

# ATR4518R11

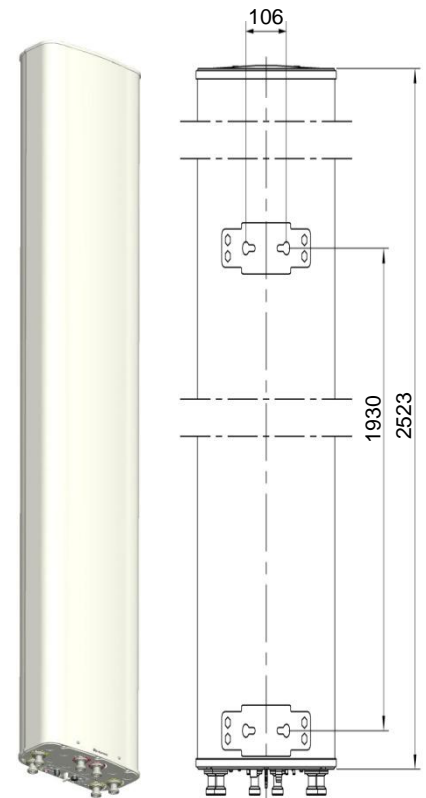
DXXX-690-960/1710-2690/1710-2690-65/65/65-17i/18i/18i-M/M/M-R  
EasyRET Tri-Band Antenna with 3 Integrated RCUs - 2.6m



## Antenna Specifications

| Electrical Properties   |   |         |      |           |      |      |           |      |      |           |      |      |                                   |         |      |             |      |      |             |      |      |             |      |      |  |
|---|---|---------|------|-----------|------|------|-----------|------|------|-----------|------|------|-----------------------------------|---------|------|-------------|------|------|-------------|------|------|-------------|------|------|--|
| Frequency range (MHz)   | 690 - 960   |         |      |           |      |      |           |      |      |           |      |      | 2 x (1710 - 2690)                 |         |      |             |      |      |             |      |      |             |      |      |  |
|   | 690 - 803   |         |      | 790 - 862 |      |      | 824 - 894 |      |      | 880 - 960 |      |      | 1710 - 1990                       |         |      | 1920 - 2200 |      |      | 2200 - 2490 |      |      | 2490 - 2690 |      |      |  |
| Polarization  | +45°, -45°  |         |      |           |      |      |           |      |      |           |      |      |                                   |         |      |             |      |      |             |      |      |             |      |      |  |
| Electrical downtilt (°)   | 0 - 10, continuously adjustable, each band separately |         |      |           |      |      |           |      |      |           |      |      |                                   |         |      |             |      |      |             |      |      |             |      |      |  |
| Gain (dBi)  | 0°  | 5°      | 10°  | 0°        | 5°   | 10°  | 0°        | 5°   | 10°  | 0°        | 5°   | 10°  | 0°                                | 5°      | 10°  | 0°          | 5°   | 10°  | 0°          | 5°   | 10°  | 0°          | 5°   | 10°  |  |
|   | 16.2  | 16.5    | 16.4 | 16.4      | 16.7 | 16.7 | 16.5      | 16.8 | 16.7 | 16.7      | 17.0 | 16.8 | 17.0                              | 17.1    | 17.0 | 17.5        | 17.5 | 17.3 | 17.8        | 17.8 | 17.4 | 18.1        | 18.3 | 18.0 |  |
| Side lobe suppression for first side lobe above main beam (Typ.) (dB) | 0°  | 5°      | 10°  | 0°        | 5°   | 10°  | 0°        | 5°   | 10°  | 0°        | 5°   | 10°  | 0°                                | 5°      | 10°  | 0°          | 5°   | 10°  | 0°          | 5°   | 10°  | 0°          | 5°   | 10°  |  |
|   | 18  | 17      | 16   | 18        | 17   | 17   | 18        | 17   | 16   | 18        | 17   | 16   | 18                                | 18      | 18   | 18          | 18   | 18   | 18          | 18   | 18   | 18          | 18   | 18   |  |
| Horizontal 3dB beam width (°)   | 66  |         |      | 66        |      |      | 65        |      |      | 65        |      |      | 65                                |         |      | 64          |      |      | 63          |      |      | 62          |      |      |  |
| Vertical 3dB beam width (°)   | 9.0   |         |      | 8.3       |      |      | 7.5       |      |      | 7.2       |      |      | 7.1                               |         |      | 6.5         |      |      | 5.8         |      |      | 5.3         |      |      |  |
| VSWR  | < 1.5   |         |      |           |      |      |           |      |      |           |      |      |                                   |         |      |             |      |      |             |      |      |             |      |      |  |
| Isolation between ports (dB)  | Intra-system: ≥ 28                                    |         |      |           |      |      |           |      |      |           |      |      | Inter-system: ≥ 30                |         |      |             |      |      |             |      |      |             |      |      |  |
| Front to back ratio, co polar (dB)                                    | Typ. 27   |         |      |           |      |      |           |      |      |           |      |      | Typ. 27                           |         |      |             |      |      |             |      |      |             |      |      |  |
| Cross polar ratio (dB)  | 0°  | Typ. 18 |      |           |      |      |           |      |      |           |      |      |                                   | Typ. 18 |      |             |      |      |             |      |      |             |      |      |  |
| Max. power per input (W)  | 500 (at 50°C ambient temperature)                     |         |      |           |      |      |           |      |      |           |      |      | 250 (at 50°C ambient temperature) |         |      |             |      |      |             |      |      |             |      |      |  |
| Intermodulation IM3 (dBc)   | ≤ -153 (2 x 43 dBm carrier)                           |         |      |           |      |      |           |      |      |           |      |      |                                   |         |      |             |      |      |             |      |      |             |      |      |  |
| Impedance (Ω)   | 50  |         |      |           |      |      |           |      |      |           |      |      |                                   |         |      |             |      |      |             |      |      |             |      |      |  |
| Grounding   | DC Ground   |         |      |           |      |      |           |      |      |           |      |      |                                   |         |      |             |      |      |             |      |      |             |      |      |  |

