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

Lumistar, Inc ***3186 Lionshead Ave., Suite 100*** ***Carlsbad, CA 92010***
Phone: 760-431-2181 ***FAX: 760-431-2665***
Web: www.lumistar.net ***October 2023*** ***Email: sales@lumistar.net***

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 (40 cubic inches)
- Dual Channel / 5-Band Receiving & Diversity Combining
  - 300 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*
  - Compatible with IADS and Magali software
- 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)*
- 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
- +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 or Framed Data
- 70 MHz IF Modulator
  - Generate all demod format waveforms up to 60 Mbps
- User Defined I/O Discrete Outputs
  - Allows Creation of Dozens of "User Defined" Signal Conditions
- User Programmable AGC / AM outputs for Auto-Track applications
  - 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 Time included with Decom or Recording Options for Time Stamping Data
  - PTP time (Optional)
- Small Size and Weight
  - Modular Unit: 6.00" x 4.00" x 1.67"
- Approx. 2 pounds (Modular Unit)
- Single Rail Power Supply
  - +9 to +42 VDC Operation (Modular Unit)
  - 50 watts power dissipation typical (Modular Unit)
- Available in 1U Dual Channel Rack Mounted or Portable Configurations

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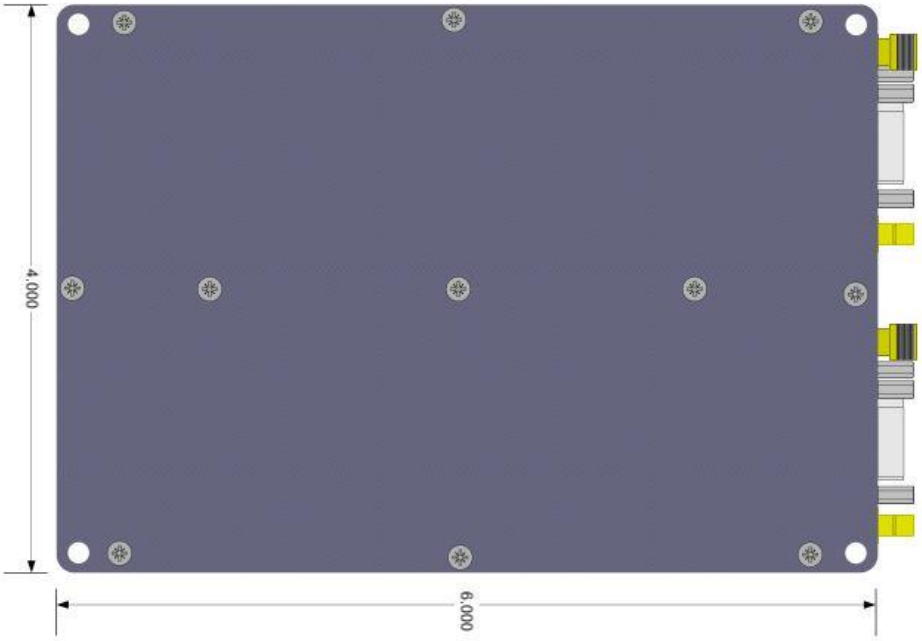
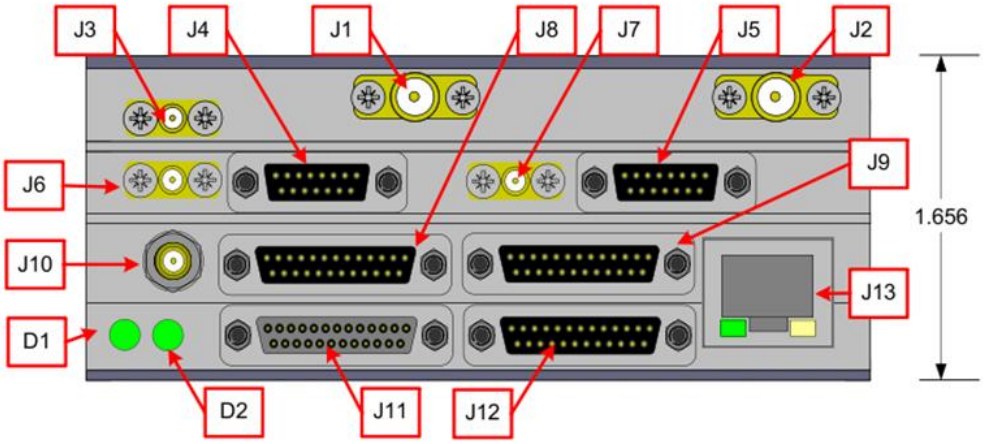
Outline and Dimensions - with Signal I/O

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)

