

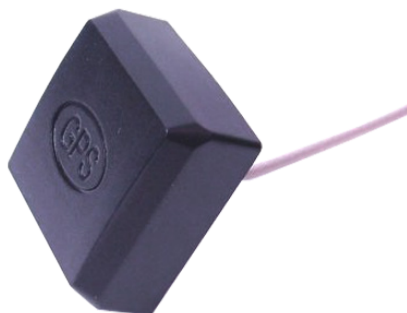


## Tango 21

Robust Through Hole GPS Antenna

### Key Features

- GPS antenna
- 28dB LNA gain
- High gain dielectric antenna



### General Description

The Tango 21 is our most compact GPS antenna with a screw threaded base.

The built in Low Noise Amplifier (LNA) provides a 28dB gain on the antenna signal. The benefit of having a strong signal means that satellite fix times are quicker which drives application readiness.

The antenna can be mounted securely and can be used for a host of different GPS applications including: vehicle/fleet/asset tracking, mobile applications or general positioning purposes.

Supplied as standard with an IPEX or MCXM connector. Custom cable lengths and alternative connector types can be specified for volume orders.

### Additional Considerations

- Vandal resistant
- Compact design for covert or space limited applications
- Low current consumption 5mA at 2.2V





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### Antenna Specifications

Frequency Range:	1575.42 ±1 MHz
VSWR:	<1.5
Polarization:	RHCP
Gain:	5dBic (Zenith)
Impedance:	50 Ohm
Band Width:	CF ±5MHz
Axial Ratio:	3dB (max)
Dimensions:	L30.5 x W30.5 x H13.9mm

### LNA Specifications

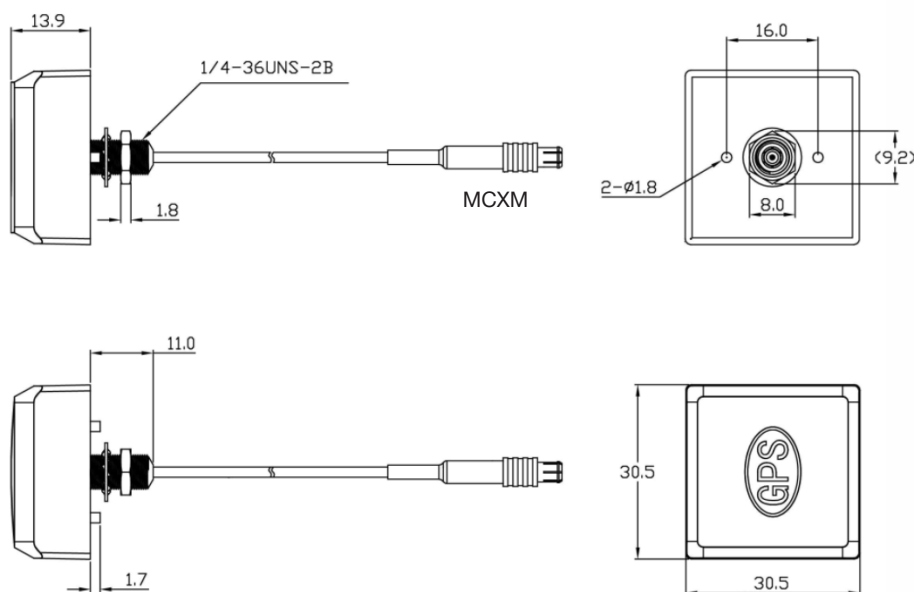
Gain:	28±2dB
Noise Figure:	<1.5
Ex-band Attenuation:	12dB@CF + 50MHz 16dB@CF - 50MHz
Supply Voltage:	2.2-5V DC
Current Consumption:	5-15mA
VSWR:	<2.0

### Mechanical Specifications

Cable:	RG178
Connector:	MCXM/IPEX/SMA
Material:	ABS
Mounting Method:	Screw

### Environmental Specifications

Operating Temperature:	-40 - +85°C
Relative humidity:	Up to 95%



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### Special Note for SMA Connector Selection:

The SMA connector is larger than the threaded stud on the antenna base.

It is necessary to make a slot on the device so the cable can slide into place. The nut and washer are permanently in place on the cable.

The slot needs to be 3mm wide to accommodate the 2.95mm cable diameter

If it is not possible to do this on your device then select the MMCX connector which is 4mm in diameter and will fit into the same size hole as the antenna threaded fixing stud.

