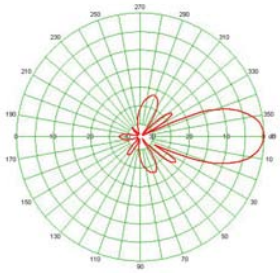
AlanDick

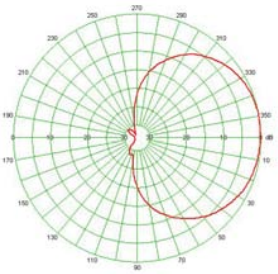
65 DEGREE 14/13.5 dBi GAIN CROSS POLAR ANTENNA

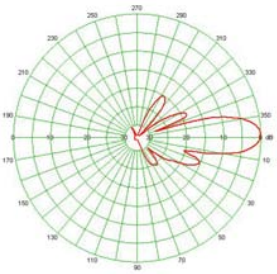
Model No.			XMN65-21/13
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	14/13.5
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1000 x 326 x 127
Windload @ 160km/h	Front	(N)	355
	Side	(N)	186
	Rear	(N)	355
Weight		(kg)	8
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		870 - 960	1710 - 1880
Gain	(dBi)	14	13.5
Horizontal beamwidth, -3dB	(°)	65	72
Vertical beamwidth, -3dB	(°)	21	13
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>27
Isolation between polarizations	(dB)	>30 (>25 @ 0° EDT)	>30 (>25 @ 0° EDT)
First upper side lobe suppression	(dB)	>18	>18
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-100	<-100
Maximum power per input	(W)	250	150


HRP GSM


VRP GSM @ 0°


HRP PCN

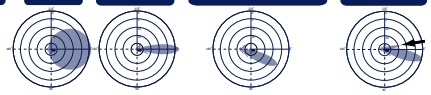

VRP PCN @ 0°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : DFX-MN65-21/13
Edition No: 1-04

870 - 960 MHz
1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	21°/13°	0°, 2°, 4°, 6°	>18dB

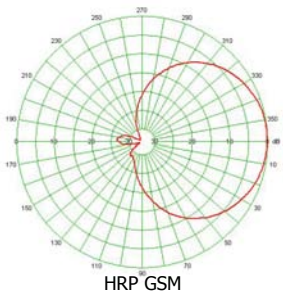


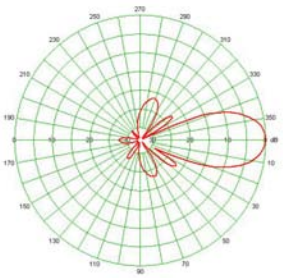
AlanDick

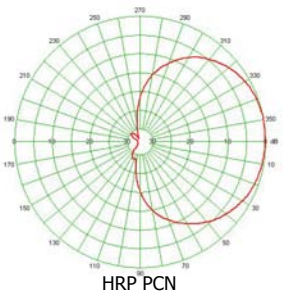
65 DEGREE DUPLEXED 13.8/13.3 dBi GAIN CROSS POLAR ANTENNA

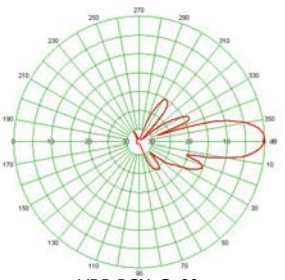
Model No.			XMNI65-21/13
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	13.8/13.3
Mechanical Specifications			
Input Connector			2 X 7.16 DIN Female
Connector Location			Bottom
Dimensions (HXWXD)		(mm)	1000 X 326 X 127
Windload @ 160km/h	Front	(N)	355
	Side	(N)	186
	Rear	(N)	355
Weight		(kg)	8
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		870 - 960	1710 - 1880
Gain	(dBi)	13.8	13.3
Horizontal beamwidth, -3dB	(°)	65	72
Vertical beamwidth, -3dB	(°)	21	13
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>27
Isolation between polarizations	(dB)	>30 (>25 @ 0° EDT)	>30 (>25 @ 0° EDT)
First upper side lobe suppression	(dB)	>18	>18
Impedance	(Ohms)	50	50
Input VSWR		<1.5	<1.5
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100
Maximum power per input	(W)	250	150


HRP GSM


VRP GSM @ 0°


HRP PCN


VRP PCN @ 0°

In pursuance of continual product improvement,
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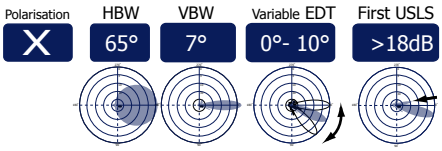
specifications without prior notice

Previously : DFX-MNI65-21/13
Edition No: 3-04

870 - 960 MHz
1710 - 2170 MHz



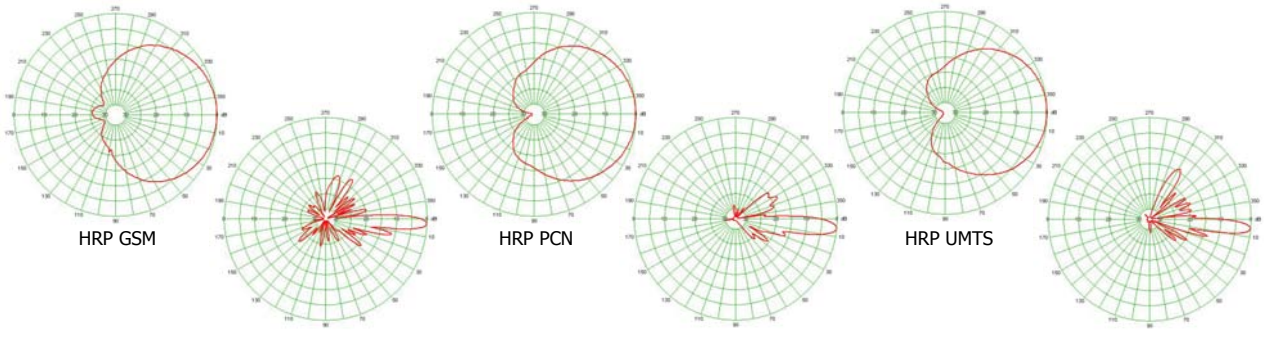
AlanDick

65 DEGREE 16.5 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

Model No.			XMW65-7/6-AA
Frequency		(MHz)	870 - 960 & 1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16.5
Mechanical Specifications			
Input Connector			4 X 7.16 DIN Female
Connector Location			Bottom
Dimensions (HXWXD)		(mm)	2640 X 268 X 180
Windload @ 160km/h	Front	(N)	912
	Side	(N)	515
	Rear	(N)	1063
Weight		(kg)	25
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		870 - 960	1710 - 2170
Gain	(dBi)	16.5±0.5	16.5±0.5
Horizontal beamwidth, -3dB	(°)	67	63
Vertical beamwidth, -3dB	(°)	7	6
Variable electrical downtilt	(°)	0 - 10	0 - 10
Front to back ratio, co-polar	(dB)	>25	>30
Isolation between polarizations*	(dB)	>25	>25
First upper side lobe suppression*	(dB)	>18	>18
First lower null-fill*	(dB)	<25	<25
Impedance	(Ohms)	50	50
Input VSWR		<1.5	<1.5
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100
Maximum power per input	(W)	250	160

