

## TRISECTOR PENTABAND 1x 698-960 MHz, 4x 1710-2690 MHz

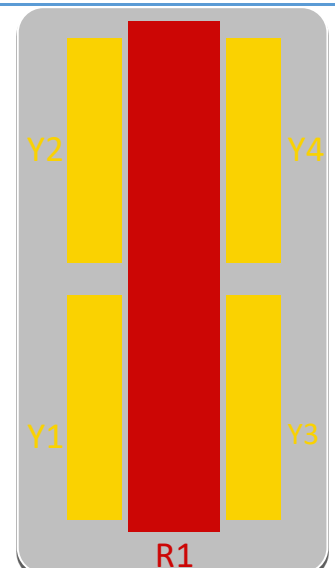
- Reinforced antenna
- 5G ready
- Diameter 450 mm
- Internal RET

### RF Electrical specifications\*

| Frequency Range (MHz)                        |                 | 698-790 | 792-862 | 880-960 | 1710-1880 |       | 1920-2170 | 2500-2690 |       |       |
|--|-----------------|---------|---------|---------|-----------|-------|-----------|-----------|-------|-------|
| Cluster Name                                 |                 | R1      |         |         | Y1 // Y3  |       | Y2 // Y4  |           |       |       |
| Gain (dBi)                                   | Min Tilt        | 16,4    | 16,2    | 16,5    | 16,6      | 17,1  | 18,9      | 16,1      | 16,8  | 18,4  |
|  | Mid Tilt        | 16,6    | 16,7    | 16,8    | 16,9      | 17,6  | 19,1      | 16,4      | 17,0  | 18,7  |
|  | Max tilt        | 16,3    | 16,4    | 16,3    | 16,8      | 17,4  | 18,8      | 16,3      | 16,9  | 18,4  |
|  | Over all Tilts: |         |         |         |           |       |           |           |       |       |
|  | Average         | 16,4    | 16,4    | 16,5    | 16,8      | 17,4  | 19,0      | 16,3      | 16,9  | 18,5  |
| Azimuth Beamwidth (deg)                      | Tolerance       | 0,4     | 0,3     | 0,4     | 0,7       | 0,6   | 0,5       | 0,5       | 0,6   | 0,5   |
|  | Average         | 62,5    | 63,0    | 63,8    | 64,65     | 65,15 | 51,35     | 64,65     | 65,15 | 51,35 |
| Elevation Beamwidth (deg)                    | Tolerance       | 3,4     | 2,5     | 2,7     | 6,60      | 4,00  | 2,65      | 6,60      | 4,00  | 2,65  |
|  | Average         | 9,1     | 7,7     | 6,9     | 6,9       | 6,2   | 5,0       | 6,9       | 6,2   | 5,0   |
| Elevation Downtilt Deviation (deg)           | Tolerance       | 0,2     | 0,3     | 0,6     | 0,5       | 0,5   | 0,3       | 0,5       | 0,5   | 0,3   |
|  | Average         | <0,2    | <0,4    | <0,4    | <0,6      | <0,2  | <0,4      | <0,6      | <0,2  | <0,4  |
| First Upper Sidelobe level                   |                 | >18     | >17     | >12     | >17       | >17   | >15       | >17       | >17   | >15   |
| Upper Sidelobe Level peak to 20° above (dB)  |                 | >18     | >18     | >13     | >17       | >17   | >15       | >17       | >17   | >15   |
| Cross Polar Discrimination at Boresight (dB) |                 | >17     | >23     | >20     | >17       | >18   | >22       | >17       | >18   | >22   |
| Cross Polar Discrimination Over Sector (dB)  |                 | >6      | >9      | >6      | >8        | >9    | >6        | >8        | >9    | >6    |
| Front to Back Ratio total power ±30° (dB)    |                 | >24     | >24     | >23     | >25       | >26   | >23       | >25       | >26   | >23   |
| Cross Polar Isolation (dB)                   |                 | >29     | >29     | >29     | >27       | >27   | >27       | >27       | >27   | >27   |
| Interband isolation (dB)                     |                 | >28     |         |         |           |       |           |           |       |       |
| Polarization (deg)                           |                 | ±45     |         |         |           |       |           |           |       |       |
| Electrical Downtilt (deg)                    |                 | 2–12    |         |         |           |       |           |           |       |       |
| Impedance (Ω)                                |                 | 50      |         |         |           |       |           |           |       |       |
| VSWR   |                 | < 1.5:1 |         |         |           |       |           |           |       |       |
| PIM, 2x43dBm (dBc)                           |                 | < -153  |         |         |           |       |           |           |       |       |
| Max. Effective Power per Port (W)            |                 | 300     |         |         |           |       |           |           |       |       |

\* All specifications are subject to change without notice. Refer to TELNET for the most current information.

