

GLI-ECHO II (Air)

Smart GPS Retransmission



GLI-Echo II (Air)

Description

The GLI-ECHO II is a military grade, primary system LRU for GPS Retransmission. It will provide wireless or wired signal to all GPS enabled sub-systems on an aircraft platform. Based on state of the art technology developed for permanent GPS retransmission in the Boeing C-17, the GLI-ECHO II supports options not available in any other repeater, outperforming retransmission systems costing several thousand dollars more. Designed for long term reliability, it is small, lightweight and built for limiting SWaP.

Features

- GPS Bands: GPS L1, L2 (includes M-code), Galileo, GLONASS
- Precisely controlled and user adjustable output signal strength
- Automatic oscillation detection
- BIT and fault isolation
- Ability to directly connect up to three GPS receivers
- NVG compatible
- Available in Single & Quad Output Configurations
- Power Always On or Power On/Off Configurations

Options

The GLI-ECHO II is available as part of a roll on/roll off or permanent installation kit. The kits are available with multiple options and supporting equipment to meet specific needs. Please contact GPS Source for further information on product options and specifications.

Basic Functions

AMPLIFIES & CONDITIONS THE SIGNAL

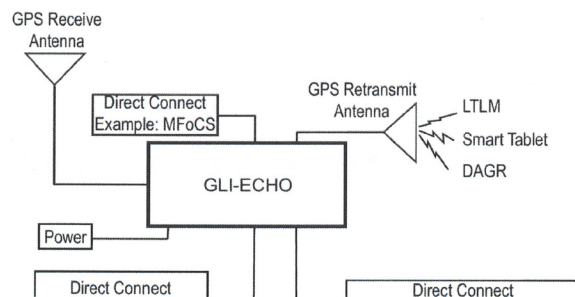
The GLI-ECHO II signal controller receives the GPS signals from a receive antenna and amplifies them to a level that is sufficient for retransmission of the signals throughout any small to large indoor space. The signals are retransmitted by a passive antenna installed within the enclosure.

SIGNAL SPLITTER

The GLI-ECHO II splits the signal equally between four ports. Any of the four output ports can be connected to a passive GPS antenna, transmitting the signal within the enclosure. More than one retransmission antenna may be necessary if retransmitting within a large ground vehicle or aircraft.

DIRECT CONNECT OPTION

The GLI-ECHO II can be ordered with the "Direct Connect" option. This configuration allows the GLI-ECHO II to operate as a combined GPS retransmission controller and GPS signal divider to other GPS embedded systems. Any device requiring a direct connection to an external GPS antenna can utilize one of these attenuated "direct-connect" ports. The fourth output port is set aside for wireless retransmission via passive GPS antenna.



BUILT IN TEST (BIT)

The GLI ECHO II performs a continuous built in test function. This monitors the status of coaxial cables to and from the device, the presence of GPS receivers on ports configured for direct connect, as well as the GPS signal levels and signal quality within the device itself. Real-time status indicators are provided on the user input panel.

REAL-TIME STATUS INDICATION

The GLI-ECHO II provides a status signal (XMIT OR FAULT) to the user input panel.

Amplifier Specifications

Operating Temperature -54°C to 71°C

Parameter	Conditions	Min	Typ	Max	Units
Operating Frequencies	L1	1560.42	157.42	1590.42	MHz
	L2	1212.60	1227.60	1242.60	
Input/Output Impedance	Ant: Output= 50 Ω		50		Ω
Operating Gain		6	33	49	dBm
Direct Connect Output Power			-150		dBm
Output SWR	Output= 50 Ω			2.1	--
Noise Figure				3	dBm
RF Power	Output= 50 Ω	-85		-65	dBm

