

### TRNCG-7-60

- Standard four hole fixing transit antenna
- Wideband LTE/Celular/WIFI element
- Integrated GPS/GNSS antenna

The TRNCG antenna series has been designed specifically for use on trains, trams and buses operating on surface or underground systems.

The TRNCG-7-60 range covers 698-960/1710-6000MHz for global 5G/4G/LTE operation, including GSM, UMTS, LTE (B1, B3, B7, B20) and the radiating element is DC grounded.

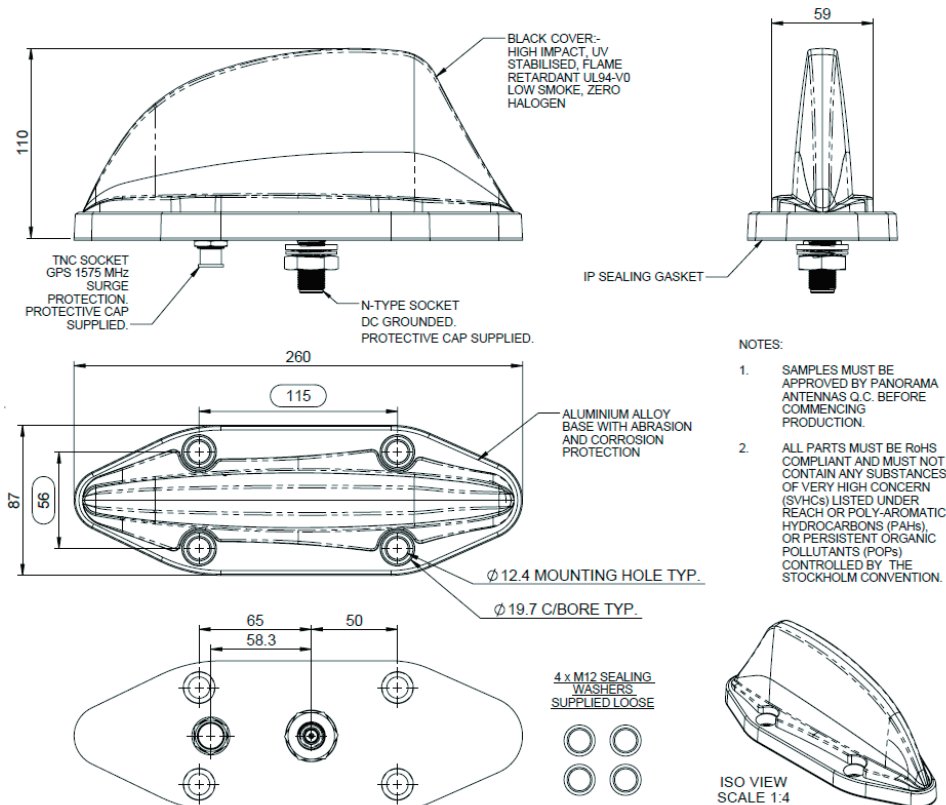
It also incorporates an active GPS/GNSS antenna for GPS/ GLONASS/Galileo/ BeiDou systems with a 26dB gain LNA with effective filtering and a gas discharge surge arrester.

Housed in a high impact, flame retardant Ultem housing, the TRNCG series is weatherproof ensuring that the antenna's performance is never compromised.

The TRNCG-7-60 meets stringent industry standards including EN50155, EN45545-2 (HLI-3), EN50124 (40 KA 100 MS) and the installation is ingress protected to IP69K when installed as per instruction SW3-988

