



101 Courageous Drive League City, Texas 77573
Tel: 281.538.6000 Fax: (281) 334-5302 www.etoolz.com

L-Band Iridium Repeater *Exchange System*

Description

The Eagle Broadband L-Band Iridium Exchange System is designed to serve as a lightweight, high capacity, high reliability, satellite earth-station repeater, featuring MIC design low-noise and power amplifiers. The Exchange System employs narrowband filtering that ensures strict pass band of the Iridium band. The amplifiers employ GaAs MMICs (Monolithic Microwave Integrated Chips) and thin-film technology in a balanced configuration to provide highly stable power with minimal intermodulation distortion.

The Exchange System is designed for use with the Iridium satellite constellation. It can be set up to operate in various temporary or permanent environments. Temporary applications can be installed in a matter of minutes. The Exchange System is capable of handling multi-user voice and data connections.

Single Unit Construction

Since the repeater is a single unit in a lightweight aluminum housing, it is suitable for installation in any military/ commercial/ private aircraft electronic bay, mobile/ permanent military installations, and security commercial applications. Its housing meets or exceeds all ARINC 404 and ARINC 600 standards.

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Certifications

The Eagle Broadband L-Band Iridium Exchange System is currently pursuing certifications on its prototype version. Certifications include:

- Iridium Certification
- FCC Certification
- JAA Certification
- Mil-Spec Certification

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RF Characteristics

Transmit (Exterior)

| | |
|---|-----------------|
| Output Frequency Range | 1616-1626.5 MHz |
| Output Power (at -1dB Gain Compression) | 5 Watts |
| Input Frequency Range | 1616-1626.5 MHz |
| Signal Bandwidth | 10.5 MHz |
| Minimum Input Power (MDS) | -118.5 dBm |
| Gain Flatness: | |
| Over any 2 MHz Bandwidth | +/- 0.4 dB |
| Over any 10MHz Bandwidth | +/- 0.5 dB |
| Spurious Outputs @ 5 Watt Output Power | -40 dBc, max |
| Harmonics @ 5 Watt Output Power | -60 dBc, max |
| VSWR (Input & Output) | 1.8:1 |
| Voltage Input | +28 VDC |
| DC Consumption | 42 Watts |

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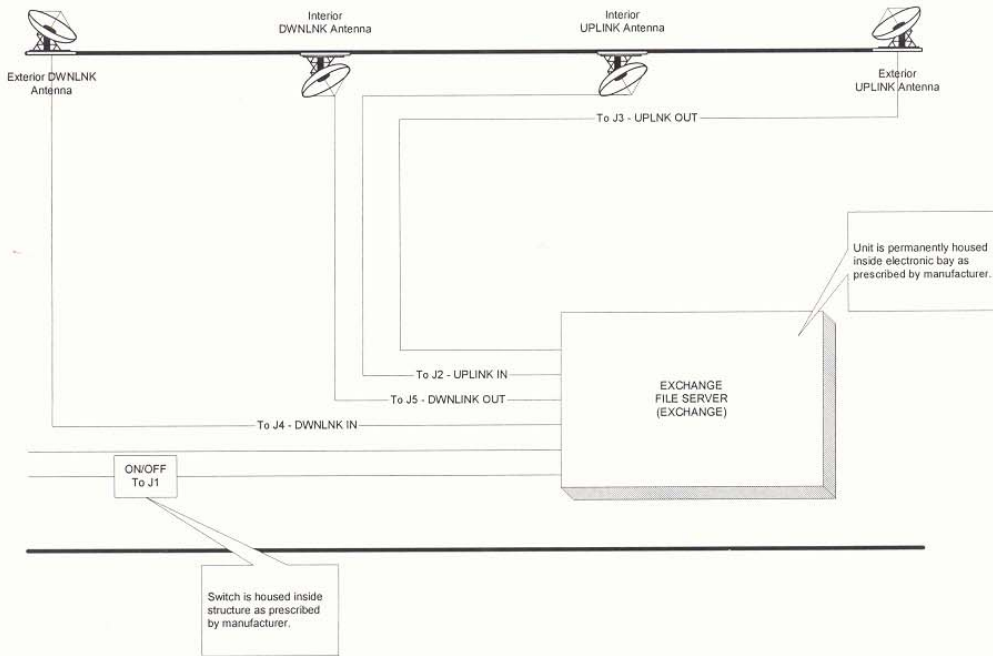
Receive (Interior)

| | |
|---|-----------------|
| Input Frequency Range | 1616-1626.5 MHz |
| Output Power (at -1dB Gain Compression) | 10 mWatts |
| Output Frequency Range | 1616-1626.5 MHz |
| Signal Bandwidth | 10.5 MHz |
| Minimum Input Power (MDS) | -118.5 dBm |
| Gain Flatness: | |
| Over any 2 MHz Bandwidth | +/- 0.4 dB |
| Over any 10MHz Bandwidth | +/- 0.5 dB |
| Overall Noise Figure | 2.0 dB, max |
| Harmonics | -45 dBc |
| VSWR | 1.8:1 |
| Voltage Input | +28 VDC |
| DC Consumption | 5 Watts |

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EXCHANGE SYSTEM (SIMPLIFIED)



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FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operations is subject to the following two conditions: (1) This device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation

CAUTION

Any changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.