* Measured at centre of downtilt adjustment range

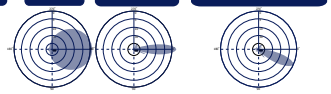


In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Edition No: 4-04

870 - 960 MHz
1710 - 2170 MHz

Polarisation	HBW	VBW	Fixed EDT
X	65°	32°/20°	0°, 2°, 4°, 6°

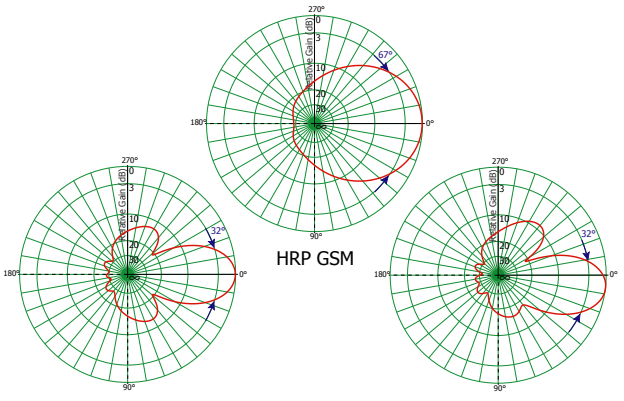


AlanDick

65 DEGREE 11.5/12.5 dBi GAIN CROSS POLAR MICRO ANTENNA

Model No.			XMW65-35
Frequency		(MHz)	870 - 960 & 1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	11.5/12.5
Mechanical Specifications			
Input Connector			4 X 7.16 DIN Female
Connector Location			Bottom
Dimensions (HXWXD)		(mm)	595 X 250 X 120
Windload @ 160km/h	Front	(N)	290
	Side	(N)	71
	Rear	(N)	303
Weight		(kg)	4.5
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

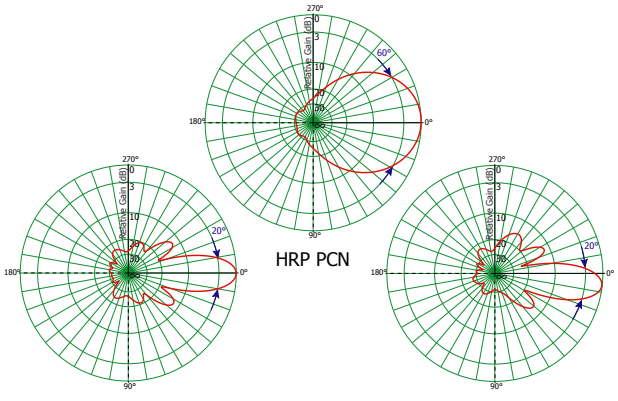
Electrical Specifications		870 - 960	1710 - 2170
Gain	(dBi)	11.5	12.5
Horizontal beamwidth, -3dB	(°)	67	60
Vertical beamwidth, -3dB	(°)	32	20
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>30
Isolation between polarizations	(dB)	>30 (>25 @ 0°EDT)	>30 (>25 @ 0°EDT)
Impedance	(Ohms)	50	50
Input VSWR		<1.5	<1.5
Intermodulation products (2nd & 3rd)	(dBm)	<-100	<-100
Maximum power per input	(W)	150	100



HRP GSM

VRP GSM @ 0°

VRP GSM @ 6°



HRP PCN

VRP PCN @ 0°

VRP PCN @ 6°

In pursuance of continual product improvement,
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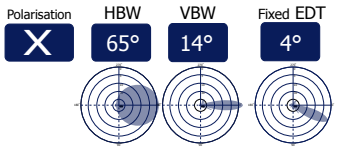
specifications without prior notice

Previously : DFX-MN65-35
Edition No: 4-04

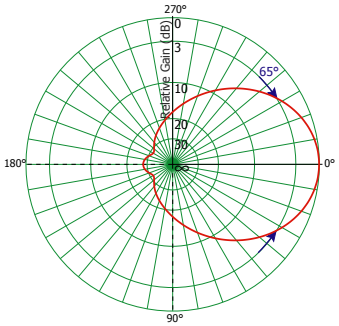
1850 - 2170 MHz



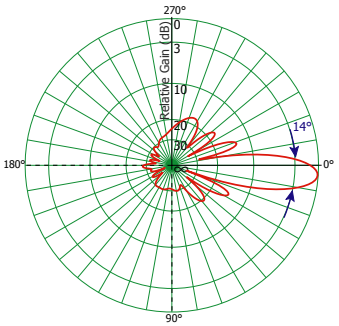
65 DEGREE 15 dBi GAIN CROSS POLAR ANTENNA

Model No.			XSU65-14
Frequency		(MHz)	1850 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15
Mechanical Specifications			
Input Connector			2 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	616 x 145 x 73
Windload @ 160km/h	Front	(N)	153
	Side	(N)	64
	Rear	(N)	170
Weight		(kg)	2.5
Lightning Protection			DC Grounded
Radome			UPVC
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		1850 - 1990	1900 - 2170
Gain	(dBi)	15	15.4
Horizontal beamwidth, -3dB	(°)	65	63
Vertical beamwidth, -3dB	(°)	14	13
Fixed electrical downtilt	(°)	2, 4, 6	2, 4, 6
Front to back ratio, co-polar	(dB)	>30	>30
Isolation between polarizations	(dB)	>30	>30
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.4
Intermodulation products (2nd & 3rd)	(dBm)	<-107	<-107
Maximum power per input	(W)	150	150



HRP PCS



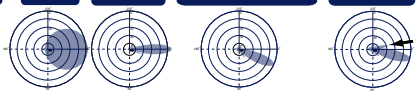
VRP PCS @ 4°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 1-04

870 - 960 MHz
1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	70°	10°	0°, 2°, 4°, 6°	>18dB

