



**Lumistar LS-28-DRSM Series
Modular Dual Stream Receiver – TM Processor
With Combiner, Frame Sync/Decom,
Data Recorder & UDP Data Broadcast Options**

This is Lumistar's newest & most compact capable Telemetry product

*A complete telemetry ground station in the palm
of your hand!*

**The LS-28-DRSM Series is designed
Specifically in support of
IRIG Flight Test & Space Telemetry Ops**



LS-28-DRSM Series Features:

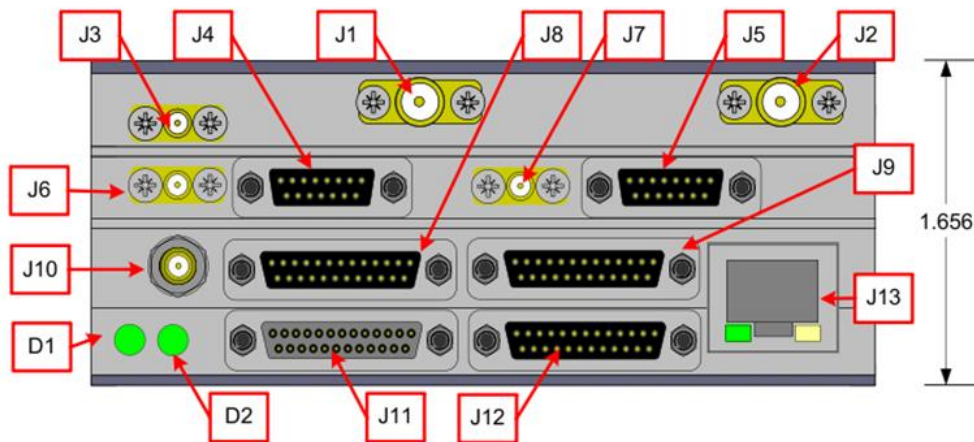
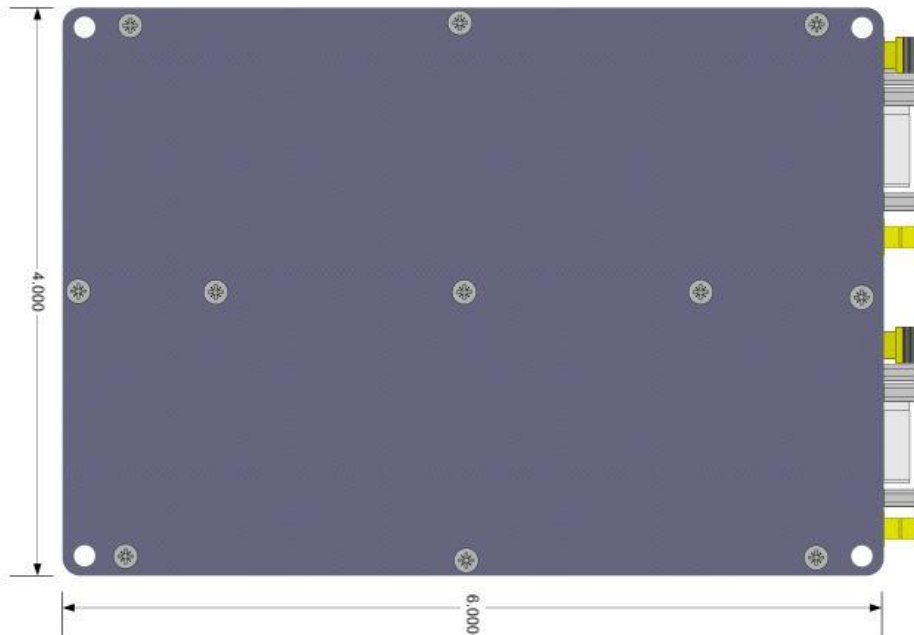
- Ideal for Ground, Mobile, Airborne & Remote Applications
- Flexible/Extensible Firmware-Based Personalities
- Ideal for Integration into any Tracking Antenna Pedestal
- Modular Configuration
 - About the Size of a Hard Drive!
- Dual Channel / 5-Band Receiving & Diversity Combining
 - 200 MHz to 6 GHz, plus 70 MHz IF Input Option
- Independent Dual Channel or Diversity Combiner Option
 - Combiner option includes a powerful 70 MHz IF Modulator
- From Ether to Ethernet
 - RF to UDP in a Single Handheld Unit (Optional)
- RF In to Traditional PCM Bit Sync Clock/Data Outputs
 - TTL and Differential High Speed 422 Simultaneously
- RF to Frame Sync/Decom Multicast UDP Data Packets
 - Incorporates Lumistar TM Display Software (*LDPS*)... *or your own*
- Multiple Demod Formats Can Be Licensed as Options
 - Digital & Analog PCM/FM, SOQPSK, Multi-H CPM, BPSK, QPSK, OQPSK, AUQPSK, PCM/PM, Subcarrier, NTSC & PAL de-emphasis, many more, data rates to 60 Mbps
- Three 70 MHz IF Outputs
 - CH1/CH2 and Combined
- Three Independent Demodulated Bit Sync Outputs
 - CH1/CH2 and Combined
- Software Selectable Dual-Channel Bit Sync Mode Option
- LDPC in accordance with IRIG 106 (*Optional*)
- Support for STC (*Optional*)
- Support for DQM/DQE (*Optional*)
- Support for Adaptive Equalization (*Optional*)
- Receiver Parameter Logging Tool (*Standard*)
- Automated G/T Test Tool (*Standard*)