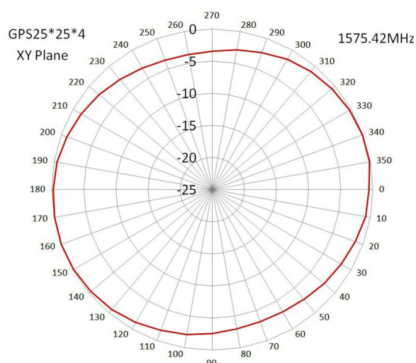
If required, use an adaptor to convert from MCX-M to SMA-M

An alternative is to select an IPEX connector which is mounted on a 1.13mm coax cable. This can also be converted to an SMA connector using an adaptor.

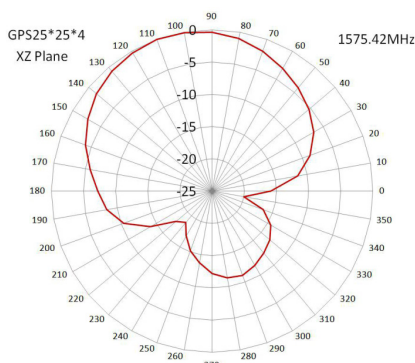


## Radiation Patterns

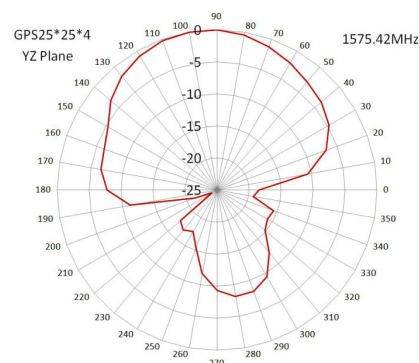
XY Plane



XZ Plane



YZ Plane

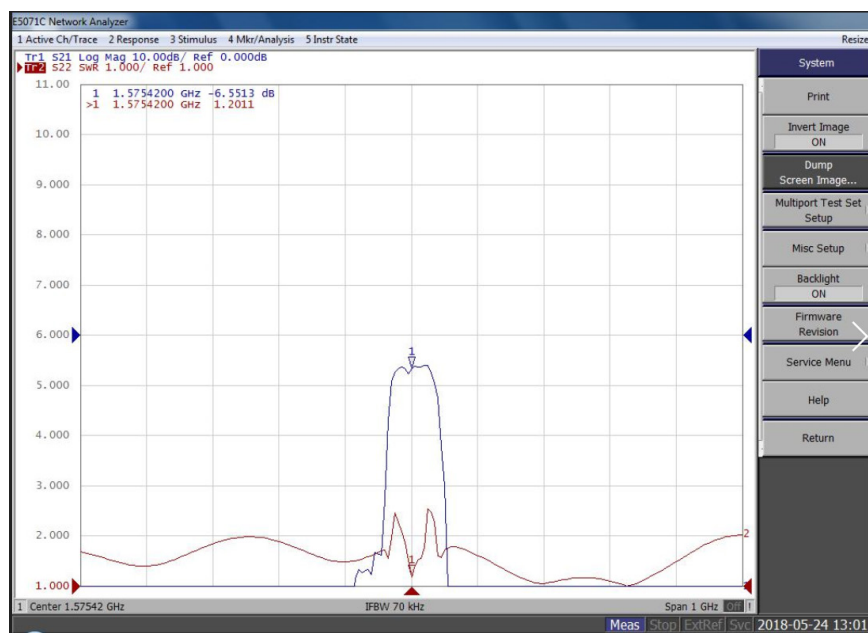




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### Return Loss & VSWR



### Ordering Details

Part Number	Description
TANGO21/0.3M/IPEX/S/S/26	Robust Through Hole GPS Antenna 300mm Cable IPEX Connector
TANGO21A/0.21M/MCXM/S/S/26	Robust Through Hole GPS Antenna 210mm Cable MMCX Male Connector
TANGO21/0.3M/SMAM/S/S/26	Robust Through Hole GPS Antenna 300mm Cable SMA Male Connector
TANGO21/3M/SMAM/S/S/26	Robust Through Hole GPS Antenna 3M Cable SMA Male Connector
ADAPT/SMAM/IPEX	RF ADAPTOR - IPEX TO SMA MALE
ADAPT/MCXF/SMAM	RF ADAPTOR - MCX FEMALE TO SMA MALE

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