

## TRISECTOR TRIBAND 1x 698-960 MHz, 2x 1710-2690 MHz

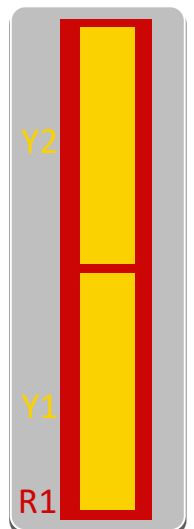
- Compact Antenna
- Diameter 450 mm
- Internal RET
- Azimuth per sector:  $\pm 10^\circ$

### RF Electrical specifications\*

Frequency Range (MHz)		698-790	792-862	880-960	1710-1880			1920-2170		2500-2690	
Cluster Name		R1			Y1			Y2			
Gain (dBi)	Min Tilt	15,7	16,4	16,3	17,2	17,3	17,3	16,6	16,3	16,5	
	Mid Tilt	15,9	16,6	16,6	17,1	17,5	18,0	16,7	16,8	16,9	
	Max tilt	15,6	16,4	16,2	16,4	17,0	17,7	16,3	16,8	16,9	
	Over all Tilts: Average	15,8	16,5	16,3	16,9	17,3	17,7	16,5	16,6	16,8	
	Tolerance	0,7	0,4	0,6	0,7	0,7	0,6	0,7	0,7	0,6	
Azimuth Beamwidth (deg)	Average	68,0	66,9	66,2	61,9	64,5	55,7	61,9	64,5	55,7	
	Tolerance	4,4	3,3	2	3,5	5,1	5,4	3,5	5,1	5,4	
Elevation Beamwidth (deg)	Average	8,8	7,8	6,9	7,7	6,6	5,2	7,7	6,6	5,2	
	Tolerance	0,5	0,5	0,4	0,6	0,6	0,5	0,6	0,6	0,5	
Elevation Downtilt Deviation (deg)		<0,5	<0,2	<0,4	<0,5	<0,3	<0,4	<0,5	<0,3	<0,4	
First Upper Sidelobe level		>13	>14	>12	>17	>15	>13	>17	>15	>13	
Upper Sidelobe Level peak to 20° above (dB)		>13	>15	>12	>18	>14	>13	>18	>14	>13	
Cross Polar Discrimination at Boresight (dB)		>16	>20	>17	>19	>18	>17	>19	>18	>17	
Cross Polar Discrimination Over Sector (dB)		>6	>8	>9	>9	>14	>8	>9	>14	>8	
Front to Back Ratio total power $\pm 30^\circ$ (dB)		>19	>21	>24	>24	>26	>23	>24	>26	>23	
Cross Polar Isolation (dB)		>27	>28	>28	>27	>27	>27	>27	>27	>27	
Interband isolation (dB)											>28
Polarization (deg)											$\pm 45$
Electrical Downtilt (deg)											2–12
Impedance ( $\Omega$ )											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)	2850 + 300 x 450
Packing Size: Height/Width/Depth (mm)	3256 x 566 x 572
Net Weight (kg)	126
Shipping Weight (kg)	138
Connector Quantity	18 (3x6)
Connector Type	7/16 or 4.3-10 female connectors
Connector Position	Bottom
Wind Load Frontal (N @ 150 KMH)	1252
Wind Load Lateral (N @ 150 KMH)	1252
Wind Load Rear (N @ 150 KMH)	1252
Survival wind speed (km/h)	200
Azimuth (Full antenna / Per Sector)	± 50° / ± 10°
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

## TNA970A10Rx0y 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 ore 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

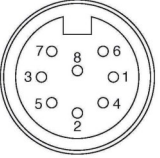
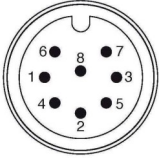
Telnet cable code	TNR215xxx (where xxx is the length of the cable)	
Connector 1	IEC 60130-9, female connector	
Connector 2	IEC 60130-9, male connector	
Length	500mm	

### 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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