Lumistar LS-28-DRSM Series Modular Data Receiver - Combiner with Frame Sync/Decom, Data Recorder & UDP Data Broadcast

- **4-6 dB Noise Figure with up to 120 dB Dynamic Range**
- **Data IF Bandwidth Resolution of 10 KHz**
 - Over 40,000 IF Bandwidth Selections
 - Bandwidth Selections <50 KHz to >40 MHz
- **Dual Channel Independent Receiver or Diversity Combining (Optional)**
- **+17 dBm Operational, +29 dBm Non-Damage at Start-Up**
- **Spectral Displays for CH1 and CH2 (Standard)**
- **O-scope Displays for CH1, CH2 & Combined (Standard)**
- **Constellation Displays for CH 1, CH2 and Combined (Standard)**
- **Bit Error Rate Readers CH 1, CH2 & Combined for both I&Q Channels**
- **Data Recording and Playback (Optional)**
 - 64 GB per data channel, CH1/CH2/Combined (includes Decom option)
- **PCM Test Signal Generation (Standard)**
 - Excellent for Loop Back Tests using Internally Generated Data Patterns
- **70 MHz IF Modulator (Optional, with Combiner)**
 - LS-76-M Upconverter accessory available for RF Output form Modulator
- **User Defined I/O Discrete Outputs (Optional)**
 - Allows Creation of Dozens of "User Defined" Signal Conditions
- **User Programmable AGC / AM outputs for Auto-Track applications (Standard)**
 - Extremely Linear AGC, +/- 5V
 - Thirty-two User Selectable Lowpass Filtered AM Outputs
- **Ethernet Appliance-No OS on board**
 - Control / Status over Ethernet (or USB or RS-232 if desired)
- **IRIG or PTP Time Inputs**
 - IRIG included with Decom or Recording Options for Time Stamping Data
 - PTP time optional (includes IRIG Time)
- **Small Size and Weight**
 - Modular Unit: 6.00" x 4.00" x 1.67" (41 cubic inches)
- **Approx. 2 pounds (Modular Unit)**
- **Single Rail Power Supply**
 - +9 to +42 VDC Operation (Modular Unit)
 - 45 watts power dissipation typical (Modular Unit)
- **Available in 1U Dual Channel Rack Mounted Configurations**

