

4X4 MiMo 4G/5G

Transit Antenna

TRNM[X]4-6-60-[X]

PANORAMA ANTENNAS



Low Profile Transit Antenna

4x4 MiMo 617-960/1427-6000MHz

Up to 4x4 MiMo WiFi 6e (Optional)

GPS/GNSS 26dB LNA (Optional)

Meets Railway Standards EN50155, EN45545-2 and EN50124-1*

The TRNM[X]4-6-60-[X] MiMo antenna series is designed for use on trains, trams and buses underground or over ground. Incorporating four wide band elements covering the frequency range 617MHz to 6000MHz, the TRNM[X]4-6-60-[X] series is versatile and future proof.

The TRNM[X]4-6-60-[X] series covers global 4G/5G frequencies with 4x4 MiMo, optional up to 4x4 MiMo Wifi 6e and optional GPS/GNSS.

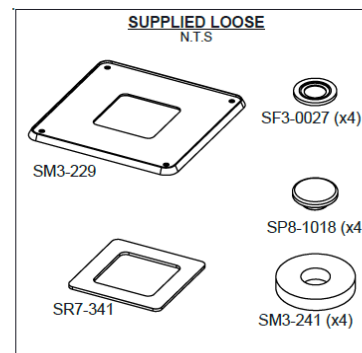
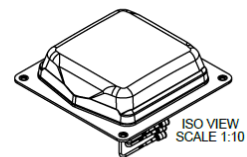
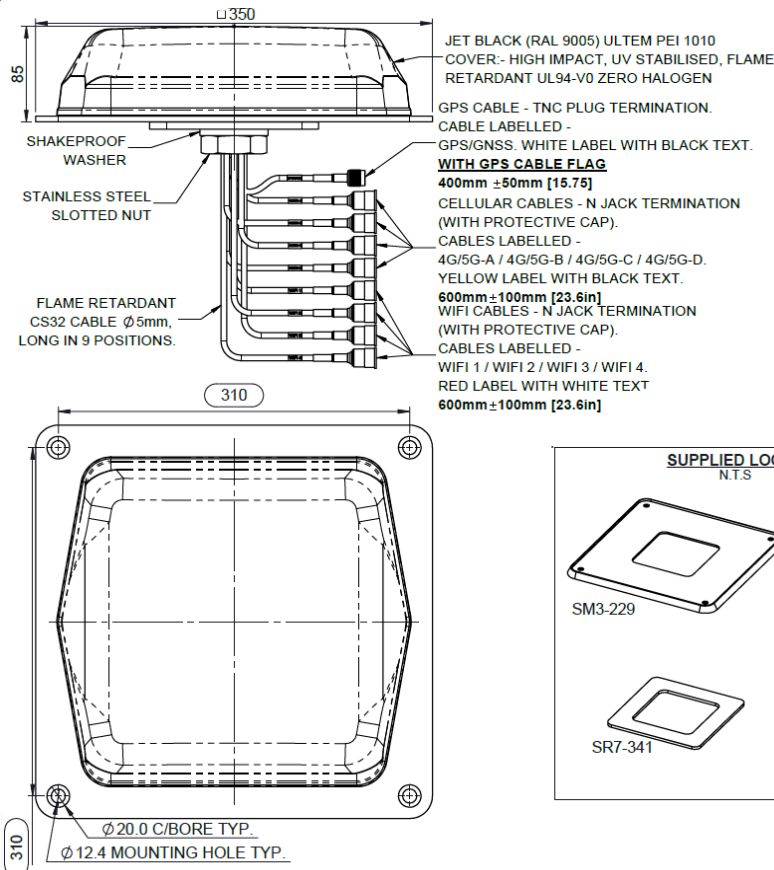
Housed in a high impact, flame retardant Ultem housing, the antenna is fully weatherproof ensuring a long service life with no compromise in performance.

The TRNM[X]4-6-60-[X] antenna meets stringent industry standards including EN50155, EN45545-2 (HL 1-3), EN50124-1* and is ingress protected to IP69k when correctly installed.

*Whole assembly compliant to 27.5 KV AC Insulation Test. Cell/LTE elements tested to 40KA AC Short Circuit Test.

Technical Drawing

TRNMG4-6-60-Q Shown



Product Data

Part No.		TRNMG4-6-60-Q	TRNMG4-6-60-T	TRNMG4-6-60-D	TRNMG4-6-60	TRNM4-6-60	
Electrical Data							
Frequency Range (MHz)	Cell /LTE	4x 617-960 / 1427-6000					
	WiFi	4x 2396-7125	3x 2396-7125	2x 2396-7125	-	-	
	GPS/GNSS	1x 1562-1612					
Typical VSWR*	Cell Elements	< 2:1					
	WiFi Elements	< 2:1				-	-
Isolation**	Cell Elements	>14dB (617-960MHz) / >25dB (1427-6000MHz)					
	Wifi Elerments	>25dB (2.4-2.5GHz) / >30dB (5.150-7.125GHz)				-	-
Pattern				Omni-directional			
Impedance				50Ω			
Max Input Power (W)				60			
GPS/GNSS Data							
Frequency Range (MHz)				1559-1612			-
Impedance				50Ω			-
LNA Gain				26dB			-
Voltage / Current				3-5v 15ma Typical			-
Polarisation				Right Hand Circular			-
Mechanical Data							
Dimensions (mm)	Height	85 (3.34")					
	Width	350 (13.78")					
	Length	350 (13.78")					
Weight Excl. Packaging (kg)				≤ 5			
Environmental Specification							
Operating Temp (°C)				-40° / +85°C (-40° / +185°F)			
Radome Material				Ultem 1010			
Radome Flame Retardance Rating				V0 (UL 94)			
Base Material				Aluminium (corrosion protected & powder coated)			
Rail Industry Approvals							
Flammability				EN45545-2:2020 - HL3 External			
Environmental		EN50155:2021 -Low temperature, dry heat, salt mist, damp heat cyclic, shock, random vibration, long life random vibration					
EMC/EMI				EN 50121-3-2:2016 A1: 2019 - EMC / EMI			
Insulation / Short Circuit		EN 50124-1:2017 - Insulation Test - (27.5KV AC 50Hz 1 min) EN50388:2012 / EN50122-1:2022 - (40kA 50Hz AC 100ms) - Cell elements only					
Ingress Protection / Vandal Protection				ISO 20653: 2013 - IP69K EN 62262:2002 - IK07			
Mounting Data							
Fixing		4 × mounting holes to suit M12 bolts 1x M33 central mounting bush					
Termination Data							
Cable Type				C32 (Compliant to UN ECE R118 & EN45545-2)			
Cable Diameter (mm)				5 (0.2")			
Cable Length (m)				0.6m (20") [Cell] / 0.4m (16") [GPS/GNSS]			
Termination	4G/5G	4x N Socket (f)					
	WiFi	4x N Socket (f)	3x N Socket (f)	2x N Socket (f)	-	-	
	GPS/GNSS	1x TNC Plug (m)					-

*Across 90% of relevant bands when measured on a 600 x 600mm (2' x 2') ground plane with 0.5m (20") of CS32 cable **Worst case isolation measured with 0.5m (1.5') CS32 cable