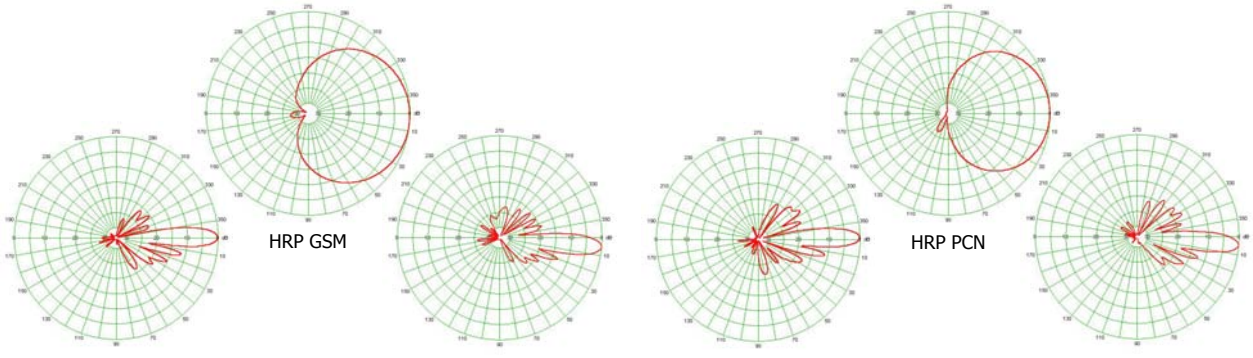


AlanDick

70 DEGREE DUPLEXED 16 dBi GAIN CROSS POLAR ANTENNA

Model No.			XMNI70-10
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	16
Mechanical Specifications			
Input Connector			2 X 7.16 DIN Female
Connector Location			Bottom
Dimensions (HXWXD)		(mm)	2036 X 231 X 110
Windload @ 160km/h	Front	(N)	680
	Side	(N)	200
	Rear	(N)	755
Weight		(kg)	18
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		870 - 960	1710 - 1880
Gain	(dBi)	16	16
Horizontal beamwidth, -3dB	(°)	72	65
Vertical beamwidth, -3dB	(°)	10	10
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>25
Isolation between polarizations	(dB)	>30 (>25 @ 0°EDT)	>30 (>25 @ 0°EDT)
First upper side lobe suppression	(dB)	>18	>18
Impedance	(Ohms)	50	50
Input VSWR		<1.5	<1.5
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107	<-107
Maximum power per input	(W)	250	200



HRP GSM

VRP GSM @ 0°

VRP GSM @ 6°

HRP PCN

VRP PCN @ 0°

VRP PCN @ 6°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : DFX-MNI70-10
Edition No: 2-04

870 - 960 MHz
1710 - 1880 MHz

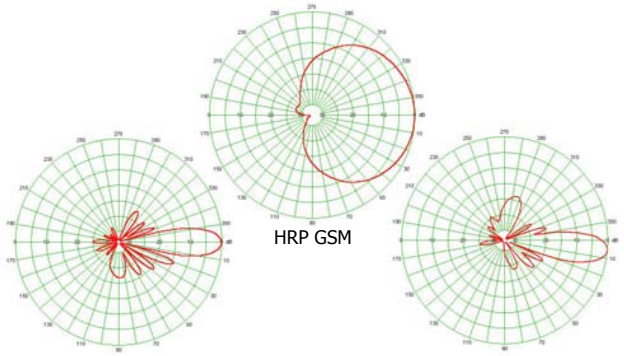
Polarisation	HBW	VBW	Fixed EDT	First USLS
X	70°	13°	0°, 2°, 4°, 6°	>18dB

AlanDick

70 DEGREE 15/13.5 dBi GAIN CROSS POLAR ANTENNA

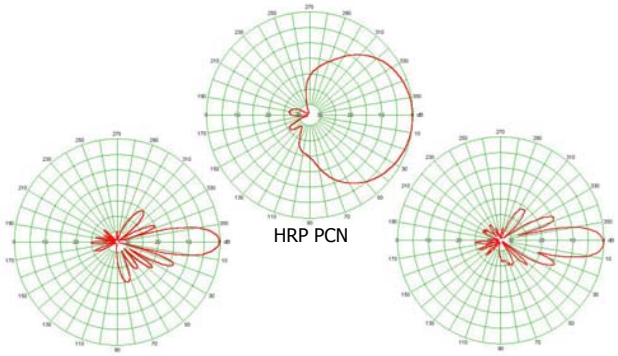
Model No.			XMN70-13
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15/13.5
Mechanical Specifications			
Input Connector			4 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1476 x 241 x 120
Windload @ 160km/h	Front	(N)	500
	Side	(N)	171
	Rear	(N)	545
Weight		(kg)	11.2
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

Electrical Specifications		870 - 960.	1710 - 1880.
Gain	(dBi)	15	13.5
Horizontal beamwidth, -3dB	(°)	72	65
Vertical beamwidth, -3dB	(°)	13	13
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>24	>25
Isolation between polarizations	(dB)	>30	>30
First upper side lobe suppression	(dB)	>18	>15
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100
Maximum power per input	(W)	250	200



VRP GSM @ 0°

VRP GSM @ 6°



VRP PCN @ 0°

VRP PCN @ 2°

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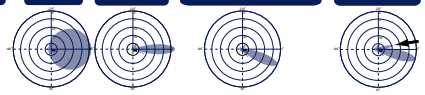
specifications without prior notice

Previously : DFX-MN70-13
Edition No: 3-04

870 - 960 MHz
1710 - 1880 MHz

Polarisation	HBW	VBW	Fixed EDT	First USLS
X	70°	13°	0°, 2°, 4°, 6°	>18dB

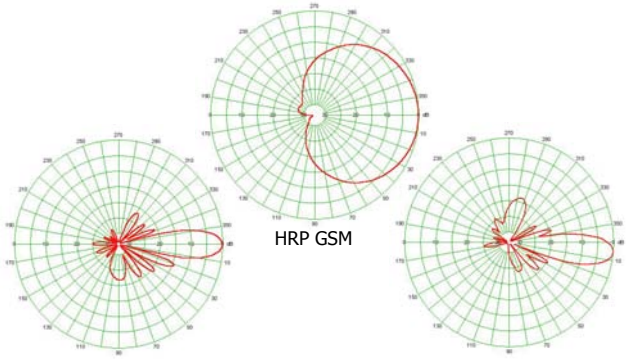


AlanDick

70 DEGREE DUPLEXED 15/13.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XMNI70-13
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15/13.5
Mechanical Specifications			
Input Connector			2 X 7.16 DIN Female
Connector Location			Bottom
Dimensions (HXWXD)		(mm)	1476 X 241 X 120
Windload @ 160km/h	Front	(N)	500
	Side	(N)	171
	Rear	(N)	545
Weight		(kg)	11.2
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

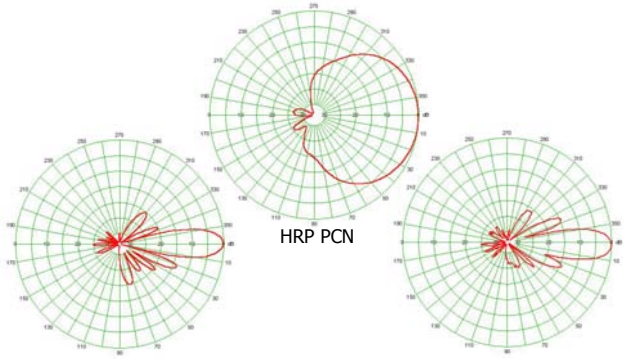
Electrical Specifications		870 - 960.	1710 - 1880.
Gain	(dBi)	15	13.5
Horizontal beamwidth, -3dB	(°)	72	65
Vertical beamwidth, -3dB	(°)	13	13
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>25
Isolation between polarizations	(dB)	>30	>30
First upper side lobe suppression	(dB)	>18	>18
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-107	<-107
Maximum power per input	(W)	250	200