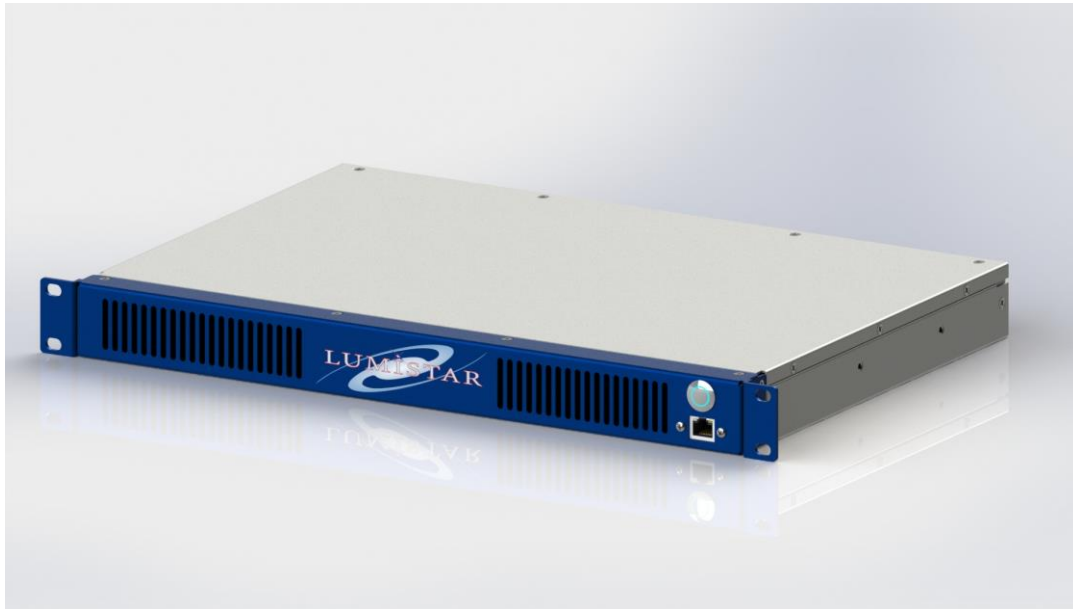
Outline and Dimensions - with Signal I/O Modular Unit



Designator	Style	Signal Description
J1	SMA-F	Channel 1 RF/IF Input
J2	SMA-F	Channel 2 RF/IF Input
J3	SMB-M	10MHz Reference Input/Output
J4	uDSUB15	Channel 1 Analog I/O (AM, AGC, Video, BSync In)
J5	uDSUB15	Channel 2 Analog I/O (AM, AGC, Video, BSync In)
J6	SMB-M	Channel 1 70MHz IF Out Linear/DAGC
J7	SMB-M	Channel 2 70MHz IF Out Linear/DAGC
J8	uDSUB25	Channel 1 Digital I/O
J9	uDSUB25	Channel 2 Digital I/O
J10	SMB-M	IF Modulator Output
J11	uDSUB25	Combiner Digital I/O (Power)
J12	uDSUB25	User Digital I/O
J13	RJ45	Ethernet Control/Status/Data Interface
D1	Multi Color LED	Channel 1 Status LED
D2	Multi Color LED	Channel 2 Status LED

Typical 1U Rack Mount Configuration

Dual Channel Version



Front View

LS-28-DRSM-R1 Series Products
(19" W x 12" D x 1.75" H)



