

LUMISTAR

LS-24-R4 4U Rack Mount Receiver

Data Sheet

The Lumistar LS-24-R4 4U Rack Mount Receiver with optional external 1U Keyboard/Display offers a low cost, high performance COTS solution for a Ground Station Receiver. This design incorporates a Pentium 4 motherboard with high end graphics with 6 PCI slots for integration using any of the Lumistar PCI receiver or display products.

Lumistar also offers the LS-24-R1 (1U) and LS-24-R2 (2U) receiver chassis for applications that do not require as many PCI boards to be installed. Other 4U computers are available with passive backplane, Single Board Computer (SBC) with up to 18 PCI slots allowing large multi-stream systems to be created using standard Lumistar PCI boards. The optional 1U Keyboard/Display is shown.

This system is bundled with setup, control, and monitoring software with spectral and oscilloscope display (optional). Please refer to the individual data sheets for performance of the Lumistar board products used in this system.



Lumistar PCI Components for LS-24-R4

The following products can be installed in the LS-24-R4 resulting in an extremely sophisticated telemetry receiver in a 4U rack mount system.

FM Receivers:

- LS-25 Multi-band FM Receiver with Bit Sync Optional

Multi-mode Receivers (FM, Multi-Symbol FM, BPSK, QPSK, SOQPSK):

- LS-25-D2 Multi-band Down Converter and LS-32-R Multi-mode IF Receiver with bit sync and optional decom
- LS-27-D Dual-Band Two-Channel Down Converter with LS-32-R Multi-mode IF Receiver with bit sync and optional decom
- LS-27-D Dual-Band Two-Channel Down Converter with LS-33-P Pre-Detection Diversity Combiner Multi-mode demodulator and bit sync with optional decom
- LS-27-Q Quad-Band Down Converter with LS-32-R Multi-mode IF Receiver and bit sync with optional decom

ARTM Receiver (ARTM Tier 0, Tier I, and Tier II)

- LS-25-D2 Multi-band Down Converter with LS-32-R ARTM Multi-Mode Demodulator for FM, SOQPSK and CPM

Diversity Combiner

- LS-33-P IF Receiver with Pre-D Diversity Combiner and Multi-mode Demod and bit sync with optional decom

Spectral and Oscilloscope Display

- LS-22-SE Spectral and Oscilloscope Display - up to 3 channels with optional Bit Sync

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SPECIFICATIONS:

Receiver (LS-25-P2) or Down-Converter (LS-25-D2):

Input Frequency	Specify 1, 2, or 3 Frequency Bands: NATO-E Band: 2185-2480 MHz S-Band: 2200-2400 MHz Upper L-Band: 1710-1850 MHz Lower L-Band: 1435-1540 MHz P-Band: 215-320 MHz Other Frequency Bands - consult Lumistar
Tuner Resolution	50 KHz
Frequency Accuracy	0.002%
Noise Figure	8 dB (Maximum); 6 dB (Typical)

FM Demodulator Outputs (LS-25-P2):

Demodulation Type	FM with AM, AGC/RSSI
IF Bandwidths	Up to 12, Software Selectable SAW filters
Post Detection Filters	Up to 12, Software Selectable filters

FM, Multi-Symbol FM, BPSK, QPSK, SOQPSK Demodulator Outputs LS-32-R IF Receiver/Demod or LS-33-P IF Receiver/Combiner/Demod:

Down converter recommended	LS-25-D2 or LS-27-D
Demodulation Type	Dependant upon software license
Post Detection Bandwidth	Either 4 or 12, Software Selectable SAW filters
Video Filters	Either 4 or 12, Software Selectable SAW filters

Environmental:

Operating Temperature	10° to +40° C
Non-Operating Temperature	-25° to +70° C
Operating Humidity	0 to 90% (Non-condensing)
Non-Operating Humidity	Protect from moisture and contamination

Physical:

Size	19" W x 22" D x 7" H
Weight	55 Lbs (25 Kg) typical
Power Supply	115 V/230 V Auto-sensing

Optional Features:

Remote Control	Network (TCP/IP)
Rack Mount Slides	1U Keyboard/Display