Electrical Specifications

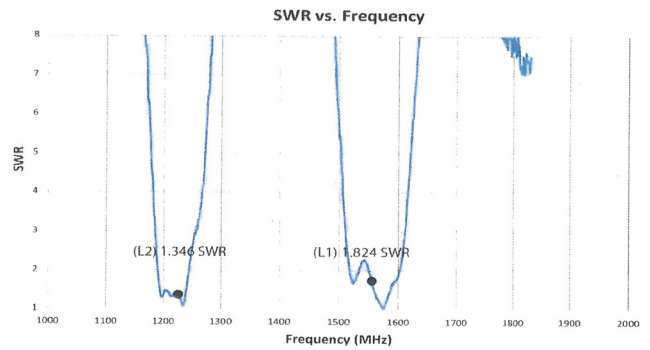
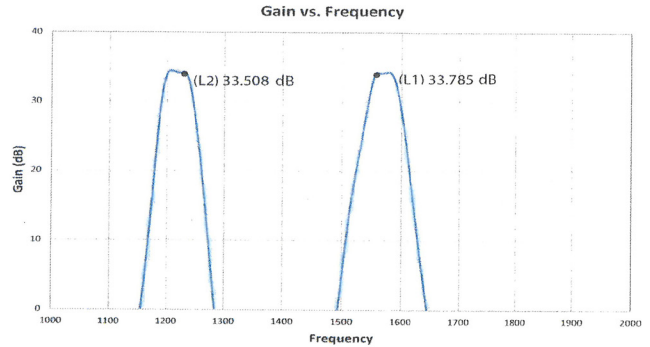
Parameter	Conditions	Min	Typ	Max	Units
DC In	Powered Mil Connector	12		33	VDC
AC In	110 Wall Mount Transfer		110		VAC
Antenna In		12		28	V
Antenna Out			6.8		V
Antenna Current Thru J1	Load Current Range		20-70		mA
Operating Current	Excludes Antenna Current as 12V		610		mA
	Excludes Antenna Current as 28V		400		mA

Environmental and EMI/EMC Requirements

The GLI-ECHO II has been designed to meet the following

Environment	MIL-STD Requirements
Mechanical Vibration	810G Mtd 514.6, Proc. I
Functional Shock	810G Mtd 516.6, Proc. I & V
Explosive Atmosphere	810G Mtd 511.5, Proc. I
Crash Hazard	810G Mtd 516.6
High Temperature	810G Mtd 501.5, Proc. 11
Low Temperature	810G Mtd 502.5, Proc. II
Temperature Shock	810G Mtd 503.5, Proc. 1-C
Altitude	810G Mtd 500.5, Proc. III
Humidity	810G Mtd 507.5, Proc. II
Salt Fog	810G Mtd 509.5
Fungus	810G Mid 508.6
Sand and Dust	810G Mtd 510.5, Proc. I & II
NVG Compatible	1572F Sec. 5.2.1.2.1.2
Display	1472 Sec. 5.2.6.7
Conducted Emissions	461F CE101, CE102
Radiated Emissions	461F RE102

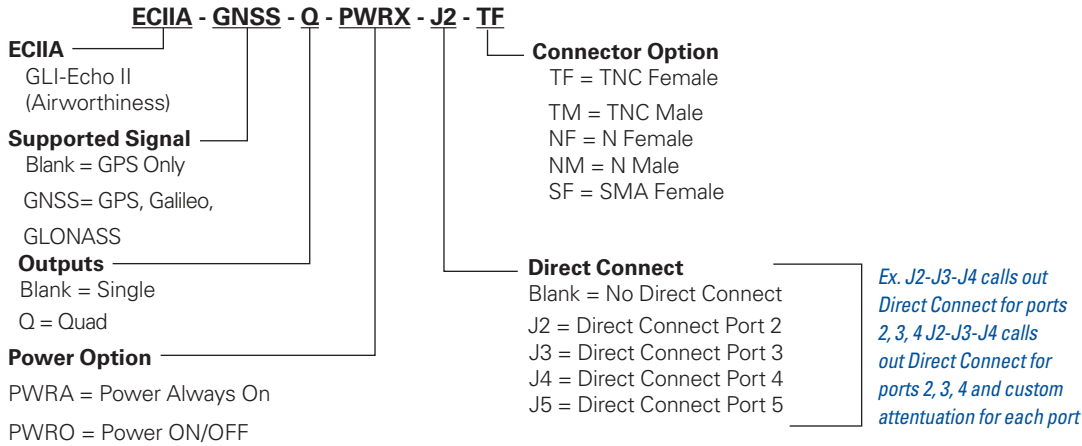
Performance Data



Product Options

Type	Options
RF Connector	TNC (Female and Male)
	N-type (Female and Male)
	SMA (Female)
28V Surge Suppression MIL-STD	MIL-STD-704

Product Code Decoder



Note: To have product/part codes customized to meet exact needs, contact GPS

Source at GPSS-Sales@gd-ms.com or visit the website at www.gpssource.com

GENERAL DYNAMICS

Mission Systems

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