

## TELEMETRY RECEIVER

### RLS-725-xx



The RLS-725-xx Receiver is a single-band, single-slot PCI FM Receiver. Versions are available for Lower L-Band, Upper L-Band, S-Band, E-Band, or UHF-Band depending on the model chosen. These wideband designs support PCM data rates up to 10 Mbps (standard) or 20 Mbps (optional) and include both an FM demodulated output for PCM data, and AM/AGC and RSSI outputs. DC coupling is employed to ensure a high quality data link with long strings of NRZ-L ones or zeroes.

The receiver is designed to be used with the optional Diversity Combiner providing a three-board solution to Pre, Post, or Pre & Post-Detection Diversity Reception. The 20 MHz Reference I/O allows the local oscillators of two receivers to be locked together to achieve the high performance required in Pre-Detection Diversity Combining.

#### KEY FEATURES

- Single-slot PCI Receiver with FM Demodulation
- Available in Lower L, Upper L, S, E, or UHF Bands
- AM/AGC & RSSI Outputs from log amplifier
- Supports data rates up to 10 Mbps (20 Mbps Optional)
- DC coupled for NRZ PCM Data Streams
- 10 dB Noise Figure (maximum); 6dB (typical)
- 70 MHz IF Output from Down-converter with 70MHz IF input to IF Receiver
- 20 MHz Reference I/O for use with LS-23 Series Diversity Combiners

*Excellence You Can Measure*



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### RLS-725-xx SPECIFICATIONS

#### Tuner:

Input Frequency . . . . . 2185 - 2480 MHz for E-Band Receivers  
2200.5 - 2399.5 MHz for SBand Receivers  
1700 - 1850 MHz for Upper L-Band Receivers  
1435.5 - 1540.5 MHz for L-Band Receivers  
P-Band and Other Bands are Available - Consult Factory

Tuner Resolution . . . . . 50 KHz  
Frequency Accuracy . . . . . 0.002%  
Noise Figure . . . . . 10 dB (Maximum); 6 dB (Typical)  
Maximum Input Level . . . . . +10 dBm without damage

#### Demodulator Outputs:

Demodulation Type . . . . . FM and AM  
Post-Detection BW . . . . . Software Selectable, 4 frequencies (specify)  
+ bypass  
Optional - 12 frequencies (requires additional card)

Available IF Filters . . . . . 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20 MHz (Specify 4 over 10:1 ratio)

Data Output Level . . . . . 4 V p-p, 75 Ohm output impedance  
AGC Time Constant . . . . . Selectable, 4 values (0.1, 1, 10, 100 ms)  
AM Frequency Resp . . . . . >50 KHz at any time constant

#### Additional Inputs/Outputs:

70 MHz IF Output from Down-Converter  
70 MHz IF Input to IF Receiver  
2nd LO Lock interface for Diversity Combiner  
AM and RSSI/AGC outputs

#### Bus Outputs:

Signal Strength and Peak Deviation

#### Environmental:

Operating Temperature . . . . . 0° to +50° C  
Non-Operating Temperature . . . . -25° to +70° C  
Operating Humidity . . . . . 0 to 90% (Noncondensing)  
Non-Operating Humidity . . . . . Protect from moisture and contamination

#### Physical:

Form Factor . . . . . Full Size PCI Board  
Input Connections . . . . . SMA for RF in  
SMA for IF in  
Output Connector . . . . . SMA for IF out  
Reference Connector . . . . . SMA for Ref I/O  
Other Connector . . . . . D-Series for other I/O  
IF Loop-back . . . . . provided  
D-Series to BNC cable . . . . . provided  
Current Required . . . . . 0.5 amps at +12 V (typical)  
0.12 amps at -12 V (typical)

#### Telemetry-West

9020 Balboa Avenue  
San Diego, CA 92123-3507  
858.694.7500 800.351.8483  
Fax: 858.279.0693  
www.L-3Com.com/TW



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