HRP GSM

VRP GSM @ 0°

VRP GSM @ 6°



HRP PCN

VRP PCN @ 0°

VRP PCN @ 2°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : DFX-MNI70-13
Edition No: 3-04

870 - 960 MHz
1710 - 1880 MHz

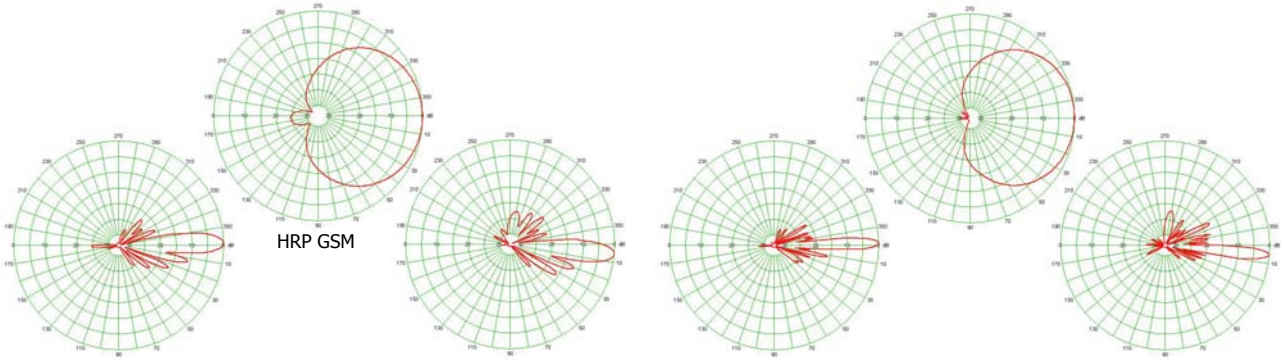
Polarisation	HBW	VBW	Fixed EDT	First USLS
X	72°	10°	0°, 2°, 4°, 6°	>20/18dB

AlanDick

72 DEGREE DUPLEXED 15.4/17.1 dBi GAIN CROSS POLAR ANTENNA

Model No.			XMNI72-10
Frequency		(MHz)	870 - 960 & 1710 - 1880
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15.4/17.1
Mechanical Specifications			
Input Connector			2 X 7.16 DIN Female
Connector Location			Bottom
Dimensions (HXWXD)		(mm)	2036 X 231 X 110
(With Optional Top & Bottom Endcaps		(mm)	2340 X 231 X 110)
Windload @ 160km/h	Front	(N)	680 (695)
	Side	(N)	200 (240)
	Rear	(N)	755 (790)
Weight			18 (19)
Lightning Protection			DC Grounded
Radome			GRP
			BS4800 00A 05

Electrical Specifications		870 - 960	1710 - 1880
Gain	(dBi)	15.4	17.1
Horizontal beamwidth, -3dB	(°)	72	72
Vertical beamwidth, -3dB	(°)	9.5	6
Fixed electrical downtilt	(°)	0, 2, 4, 6	0, 2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>28
Isolation between polarizations	(dB)	>30	>25 (>30 @ 1710 - 1817)
First upper side lobe suppression	(dB)	>20	>18
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.5 (<1.4 @ 1710 - 1817)
Intermodulation products (2nd & 3rd)	(dBm)	<-107	<-107
Maximum power per input	(W)	250	200



HRP GSM

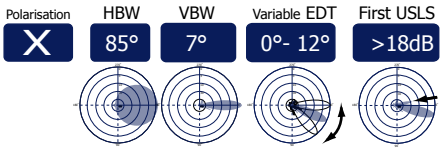
VRP GSM @ 0°

VRP GSM @ 6°

In pursuance of continual product improvement,
AlanDick reserve the right to change
specifications without prior notice

Previously : DFX-MNI72-10
Edition No: 3-04

870 - 960 MHz
1710 - 2170 MHz



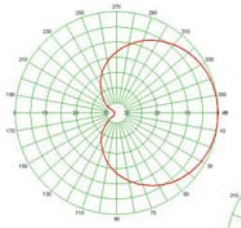
AlanDick

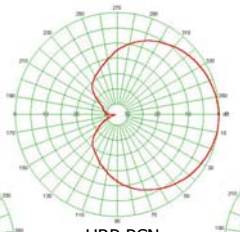
85 DEGREE 15.5 dBi GAIN CROSS POLAR ANTENNA WITH VARIABLE ELECTRICAL DOWNTILT

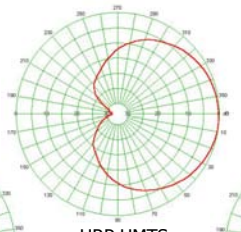
Model No.			XMW85-7-AA
Frequency		(MHz)	870 - 960 & 1710 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15.5
Mechanical Specifications			
Input Connector			4 X 7.16 DIN Female
Connector Location			Bottom
Dimensions (HXWXD)		(mm)	2367 X 268 X 180
Windload @ 160km/h	Front	(N)	818
	Side	(N)	462
	Rear	(N)	953
Weight		(kg)	23
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

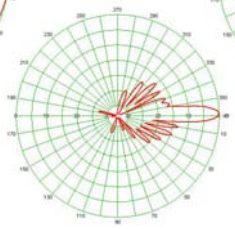
Electrical Specifications		870 - 960	1710 - 2170
Gain	(dBi)	15.5 ± 0.5	15.5 ± 0.5
Horizontal beamwidth, -3dB	(°)	88	88
Vertical beamwidth, -3dB	(°)	7	7
Variable electrical downtilt	(°)	0 - 12	0 - 10
Front to back ratio, co-polar	(dB)	>25	>30
Isolation between polarizations	(dB)	>25	>25
First upper side lobe suppression*	(dB)	>18	>18
Impedance	(Ohms)	50	50
Input VSWR		<1.4	<1.5
Intermodulation products (2nd & 3rd)	(dBm)	<-100	<-100
Maximum power per input	(W)	250	160

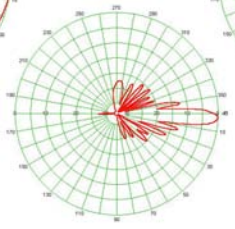
* Measured at centre of downtilt adjustment range

