



Horizon II *macro* Indoor

Motorola's Horizon II *macro* Indoor GSM base station combines renowned RF design; field proven technology and system flexibility, to create a space efficient and future capable solution

The Horizon II *macro* Indoor platform is a highly scaleable, small footprint solution. Using Motorola's CTU4 multi-carrier radio, the Horizon II *macro* becomes a high capacity GSM base station with up to 36 carriers within the cabinet and further expansion beyond.

Benefits

Adaptable and Robust

The Horizon II *macro* supports GPRS, EDGE, and Evolved EDGE. With the addition of a mounting bracket and Motorola's "zero foot print" solutions the Horizon II *macro* is also capable of supporting UMTS, HSPA and LTE, increasing the future value to this proven platform.

The Horizon II *macro* Indoor provides service providers with peace of mind when it comes to system availability and maintaining high quality of service. Motorola's highly reliable platforms and common use of system Field Replaceable Units means that inventory can be optimized and network OPEX managed effectively.

The Horizon II *macro* offers fully sectored dual band 900/1800 configurations with up to 36 GSM carriers within the cabinet. Furthermore using a mounting system, Horizon II *macro* cabinets can also be stacked; meaning that up to 72 GSM carriers may be deployed without requiring any additional floor space.

Flexible Performance

The Horizon II *macro* Indoor is a highly capable and flexible base station; utilizing Motorola's CTU2D radio with the HIISC2 site controller, to provide entry level GSM coverage with high performance and reliability and the CTU4 multi-carrier radio with the BBU site controller to support increased capacity and future data capability with Evolved EDGE.

Motorola's CTU2D and CTU4 radios operate in either the EGSM900 or GSM1800 bands; support GSM Half Rate, Adaptive Multi-Rate (AMR), GPRS and EDGE technologies. The CTU4 is also capable of supporting Evolved EDGE and LTE.

Expansion Beyond the Cabinet

Utilizing Motorola's remote radio head unit, the RCTU4, carrier capacity can be expanded further with the addition of up to six additional RF heads, offering the possibility of 36 further carriers depending on the BBU site controller loading. The RCTU4s can also be located to distances over 20km away, via the fast fiber connection to the base station, offering even more flexibility to this versatile base station.

Specifications

Guidelines

The Site controller configuration provides the total number of carriers available at a site and is dictated by service class, the software load and network elements of the end to end system.

(Numbers shown for Full Rate GSM under a Horizon 2G RAN Controller)

Additional in-cabinet radio numbers can be provided via daisy chaining of ancillary cabinets under the control of a single "master" base station.

For CTU4 and RCTU4 the maximum RF output powers are stated as MC-BTS Class I and the maximum radio carriers are stated as MC-BTS Class II.

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Size: 870mm (H) x 700mm (W) x 430mm (D)
Weight: ≤135kg (fully populated)
Power Supply: +27VDC, -48/60VDC, 88 to 264VAC
Power Consumption: 2.4kW (typical peak)
Operational Environment: -5°C to 50°C
ETSI EN 300 019-1-3 Class 3.2 Operator Indoor
ETSI EN 300 019-1-1 Class 1.3E Storage
ETSI EN 300 019-1-2 Class 2.3 Transport
Type Approval:
Type Approval: ETSI EN 301-502
EMC: ETSI EN 301 489-8
Safety: EN60215, IEC60215, EN60950, IEC60950, EN50385, IEC50385
Environmental Approval:
2002/95/EC Restriction of the use of certain hazardous substances in electrical and electronic equipment
2002/96/EC waste electrical and electronic equipment WEEE
94/62/EC Packaging and packaging waste
Maximum Number In-Cabinet Radios: 6

Site Controller Configurations

Maximum Number Site Controllers: 2
Maximum Number Carriers:
HIISC2 (CTU2D only): 48
BBU (CTU2D): 48
BBU (R/CTU4): 48
BBU (Total): 72

Radio Configurations

Per CTU2D In-Cabinet Radio

Maximum Number Carriers: 2
Number Sectors: 1
Maximum RF Output Power <i>EGSM900</i> :
Single Carrier: 63W
Double Carrier: 20W
Double EDGE: 10W
Maximum RF Output Power <i>GSM1800</i> :
Single Carrier: 50W
Double Carrier: 16W
Double EDGE: 8W
Receive Sensitivity:
EGSM900: -112.5dBm
GSM1800: -113.5dBm

Per CTU4 In-Cabinet Radio

Maximum Number Carriers: 6
Number Sectors: 1
Maximum RF Output Power <i>EGSM900</i> :
Single Carrier: 40W
Multi Carrier: 20W
Multi EDGE: 15W
Multi E-EDGE: 10W
Maximum RF Output Power <i>GSM1800</i> :
Single Carrier: 32W
Multi Carrier: 16W
Multi EDGE: 12W
Multi E-EDGE: 8W
Receive Sensitivity:
EGSM900: -112.5dBm
GSM1800: -113.3dBm

Per RCTU4 Remote Radio Head

Maximum Number Carriers: 6
Number Sectors: 1
Maximum RF Output Power <i>EGSM900</i> :
Single Carrier: 40W
Multi Carrier: 20W
Multi EDGE: 15W
Multi E-EDGE: 10W
Maximum RF Output Power <i>GSM1800</i> :
Single Carrier: 32W
Multi Carrier: 16W
Multi EDGE: 12W
Multi E-EDGE: 8W
Receive Sensitivity:
EGSM900: -112.8dBm
GSM1800: -113.6dBm



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