#### Technical Drawing

TRNCG-7-60 shown



# LTE/Cellular Transit Antenna

## TRNCG-7-60

### Product Data

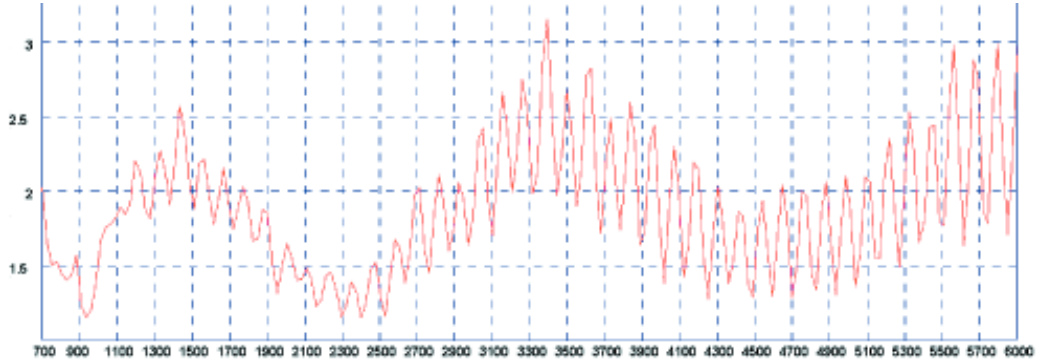
Part No.		TRNCG-7-60
<b>Electrical Data</b>		
Frequency Range (MHz)		698-960/1710-6000 MHz
Peak Gain: **	698-960MHz	5dBi
	1710-2700MHz	7dBi
	4900-6000MHz	10dBi
Polarisation		Vertical
Typical VSWR*		< 2.5:1
Pattern		Omni-directional
Impedance		50Ω
Max Input Power (W)		60
<b>GPS Data</b>		
Frequency Range (MHz)		1560-1612
Impedance		50Ω
LNA Gain		26dB ± 3
Polarisation		Righth Hand Circular
Operating Voltage		3-5V DC
Current (Typical)		15mA
GPS Antenna EMC Compliance		EN 301 489-1 V1.81 & EN 301 489-3 V1.6.1   EN 50121-3-2:2015
<b>Mechanical Data</b>		
Dimensions (mm)	Height (N/inc pad)	110 (4.33")
	Width	87 (3.42")
	Length	260 (10.23")
<b>Environmental Specification</b>		
Operating Temp (°C)		-40° / +80°C ( -40° / +176°F )
Radome Material		Ultem 1000
Radome Flame Retardance Rating		V0 (UL 94)
Base Material		Cast Aluminium
Ingress Protection		IP67 (Report No. 98883) or IP69K when installed in accordance with SW3 - 988 (Report No. 103439)
<b>Approvals Data</b>		
Regulatory Approvals		EN50155:2007 (Dry heat & Cooling), EN61373:2010 / EN50155:2007 (Shock & Vibration), EN45545 - HL3 (flammability) / EN50124-1:2017 (40 KA 100 MS)
<b>Mounting Data</b>		
Fixing		4 × mounting holes to suit M12 bolts
<b>Termination Data</b>		
Termination	Comms	N (female) - DC grounded
	GPS	TNC (female) - surge protected

\*\* Simulated on a 600 x 600mm (2' x 2') ground plane without cable.

\* Measured on a 600 x 600mm (2' x 2') ground plane with 1m (3') of low loss cable

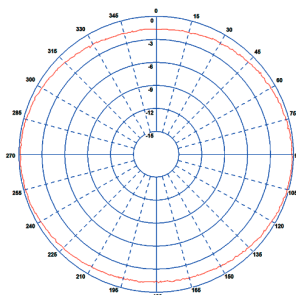
Electrical Data - Cell

Typical VSWR\*

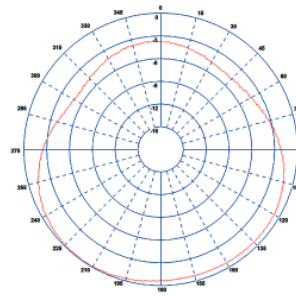


\* Measured on a 600 x 600mm (2' x 2') ground plane with 1m (3') of low loss cable

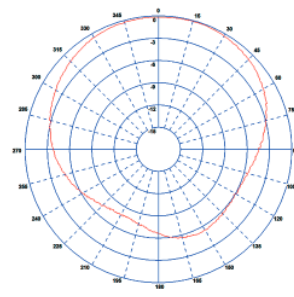
Typical H Plane - 700MHz



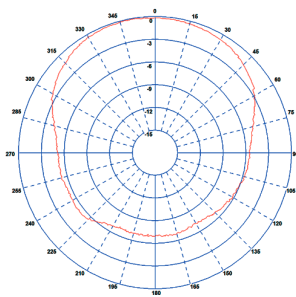
Typical H Plane - 800MHz



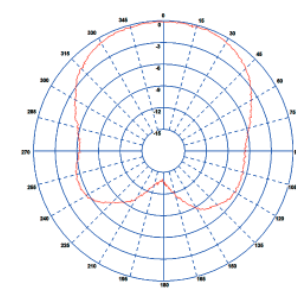
Typical H Plane - 900MHz



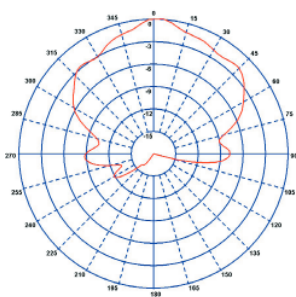
Typical H Plane - 1800MHz



Typical H Plane -2100MHz



Typical E-Plane Pattern - (GPS) 1575MHz



Patterns measured on a 600 x 600 (2' x 2') ground plane with 1m (3') of low loss cable