\* All specifications are based on NGMN recommendations on Base Station Antenna Standards (BASTA).



## Mechanical specifications

|   |                                  |
|---|----------------------------------|
| Antenna Dimensions: Height/Diameter (mm)              | 2865 + 300 x 635                 |
| Packing Size: Height/Width/Depth (mm)                 | 3266 x 751 x 757                 |
| Net Weight (kg)                                       | 320                              |
| Shipping Weight (kg)                                  | 358                              |
| Connector Quantity                                    | 30 (3x10)                        |
| Connector Type  | 7/16 or 4.3-10 female connectors |
| Connector Position                                    | Bottom                           |
| Wind Load Frontal (N @ 150 KMH)                       | 1674                             |
| Wind Load Lateral (N @ 150 KMH)                       | 1674                             |
| Wind Load Rear (N @ 150 KMH)                          | 1674                             |
| Survival wind speed (km/h)                            | 200                              |
| Azimuth (Full antenna / Per Sector)                   | ± 50° / ± 0°                     |
| Radome Material                                       | Fiber glass + polyester          |
| Radome Colour   | RAL9018                          |
| Mechanical Distance between Mounting Points - Antenna | N/A                              |
| Mechanical Distance between Mounting Points - Pole    | N/A                              |
| Lightning Protection                                  | DC grounded                      |



## TELNET RET

|   |  |
|---|--|
| RET Type  | Internal   |
| Actuator standalone size: Height / Width / Depth (mm) | Inside the antenna                                       |
| Actuator installed size: Height / Width / Depth (mm)  | Inside the antenna                                       |
| Working temperature range (°C)                        | -33 – 70   |
| Power consumption (W)                                 | 1 – 10   |
| Loss of position on power failure                     | False  |
| Compatible standards                                  | 3GPP/AISG 2.0  |
| Configuration management                              | Integrated RET, pre-configured.                          |
| Antenna configuration file availability               | True   |
| Antenna configuration file upgradability              | Yes, by base station and proprietary portable controller |
| Software upgradability                                | Yes, by portable controller only.                        |
| Replaceability in field                               | Yes, without removing antenna.                           |
| Visual indicator available on tilt change             | True   |
| Daisy chain available                                 | True   |


## TRA990A15Rx0y ordering codes:

|            |  |
|------------|--|
| <b>Rx:</b> | <ul style="list-style-type: none"> <li>• <b>RU:</b> Antenna with INTERNAL RET in all bands + one AISG control interface</li> <li>• <b>RI:</b> Antenna with INTERNAL RET in all bands + two AISG control interfaces</li> <li>• <b>RP:</b> Antenna ready for INTERNAL RET installation in all bands and one or two AISG control interfaces. Motors and electronics can be installed afterwards (without uninstalling antenna)</li> </ul> |
| <b>Oy:</b> | <ul style="list-style-type: none"> <li>• <b>00:</b> Antenna with 7/16 connectors</li> <li>• <b>01:</b> Antenna with 4.3-1 connectors</li> </ul>  |


\* By default, all antennas are supplied with trisector configuration and white colour (RAL9018). For different colours and sector configurations, contact TELNET Redes Inteligentes.

## RET Cabling recommendations:

### Cabling for daisy chain connexion between sectors

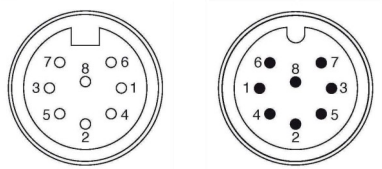
|                   |  |  |
|-------------------|--|--|
| Telnet cable code | TNR215xxx (where xxx is the length of the cable) |  |
| Connector 1       | IEC 60130-9, female connector                    |  |
| Connector 2       | IEC 60130-9, male connector                      |  |
| Length            | 500mm  |  |

### Cabling between RETs and BTS/RRU

|                   |  |  |
|-------------------|--|--|
| Telnet cable code | TNR215xxx (where xxx is the length of the cable) |  |
| Connector 1       | IEC 60130-9, female connector                    |  |
| Connector 2       | IEC 60130-9, male connector                      |  |
| Length            | From 1m to 150m                                  |  |

### Pin assignment

|          |                |
|----------|----------------|
| <b>1</b> | Not connected  |
| <b>2</b> | Not connected  |
| <b>3</b> | RS485 B        |
| <b>4</b> | Not connected  |
| <b>5</b> | RS485 A        |
| <b>6</b> | +10V - +30V DC |
| <b>7</b> | DC Return      |
| <b>8</b> | Not connected  |

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