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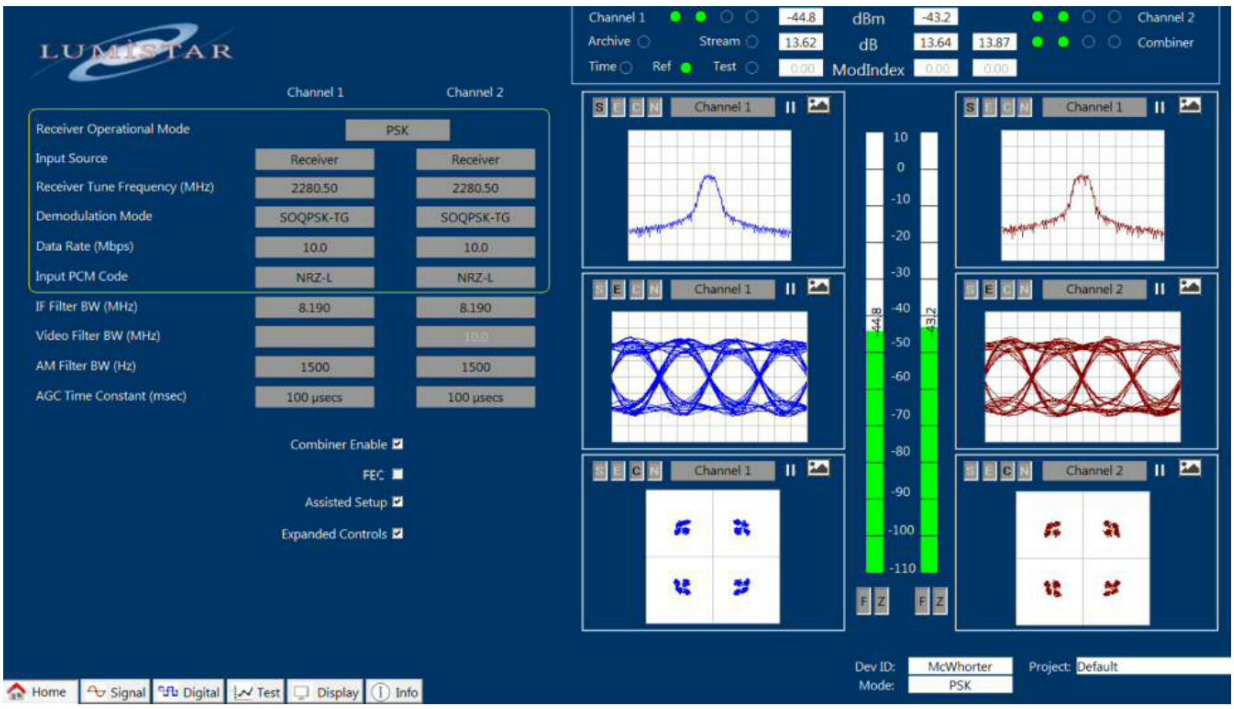
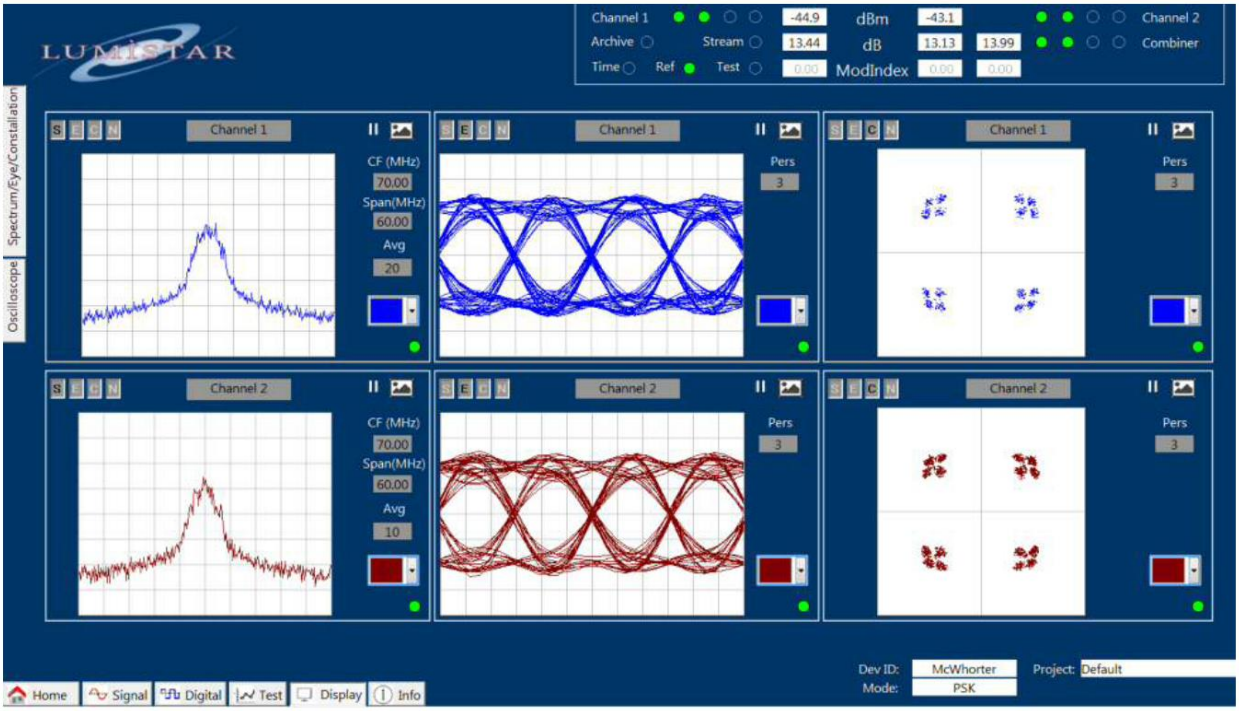
Typical Lumistar GUI Examples

Home Page



Display Page



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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

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