



Repeater Solutions

GPS/GNSS Repeater Solution Guide for Hangars



Features

- GPS/GNSS support
- Indoor coverage up to 1500m²
- High efficiency directional indoor retransmitting antenna
- Top RF-Noise performance
- Single or Dual transmission zone support
- Fiber optic option
L2, L5 optional support

Product Description

Global Foxcom's GNSS hangar repeater solution is the ideal solution for re-transmitting GNSS signals indoors. The repeater system provides seamless coverage inside a hangar enabling the testing of aircraft navigational systems without the need to move the aircraft out of the hangar. The Repeater Kit consists of an Outdoor Unit (ODU), and/or an Indoor Unit (IDU), antennas, cables and a power supply (PS). Using top RF-Noise performance and a unique indoor directional RHCP antenna, the system provides better coverage, consumes less power and adds less distortion than compatible systems.

Global Foxcom offers optional fiber optic repeaters for remote and flexible placement of outdoor antennas. Users can enjoy the many benefits that optical fiber has to offer, such as low RF transmission loss, improved signal quality, lightning protection, safety and ease of installation.

In addition to hangars, the system can be applied to other situations, such as:

Border surveillance • Fire/Police stations • Tunnels • Data centers • Fleet management • Military bunkers

Note: L2, L5 GPS bands are listed as options. For more information contact Global Foxcom.

Repeater Unit System Specifications

GNSS Repeater System	
RF Spec	
System frequency range	1164-1610MHz
GPS support	L1/L2*/L5*
Glonass support	L1/L2*/L5*
Galileo support	E1/E5/E6
Gain	50dB
Number of supported indoor antenna	1 or 2
Noise figure (RSU to ASU)	<2dB
Environmental Specifications (Outdoor Unit)	
Operating temperature	-32°C-49°C (operational)
Storage	-32°C-71°C (storage)
Humidity	95% @ 35°C Non-condensing
Physical Specifications	
RF connectors	SMA TNC Female
Operating voltage/Current consumption	12VDC/0.5A
Dimensions	370x150x700 mm

*L2, L5 are optional. Contact Global Foxcom for additional details.

Parts List

Coaxial Repeaters

Model Number	Description	Housing	Number of Outputs/ Zones	RF Connector Type
GPS-R-C-5-0-0-0	Coaxial GNSS repeater, support for GPS L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. 5/12V switchable LNA Voltage, adjustable Gain. DC powered. Supplied with 100-220 AC to DC Power adapter.	Indoor	Single	SMA
GPS-R-C-5-0-0-1	Coaxial GNSS repeater, support for GPS L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. 5/12V switchable LNA Voltage, adjustable Gain. DC powered. Supplied with 100-220 AC to DC Power adapter.	Indoor	Dual	SMA
GPS-R-C-5-0-0-3	Coaxial GNSS repeater, support for GPS L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. 5/12V switchable LNA Voltage, adjustable Gain. DC powered. Supplied with 100-220 AC to DC Power adapter. Extra 10dB Gain	Indoor	Single	SMA
GPS-R-C-5-0-0-4	Coaxial GNSS repeater, support for GPS L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. 5/12V switchable LNA Voltage, adjustable Gain. DC powered. Supplied with 100-220 AC to DC Power adapter.	Indoor	Dual	SMA
GPS-R-C-5-0-0-2	Coaxial GNSS repeater, Housed in a G2000 IP65 Outdoor enclosure, support for GPS L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. 5/12V switchable LNA Voltage, adjustable Gain. DC powered. Powered By 100-220AC 50/60Hz. N-Type Female RF Connector.	Outdoor	Dual	N-Type

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Optical Repeaters

Model Number	Description	Type	Housing	Number of Outputs/ Zones	RF Connector Type
TDS-GPS-00-FA-N-01-05-TX	Optical based GNSS Transmitter, support for L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. housed in a G2000 Ip65 outdoor unit equipped with 100-22VAC PS. FC-APC Optical connector	Transmitter	Outdoor	Single	N-Type
TDS-GPS-00-FA-N-01-06-TX	Optical based GNSS Transmitter, support for L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. housed in a G2000 Ip65 outdoor unit equipped with 100-22VAC PS. FC-APC Optical connector	Transmitter	Outdoor	Single	N-Type
TDS-GPR-00-FA-SM-01-00-RX	Optical based GNSS receiver support for L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. housed in a compact indoor unit supplied with a 100-22VAC PS. FC-APC Optical connector, SMA RF Connector.	Receiver	Indoor	Single	SMA
TDS-GPR-00-FA-SM-02-00-RX	Optical based GNSS receiver support for L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. housed in a compact indoor unit supplied with a 100-22VAC PS. FC-APC Optical connector	Receiver	Indoor	Dual	SMA
TDS-GPR-00-FA-SM-04-00-RX	Optical based GNSS receiver support for L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. housed in a compact indoor unit supplied with a 100-22VAC PS. FC-APC Optical connector	Receiver	Indoor	Quad	SMA
TDS-GPR-00-FA-NF-02-04-RX	Optical based GNSS receiver support for L1/L2*/L5*, GLONASS G1/G2/G3, BeiDou B1/B2, Galileo E1/E5a+b. housed in a G2000 IP65 outdoor unit supplied with a 100-22VAC PS. FC-APC Optical connector	Receiver	Outdoor	Dual	N-Type

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Antennas

Model #	Type	Description (GPS)	Frequency Bands	Form Factor
FOXANT-R-R-155-161-TF-4-01	Active / Receive	1559-161MHz. Outdoor-rated with built-in, high gain 40dB LNA (Gain >4dBi). Supplied with mounting bracket. TNC Female RF connector.	GPS L1, BeiDou B1, Galileo E1, GLONASS L1 and SBAS	
FOXANT-R-D-155-161-TF-0-04	Passive Directional, Transmit and Receive	Hangar-optimized GNSS/Iridium antenna, Gain >9.7dBi, 1559-1610 RHCP. Supplied with mounting bracket. TNC Female RF connector.	Iridium, GPS L1, BeiDou B1, Galileo E1 and GLONASS L1.	

NOTE: For L2 and L5 GPS band options, contact Global Foxcom

RF Cable Assemblies

Model Number	Description	RF Connector Type
FO-LM40-S-005-M-N5M-T5M-00	5M LMR400 coaxial cable	N-Type to TNC (M) (antenna-side)
FO-LM30-S-010-M-S5M-T5M-00	10M LMR300 coaxial cable	SMA to TNC (M) (antenna-side)
FO-LM30-S-005-M-N5M-T5M-00	20M LMR300 coaxial cable	N-Type to TNC (M) (antenna-side)