| Mechanical Properties               |  |
|-------------------------------------|--|
| Antenna dimensions (H x W x D) (mm) | 2523 x 359 x 178   |
| Packing dimensions (H x W x D) (mm) | 2900 x 430 x 255   |
| Antenna weight (kg)                 | 32.3   |
| Clamps weight (kg)                  | 3.6 (2 units)  |
| Antenna packing weight (kg)         | 49.0 (included clamps)   |
| Mast diameter supported (mm)        | 50 - 115   |
| Radome material                     | Fiberglass   |
| Radome colour                       | Light grey   |
| Operational temperature (°C)        | -40 .. +65   |
| Wind load (N)                       | Frontal: 1200 (at 150 km/h)<br>Lateral: 325 (at 150 km/h)<br>Rear side: 1000 (at 150 km/h) |
| Max. operational wind speed (km/h)  | 150  |
| Survival wind speed (km/h)          | 200  |
| Connector                           | 6 x 7/16 DIN Female  |
| Connector position                  | Bottom   |



## Accessories

| Item         | Model     | Description                 | Weight | Units per antenna    |
|--------------|-----------|-----------------------------|--------|----------------------|
| Downtilt kit | ASMDT0D01 | Mechanical downtilt: 0 - 8° | 2.0 kg | 1 (Separate packing) |

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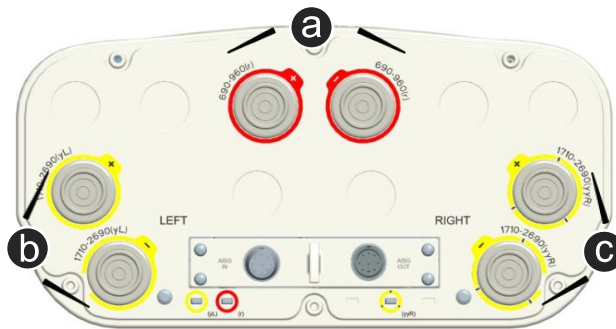
## Integrated RCU Specifications