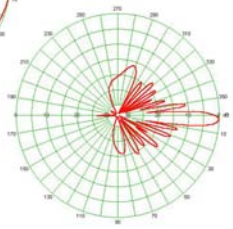

HRP GSM


HRP PCN


HRP UMTS


VRP GSM @ 0°


VRP PCN @ 2°


VRP UMTS @ 2°

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- Broadcast Solutions
- Enterprise Wireless Solutions
- Radar/Surveillance Solutions

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Tri Band Antenna Range

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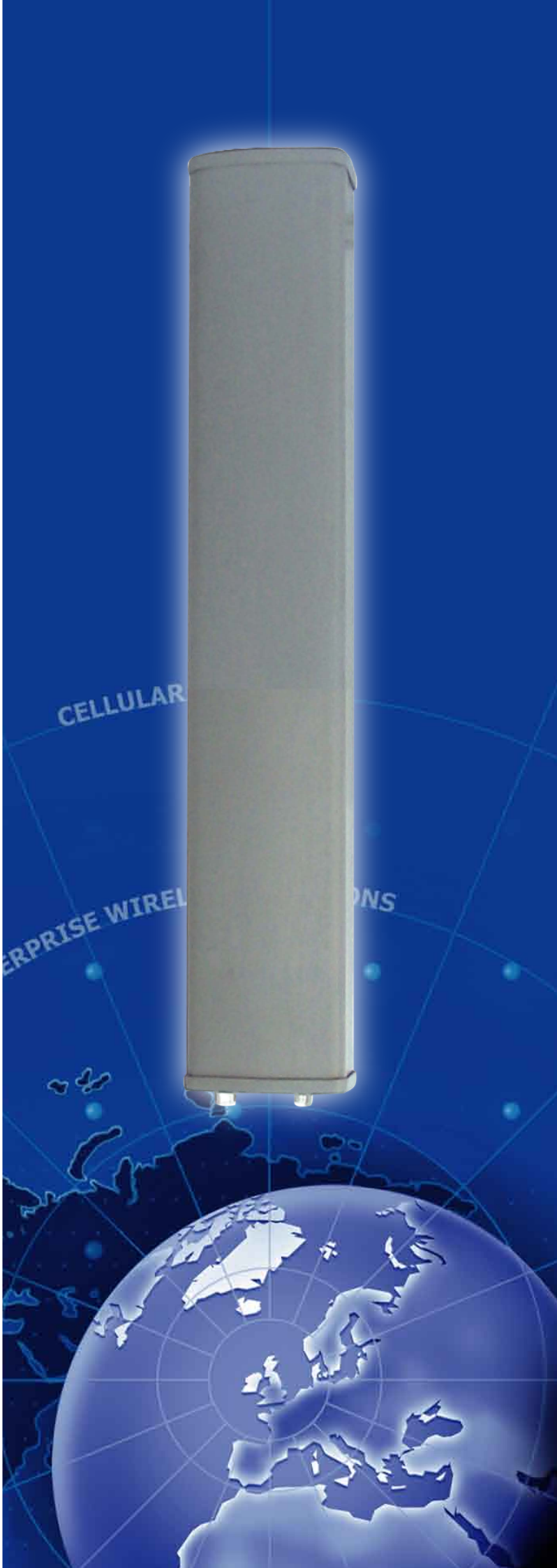
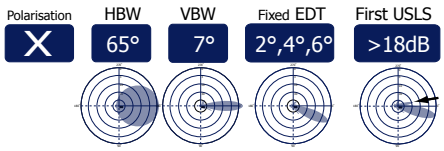
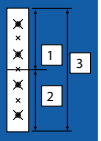


870 - 960 MHz
1710 - 1880 MHz
1900 - 2170 MHz

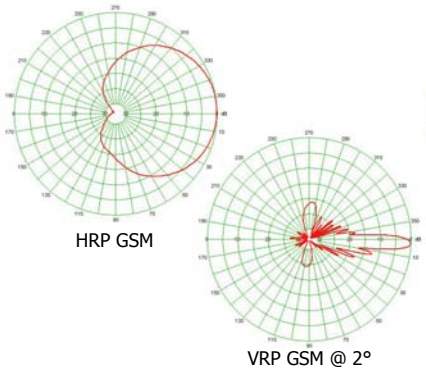


65 DEGREE 17.5 dBi GAIN CROSS POLAR ANTENNA

Model No.			XMWW65-7
Frequency	(MHz)		870 - 960 & 1710 - 1880 & 1900 - 2170
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	17.5
Mechanical Specifications			
Input Connector			6 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2638 x 268 x 180
Windload @ 160km/h	Front	(N)	911
	Side	(N)	515
	Rear	(N)	1062
Weight		(kg)	20
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

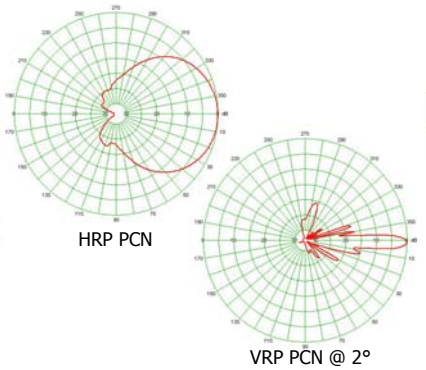


Electrical Specifications		870 - 960	1710 - 1880	1900 - 2170
Gain	(dBi)	17.5	17.5	17.5
Horizontal beamwidth, -3dB	(°)	67	60	63
Vertical beamwidth, -3dB	(°)	7.5	8	7
Fixed electrical downtilt	(°)	2, 4, 6	2, 4, 6	2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>30	>30
Isolation between polarizations	(dB)	>25	>30	>30
First upper side lobe suppression	(dB)	>18	>18	>18
First lower null-fill	(dB)	<25	<25	<25
Impedance	(Ohms)	50	50	50
Input VSWR		<1.4	<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100	<-100
Maximum power per input	(W)	250	160	160



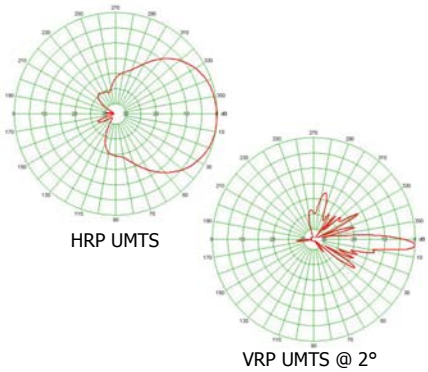
HRP GSM

VRP GSM @ 2°



HRP PCN

VRP PCN @ 2°



HRP UMTS

VRP UMTS @ 2°

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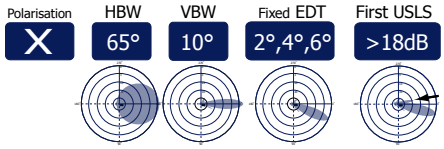
Edition No: 4-04

