



## Compact Repeater Solutions

### Mini GNSS Repeater



### Features

- GNSS Repeater module support for GPS, Glonass, Galileo and Beidou
- Compact, lightweight, easy to install and operate
- On board RF signal filtering
- Daisy chain multiple modules for increased coverage with a single PS.
- Outdoor Antenna Health Monitoring
- RF Over Gain / Oscillation Protection

### Product Description

Global Foxcom's New Mini GNSS repeater module is an innovative solution for re-transmitting GNSS signals indoor. The module is equipped with unique features and provides top-notch RF performance while consuming less power compared to competitive systems.

Using a calibrated RF Gain Dip switch array, the Mini GNSS repeater module enables easy gain adjustment for optimal coverage. The Band Pass filter embedded inside the module blocks unwanted off-air signals and prevents them from being transmitted inside the facility to ensure reliable and constant operation.

The Mini GNSS repeater module monitors and provides information on the operation status of the outdoor antenna. When the outdoor antenna placement is limited, using the coupling port multiple Mini GNSS modules can be connected in series to provide a large-area GNSS signal distribution network.

To prevent the risk of misalignment, the Mini GNSS repeater is equipped with a smart signal-limit function. This function detects when the power output is too high or Oscillation cases and it limits the output levels.

The unique Directional RHCP variant enables operators to provide seamless coverage and testing of aircraft navigational systems inside a hangar or a large facility by extending signal transmission.

The Mini GNSS is equipped with two transmit ports and supports one or two zones, which supports indoor coverage of up to 1500m<sup>2</sup>. The coupling port and Daisy chain multiple modules provide unlimited coverage areas.

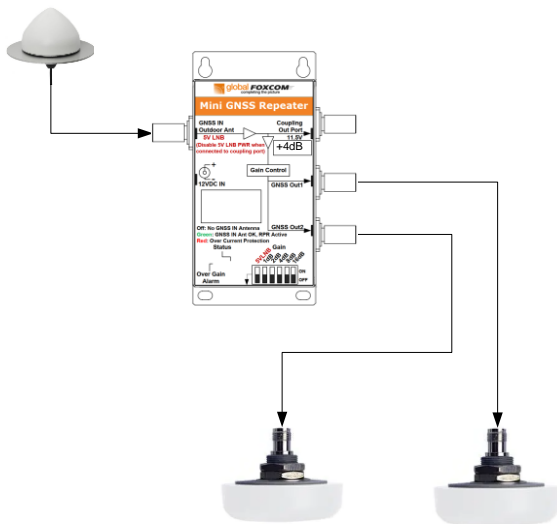
The DC feature on the unit's coupling port, enables one PS to provide power for multiple units.

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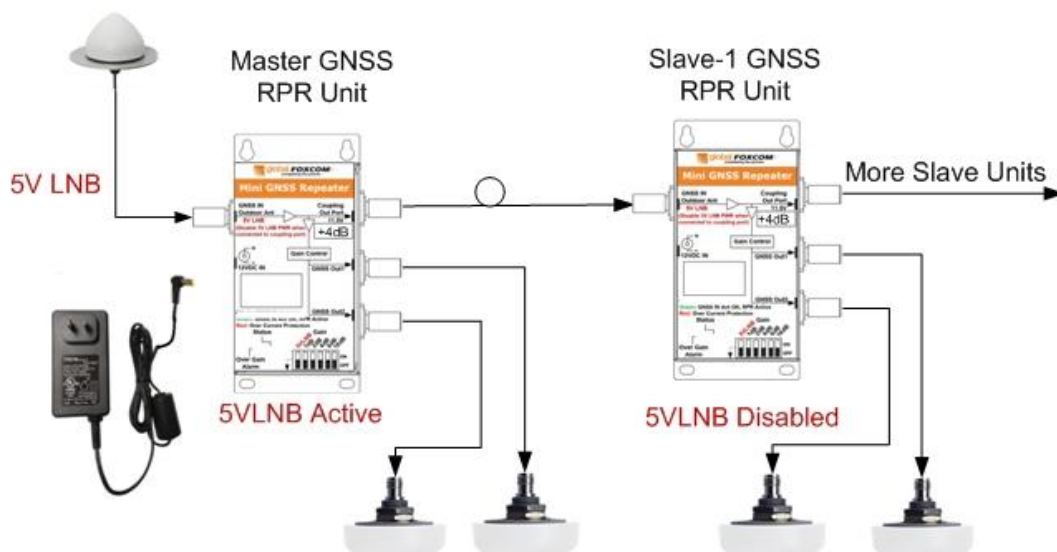
The Mini GNSS and the Global Foxcom Repeater Solution can be used in a variety of cases:

- Aircraft Hangars
- Border surveillance
- Fire/Police stations
- Tunnels
- Data centers
- Fleet management
- Military bunkers
- Manufacturing facilities

## Typical Install



## Daisy Chain Install



## Mini GNSS Module Specifications

<b>GNSS Repeater System</b>	
<b>RF Spec</b>	
System frequency range	1164–1610MHz (Filtered)
Satellite support	GPS L1/L2/L5/L6, Glonass G1/G2/G3, Galileo E1/E5/E6, Beidou B1/B3/B2
Gain	0-30dB (Calibrated, 1dB steps)
Noise figure	<3dB
Return loss	>10dB
Coupling port gain	+4dB
No of Output ports/Supported indoor antenna	2
Outdoor antenna Type Support	Foxcom Active L1/L2/L5
Indoor antenna Type Support	Foxcom Passive L1/L2/L5 RHCP Standard or Directional
Outdoor Antenna recommended cable loss	<10dB
Indoor recommended cable loss	<5dB
Gain Monitoring/Protection	Over Gain/Oscillation Detection
<b>Electrical Specification</b>	
Operating voltage/Current consumption	12VDC/0.3A
LNA (RX Antenna) Port voltage	5VDC ±.5V
LNA (RX Antenna) Current supply	<150mA
NA RX Antenna Monitoring	Open/Over Current
Coupling port Voltage	12VDC ±.5V
<b>Physical Specifications</b>	
Operating temperature	-10°C – 65°C
Storage temperature	-40°C – 80°C
Humidity	95% @ 35°C Non-condensing
RF connectors	TNC Female
Dimensions	130 x 60 x 25mm
Weight	250gr

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### Ordering Information

#### Mini GNSS Repeater

<b>MGNNS-R-30-DZ-04-TF</b>	(P/N:8587137) Mini GNSS Repeater, support for GPS L1/L2/L5, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. 5V LNA Voltage, Dip Switch adjustable Gain. Dual transmit zone, +4dB inline output port for daisy chain additional units, Antenna Fail and RF Oscillation Auto protection. requires MGPR-PS-US or MGPR-PS-EU DC power supply. TNC Female RF connector
<b>MGPR-PS-US</b>	AC to DC power supply adapter 100-240 VAC 50-60Hz. 12V 1A
<b>MGPR-PS-EU</b>	AC to DC power supply adapter 100-240 VAC 50-60Hz. 12V 1A

#### Outdoor Antenna Options

FOXANT-R-R-155-161-TF-4-01	High Gain GNSS Active receive antenna, Gain >4dBi 1559-1610 RHCP Outdoor-rated antenna with built in high gain 40dB LNA and band pass immunity filter. Support for GPS L1, BeiDou B1, Galileo E1, GLONASS L1 and SBAS. Supplied with mounting Bracket. TNC Female RF Connector. (PN:4700023)
FOXANT-R-R-121-161-TF-4-01	High Gain GNSS Active receive antenna, Gain >4dBi 1215-1610 RHCP Outdoor-rated antenna with built in high gain 40dB LNA and band pass immunity filter. Support for GPS L1/L2, GLONASS G1/G2, Galileo E1, BeiDou B1, and SBAS (WAAS, EGNOS & MSAS). Supplied with mounting Bracket. TNC Female RF Connector. (PN:4700027)
FOXANT-R-R-116-161-TF-4-01	High Gain GNSS Active receive antenna, Gain >4dBi 1164-1610 RHCP Outdoor-rated antenna with built in high gain 40dB LNA and band pass immunity filter. Support for GPS L1/L2/L5, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b, Supplied with mounting Bracket. TNC Female RF Connector. (PN:4700024)

#### Indoor Antenna Options

FOXANT-R-D-155-161-TF-0-00	GNSS Passive Omni antenna, Gain >4dBi 1559-1610 RHCP for Transmit & Receive. Iridium, GPS L1, GLONASS G1, Galileo E1 and BeiDou B1, Supplied with mounting Bracket. TNC Female RF Connector. (PN:4700038)
FOXANT-R-D-116-161-TF-0-00	GNSS/Iridium Passive Omni antenna, Gain >4dBi 1164-1610 RHCP for Transmit & Receive. Support for Iridium, GPS L1/L2/L5, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b, Supplied with mounting bracket. TNC Female RF Connector. (PN:4700025)
FOXANT-R-D-152-166-TF-0-04	Hangar optimized GNSS/Iridium/Inmarsat Passive Directional antenna, Gain >9.7dBi, 1525-1660 RHCP Transmit & Receive. Support for Iridium, GPS L1, BeiDou B1, Galileo E1 and GLONASS L1. Supplied with mounting bracket. TNC Female RF Connector. (PN:4700010)