Front Elevation View

LS-28-DRSM-R1 Series Products



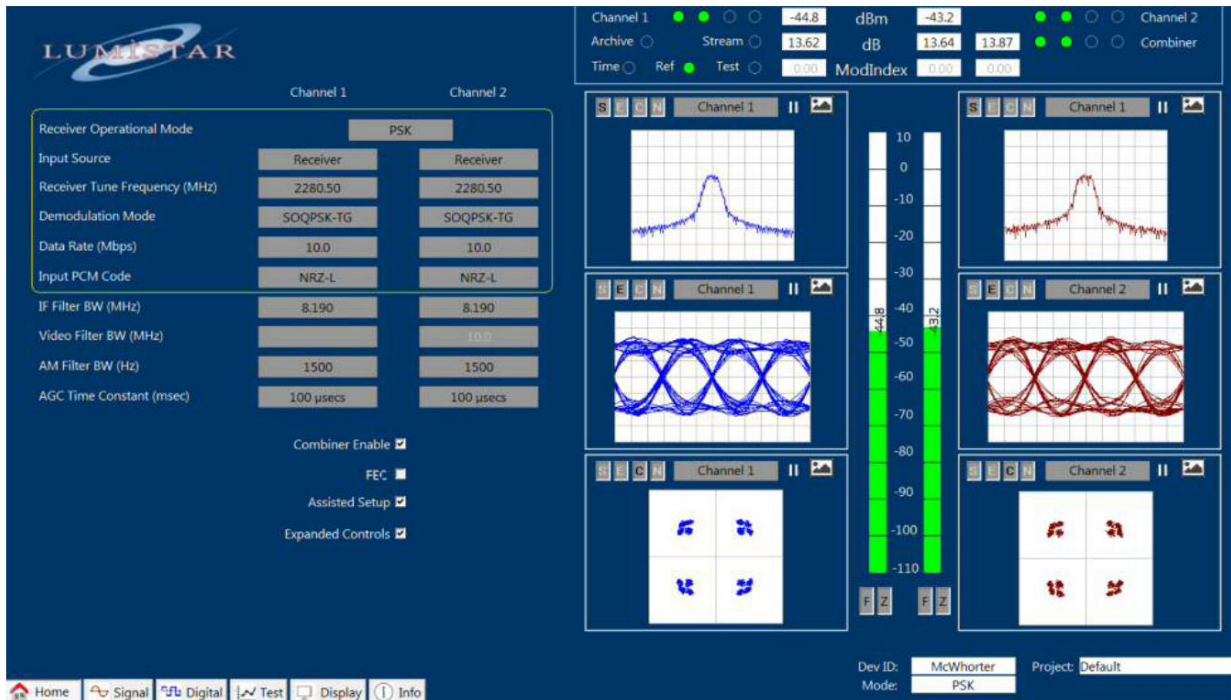
Rear Elevation View

LS-28-DRSM-R1 Series Products

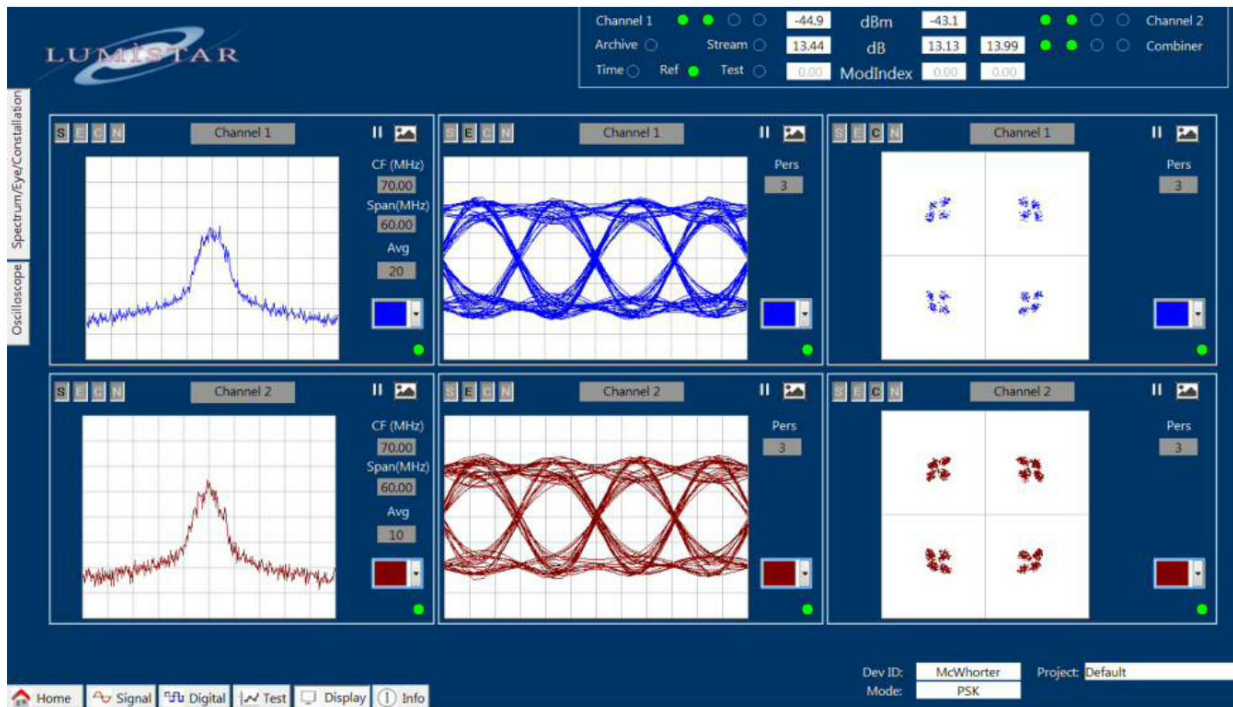
(Shown here is the R1 "Without Processor" Version. Also available is the LS-28-DRSM-R1P version that includes an internal processor, for more information please see Data Sheet for LS-28-DRSM-R1)

Typical Lumistar GUI Examples

Home Page



Display Page





**For Additional Information,
Please Visit the Lumistar Website:**

User Manual for the LS-28-DRSM

http://lumi-star.com/uploads/MANUALS/LS-28-DRSM/LS-28-DRSM_UserManual.pdf

Interface Control Drawing for the LS-28-DRSM

http://lumi-star.com/uploads/MANUALS/LS-28-DRSM/LS-28-DRSM_ICD.pdf