870 - 960 & 1710 - 1880 & 1990 - 2170 MHz HBW 65°

Tri Band Antenna Range

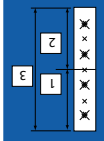
870 - 960 MHz
1710 - 1880 MHz
1900 - 2170 MHz



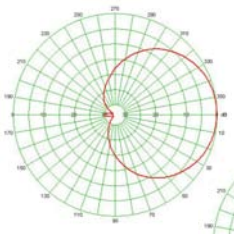
AlanDick

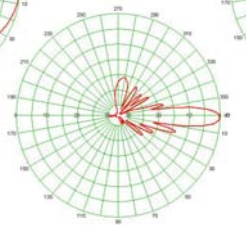
65 DEGREE 16.5/16/16 dBi GAIN CROSS POLAR ANTENNA

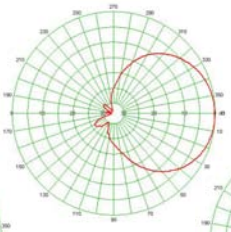
Model No.			XMWW65-10
Frequency	(MHz)		870 - 960 & 1710 - 1880 & 1900 - 2170
Polarisation			Cross Polar ±45°Slant
Gain		(dBi)	16.5/16/16
Mechanical Specifications			
Input Connector			6 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	2050 x 268 x 180
Windload @ 160km/h	Front	(N)	708
	Side	(N)	400
	Rear	(N)	825
Weight		(kg)	16
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

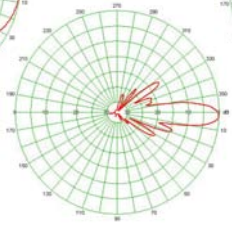


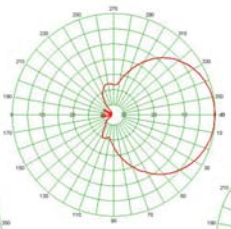
Electrical Specifications		870 - 960	1710 - 1880.	1900 - 2170
Gain	(dBi)	16.5	16	16
Horizontal beamwidth, -3dB	(°)	67	63	60
Vertical beamwidth, -3dB	(°)	9	11	9
Fixed electrical downtilt	(°)	2, 4, 6	2, 4, 6	2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>30	>30
Isolation between polarisations	(dB)	>25	>30	>30
First upper side lobe suppression	(dB)	>18	>18	>18
First lower null-fill	(dB)	<25	<25	<25
Impedance	(Ohms)	50	50	50
Input VSWR		<1.4	<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100	<-100
Maximum power per input	(W)	250	160	160

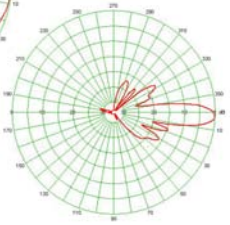

HRP GSM


VRP GSM @ 2°


HRP PCN


VRP PCN @ 2°


HRP UMTS


VRP UMTS @ 2°

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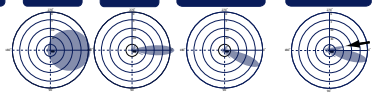
Edition No: 3-04

870 - 960 MHz
1710 - 1880 MHz
1900 - 2170 MHz

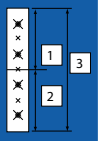
Polarisation	HBW	VBW	Fixed EDT	First USLS
X	65°	13°	2°,4°,6°	>18dB



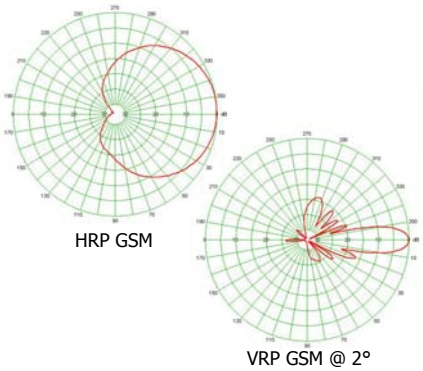
AlanDick

65 DEGREE 15.5/15/15 dBi GAIN CROSS POLAR ANTENNA

Model No.			XMWW65-13
Frequency	(MHz)	870 - 960 & 1710 - 1880 & 1900 - 2170	
Polarization			Cross Polar ±45°Slant
Gain		(dBi)	15.5/15/15
Mechanical Specifications			
Input Connector			6 x 7.16 DIN Female
Connector Location			Bottom
Dimensions (HxWxD)		(mm)	1541 x 268 x 180
Windload @ 160km/h	Front	(N)	480
	Side	(N)	245
	Rear	(N)	520
Weight		(kg)	14
Lightning Protection			DC Grounded
Radome			GRP
Standard Radome Colour (Pearl Grey)			BS4800 00A 05

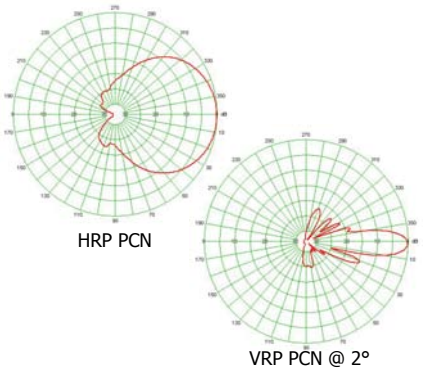


Electrical Specifications		870 - 960	1710 - 1880	1900 - 2170
Gain	(dBi)	15.5	15	15
Horizontal beamwidth, -3dB	(°)	67	60	63
Vertical beamwidth, -3dB	(°)	12	13	12
Fixed electrical downtilt	(°)	2, 4, 6	2, 4, 6	2, 4, 6
Front to back ratio, co-polar	(dB)	>25	>30	>30
Isolation between polarizations	(dB)	>25	>30	>30
First upper side lobe suppression	(dB)	>18	>18	>18
First lower null-fill	(dB)	<25	<25	<25
Impedance	(Ohms)	50	50	50
Input VSWR		<1.4	<1.4	<1.4
Intermodulation products (2^{nd} & 3^{rd})	(dBm)	<-100	<-100	<-100
Maximum power per input	(W)	250	160	160



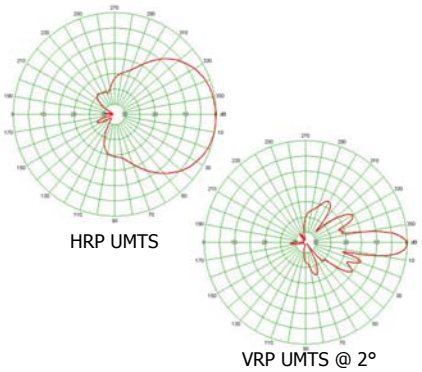
HRP GSM

VRP GSM @ 2°



HRP PCN

VRP PCN @ 2°



HRP UMTS

VRP UMTS @ 2°

In pursuance of continual product improvement, AlanDick reserve the right to change specifications without prior notice