| Properties                       |  |     |         |     |         |    |           |     |
|----------------------------------|--|-----|---------|-----|---------|----|-----------|-----|
| RET type                         | Integrated RET   |     |         |     |         |    |           |     |
| RET protocols*                   | AISG 2.0 / 3GPP  |     |         |     |         |    |           |     |
| Input voltage range (V)          | 10 - 30 DC   |     |         |     |         |    |           |     |
| Power consumption (W)            | < 6 (motor activated, 12V)<br>< 1.5 (stand by, 12V)  |     |         |     |         |    |           |     |
| Adjustment time (full range) (s) | < 65 (typically, depending on antenna type)  |     |         |     |         |    |           |     |
| RET connector                    | 2 x 8 pin connector according to IEC 60130-9<br>Daisy chain in: Male / Daisy chain out: Female |     |         |     |         |    |           |     |
| Pin assignment according AISG    | 1  | 2   | 3       | 4   | 5       | 6  | 7         | 8   |
|                                  | DC   | n/c | RS-485B | n/c | RS-485A | DC | DC return | n/c |
| Lightning protection (kA)        | 3 (10/350 $\mu$ s)<br>10 (8/20 $\mu$ s)  |     |         |     |         |    |           |     |

\* Please confirm the AISG protocol of primary station is compatible with RET antenna protocol interface. The protocol of RET antenna software interface is switchable between AISG 2.0/3GPP and AISG 1.1 with a vendor defined command. For more details about protocol switching function, contact Huawei before system installation.

**Standards:** EN 60950-1 (Safety), EN 55022 (Emission), EN 55024 (Immunity), ETSI EN300386 (1.4.1), FCC part15

**Certification:** CE, FCC, RoHS, WEEE



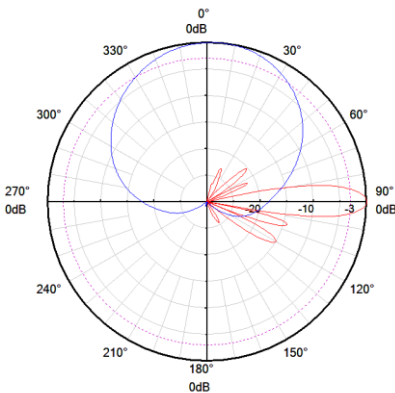
**Integrated RET S/N:**

- a** HWMxxx.....r
- b** HWMxxx....yL
- c** HWMxxx..yyR

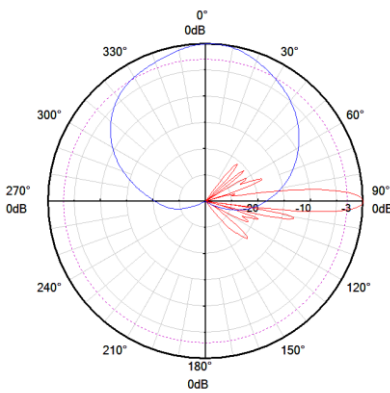
r - Red  
L - Left array

y - Yellow  
R - Right array

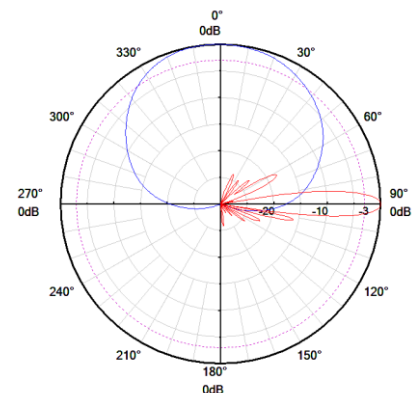
### Pattern sample for reference



690 - 960 MHz



1710 - 2690 MHz  
(Left)



1710 - 2690 MHz  
(Right)

### NOTE

1. Facilities, such as towers and poles, must bear the weight and wind load of antennas.
2. HUAWEI 's standard brackets and accessories must be used for any installation.
3. The antenna working environment must meet the requirements specified in the datasheet.
4. Only qualified personnel are allowed to perform installation. Installation tools and procedures must conform to requirements described in the antenna installation guide.