Edition No: 3-04

870 - 960 & 1710 - 1880 & 1990 - 2170 MHz HBW 65°

Tri Band Antenna Range

Glossary

Beamtilt:	Electrical tilting of main antenna bean, usually down.
Beamwidth:	Is the total included angle to either side of the peak of the beam where the signal level is -3dB, or one-half that the beam peak power. This is also called the half-power beamwidth.
Cross Polar Discrimination:	Within a dual polarized system, the ratio of the cross polarized, or orthogonally polarized radiated signal to the co-polarised signal level at a particular direction.
Cross Polarisation or Slant Polarisation:	Slant Polalisation is a form of linear polarization where the electric field lies in a plane at 45 degrees to the horizontal.
dB (Decibel):	A dimensionless unit used to express the ratio of two powers, voltages…etc.
dBd:	Gain of antenna with respect to a half wave dipole.
dBi:	Gain of antenna with respect to an isotrope.
Directional:	Concentrates pattern in one direction.
Downtilt:	Se beamtilt, but also possible mechanically.
Dual Band:	Refers to the capacity of network infrastructure and handsets to operate across two frequency bands.
Front to Back Ratio:	Ratio of field strength @ 0^{o} (main beam) and 180°.
Gain:	The ratio of radiation intensity, in a given direction, to the radiation intensity that would be obtained if the power accepted by the antenna were radiated equally in all directions (isotropically).
GRP:	Glass reinforced plastic.
Horizontal Beamwidth (HBM):	See Beamwidth.
Horizontal Radiation Pattern (HRP):	Variation of signal versus azimuth in horizontal plane.
IMD:	Intermodulation Distortion: The presence of unwanted signals which are caused by interactions among two or more desired signals.
Impedance:	Usually expressed in ohms, the ratio of the applied voltage to the current flowing at a defined point, e.g. antenna input port. In general consists of a (real) resistive part which absorbs energy, and a reactive (imaginary) part which stores energy.
Intermodulation Products:	Products of modulation of the components of a complex wave by each other in a non linear system, producing waves having frequencies, amongst others, equal to the sums and differences of the components of the original wave.
Isolation:	The amount of decoupling that is present between two electrical networks, e.g. between the two parts of a dual polarised antenna.
Null Fill:	The redirection of energy from the main beam into the nulls otherwise occurring in the vertical pattern, thus improving coverage in these regions.
Omnidirectional:	Radiated equally in all directions.
PCB:	Printed Circuit Board.
Polalisation:	Horizontal (HP) or vertical (VP), describe the direction of the electric field in the plane at right angles to the direction of propagation.
Radiation Pattern:	Intensity of radiation as a function of direction, at a large constant distance from the antenna.
Side Lobe:	A radiation lobe in any direction other than that of the major lobe.
Tri Band:	Refers to the capability of network infrastructure and handsets to operate across three frequency bands.
UMTS:	Universal Mobile Telecommunications System. The European member of the IMT200 family of third generation cellular mobile standards.
Vertical Beamwidth (VBW):	See Beamwidth.
Vertical Radiation Pattern (VRP):	Variation of signal in a vertical plane, general aim is to cover as much as possible and avoid wasting energy.
VSWR:	Voltage Standing Wave Ratio, a measure on how well a load is matched to the transmission line characteristic impedance (Ƶo). It is the ratio between the maximum and minimum levels of the standing wave on the line.

Environmental Test Specifications

Humidity Test:	Carried out in line with the requirements of BS 2011: Part 2.1 Db, 1981 (Variant 2).
Vibration Test:	Carried out in line with the requirements of BS EN 60068 2-6: 1996, (IEC 68-2-6: 1995).
Rain Test:	Carried out in line with the requirements of BS EN 60529, 1992 IPx4, (IEC 68-2-18 Test RB2.2).
Salt Mist Test:	Carried out in line with the requirements of BS 2011: Part 2.1 Ka: 1982, (IEC 68-2-14: 1981).
Thermal Cycle Test:	Carried out in line with the requirements of BS 2011: Part 2.1 Nb: 1985, (IEC 68-2-14: 1984).
Low Temperature Test:	Carried out in line with the requirements of BS EN 60068-2-1 Ab Cold, 1993 -55 C° soak for 2 hours.
UV Exposure:	The antenna is subjected to 24 hours of UV exposure (xenon arc) before and after the Low Temperature Test.

Conversion Table

TO CONVERT	INTO	FACTOR
Centimeters	feet	x 0.0328
Centimeters	Inches	x 0.3937
Centimeters	Yards	x 0.0109
Meters	Yards	x 1.094
Kilometers	Miles	x 0.62137
Kilograms	Pounds	x 2.205
Kilograms	Stones	x 0.01968
Grams	Ounces	x 0.0353
Cubic centimeters	Cubic Inches	x 0.06102
Cubic centimeters	Liters	x 0.001
Cubic meters	Cubic	feet x 35.31
Cubic meters	Gallon (U.S. liq.)	x 264.2
Cubic meters	Pints (U.S. liq.)	x 2113.0
Ohm International	Ohm Absolute	x 1.0005
Degrees (angle)	Quadrants	x 0.01111
Degrees (angle)	Radians	x 0.01745
Degrees (angle)	Seconds	x 3600.0
Temperature (°C)	Absolute temperature (°K)	+ 273 v
Temperature (°C)	Temperature (°F)	(+ 17.78) x 1.8
Temperature (°F)	Absolute temperature (°F)	+ 460
Temperature (°F)	Temperature (°C)	(-32) x 5/9
dBd dBi + 2.15		

VSWR Conversion Table

VSWR	VOLTAGE REFLECTED BACK TO ANTENNA (%)	POWER REFLECTED BACK TO ANTENNA (%)	RETURN LOSS dB
1.0	0.0	0.0	*****
1.1	5.0	0.3	-26.4
1.2	9.0	0.8	-20.8
1.3	13.0	1.7	-17.7
1.4	17.0	2.9	-15.6
1.5	20.0	4.0	-14.0
1.6	23.0	5.3	-12.7
1.7	26.0	6.8	-11.7
1.8	29.0	8.4	-10.9
1.9	31.0	9.6	-10.2
2.0	33.0	10.9	-9.6
2.1	35.0	12.3	-9.0
2.2	38.0	14.4	-8.5
2.3	39.0	15.2	-8.1
2.4	41.0	16.8	-7.7
2.5	43.0	18.5	-7.4
2.6	44.0	19.4	-7.0
2.7	46.0	21.2	-6.8
2.8	47.0	22.1	-6.5
2.9	49.0	24.0	-6.2
3.0	50.0	25.0	-6.0

Index by Frequency

Frequency (MHz)	Model name	Polarisation	Horizontal Beamwidth (°)	Vertical Beamwidth (°)	Gain (dBi)	Tilt (°)	Page
820-900	XA33-7	Cross Polar	33	33	20	Fixed	24
820-900	XA45-8.5	Cross Polar	45	8.5	18	2°, 4°, 6°	29
820-900	XA65-7	Cross Polar	65	7	17.6	Fixed	31
820-900	XA65-10	Cross Polar	65	10	16.5	Fixed	32
820-900	XA65-13	Cross Polar	65	13	15	Fixed	33
820-900	XA85-7	Cross Polar	85	7	16.2	Fixed	58
820-900	XA85-10	Cross Polar	85	10	15	Fixed	59
820-900	VA33-7	Vertical	33	7	20.0	Fixed	10
820-900	VA65-7	Vertical	65	7	17.7	Fixed	13
820-900	VA65-8-A	Vertical	65	8	16.7	2° - 8°	14
820-900 & 870-960	VAM85-7	Vertical	85	7	16.5	Fixed	21
820-900 & 1850-1900	XCS65-13/6	Cross Polar	65	13/6	16/16.5	Fixed	72
820-900 & 1850-1900	XCS65-32/18	Cross Polar	65	32/18	13/11	Fixed	73
870-960	XM33-7	Cross Polar	33	7	20.5	Fixed	25
870-960	XM33-15	Cross Polar	33	15	18.5	Fixed	26
870-960	XM45-7	Cross Polar	45	7	19	Fixed	30
870-960	XM65-7	Cross Polar	65	7	18	Fixed	34
870-960	QXM65-7	Cross Polar	65	7	18	Fixed	66
870-960	XM65-10	Cross Polar	65	10	16.8	Fixed	35
870-960	XM65-10-A	Cross Polar	65	10	16	2°- 8°	36
870-960	XM65-13	Cross Polar	65	13	15.4	Fixed	37
870-960	XM65-15-A	Cross Polar	65	15	14.5	2° - 12°	38
870-960	XM65-21	Cross Polar	65	21	14	Fixed	39
870-960	XM65-21-AA(BB)	Cross Polar	65	21	13	2° -15°/7° -20°	40
870-960	XM65-35	Cross Polar	65	33	11.5	Fixed	41
870-960	XM68-8	Cross Polar	68	8	17.5	Fixed	53
870-960	XM72-10	Cross Polar	72	10	16.3	Fixed	54
870-960	XM72-13	Cross Polar	72	13	15	0°, 4°, 6°, 12°	55
870-960	XM72-21	Cross Polar	72	21	13	4°, 7°, 15°	56
870-960	XM75-75	Cross Polar	75	75	8.7	0°	57
870-960	XM85-7	Cross Polar	85	7	16.5	Fixed	60
870-960	XM85-8	Cross Polar	85	8	16.5	Fixed	61
870-960	XM85-10	Cross Polar	85	10	15	Fixed	62
870-960	VM33-7	Vertical	33	7	20.5	Fixed	11
870-960	VM45-7	Vertical	45	7	19.5	Fixed	12
870-960	VM65-7	Vertical	65	7	18.0	Fixed	15
870-960	VM65-8-A	Vertical	65	8	17.0	2° - 8°	16
870-960	VM65-28	Vertical	65	28	12.2	Fixed	17
870-960 & 1710-1880	XLMN65-7	Cross Polar	65	7	17.7	Fixed	74
870-960 & 1710-1880	XLMNI65-7	Cross Polar	65	7	17.7	Fixed	75
870-960 & 1710-1880	XMN65-7/5	Cross Polar	65	7/5	17.8/17	Fixed	76
870-960 & 1710-1880	XMNI65-7/5	Cross Polar	65	7/5	17.8/17	Fixed	77
870-960 & 1710-1880	XMN65-21/13	Cross Polar	65	21/13	14/13.5	Fixed	78
870-960 & 1710-1880	XMNI65-21/13	Cross Polar	65	21/13	13.8/13.3	Fixed	79
870-960 & 1710-1880	XMNI70-10	Cross Polar	70	10	16	Fixed	83
870-960 & 1710-1880	XMN70-13	Cross Polar	70	13	15/13.5	Fixed	84
870-960 & 1710-1880	XMNI70-13	Cross Polar	70	13	15/13.5	Fixed	85
870-960 & 1710-1880	XMNI72-10	Cross Polar	72	10	15.4/17.1	Fixed	86
870-960 & 1710-2170	XMW65-7/6-AA	Cross Polar	65	7/6	16.5	0° - 10°	80
870-960 & 1710-2170	XMW65-35	Cross Polar	65	35	11.5/12.5	Fixed	81
870-960 & 1710-2170	XMW85-7-AA	Cross Polar	85	7	15.5	0° - 12°	87
870-960 & 1710-1880 & 1900-2170	XMWW65-7	Cross Polar	67/60/63	7.5/8/7	17.5/17.5/17.5	Fixed	90
870-960 & 1710-1880 & 1900-2170	XMWW65-10	Cross Polar	67/63/60	9/11/9	16.5/16/16	Fixed	91
870-960 & 1710-1880 & 1900-2170	XMWW65-13	Cross Polar	67/60/63	12/13/12	15.5/15/15	Fixed	92
1710-1880	XN33-7	Cross Polar	33	7	20.5	Fixed	27
1710-1880	XN65-7	Cross Polar	65	7	18	Fixed	42
1710-1880	XN65-7-A	Cross Polar	65	7	17.5	0° - 10°	43
1710-1880	XN65-13	Cross Polar	65	13	15	Fixed	44
1710-1880	XN65-13-A	Cross Polar	65	13	14	0° - 10°	45
1710-1880	XN85-7	Cross Polar	85	7	16	Fixed	63
1710-1880	VN65-7	Vertical	65	7	18.0	Fixed	18
1710-1880	VN65-13	Vertical	65	13	15.5	Fixed	19
1710-1880	VN65-28	Vertical	65	28	12.0	Fixed	20
1850-1990	XS65-28	Cross Polar	65	28	12.1	Fixed	46
1850-1990	QSX65-14	Cross Polar	65	14	15	Fixed	67
1850-1990 & 1900-2170	XSU65-14	Cross Polar	65	14	15	4°	82
1710-2170	XW33-7	Cross Polar	33	7	20.5	Fixed	28
1710-2170	XW65-5	Cross Polar	65	5	18/18.5	Fixed	47
1710-2170	XW65-7	Cross Polar	65	7	16.5/17.5	Fixed	48
1710-2170	XW65-7-A	Cross Polar	65	7	17/17.5	0° - 10°	49
1710-2170	XW65-10	Cross Polar	65	10	16.5	Fixed	50
1710-2170	XW65-10-A	Cross Polar	65	10	15.6/16.2	0° - 12°	51
1710-2170	XW65-13	Cross Polar	65	13	15/16	Fixed	52
1710-2170	QXW65-7	Cross Polar	65	7	17	Fixed	67
1710-2170	QXW65-7-A	Cross Polar	65	7	17/17.5	0° - 10°	68

* Fixed = Electrical downtilt 0, 2, 4, 6 degree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