

Dual-Channel PCM Bit Synchronizer & Recording System with UDP Streaming

The LS-48-M is a “child-design”, based on the popular LS-68-M Series Products, which provides PCM bit synchronization, and provides optional features such as frame synchronization, data recording, Baseband and PCM PRN pattern generation, and real-time data streaming functionality in raw or throughput modes.

Please refer to the device User Manual literature for full details and additional information.



A block diagram of the LS-48-M is shown in Figure 1.

The Digital Processing Engine (DPE) used in the LS-48-M is a sophisticated, modular, multi-stream, multi-mode data processing system that is capable of being operated remotely via serial interface. The device is composed of two processing slices each assigned to perform specific tasks. The unit has been designed in such a manner that precludes the necessity of a commercial operating system hosted within the device.

The LS-48-M is capable of several telemetry data functions including PCM bit synchronization, data recording and data Streaming. Blah blah blah

The Lumistar LS-68-M Modular Multi-Channel processing and recording Telemetry Processing System offers an ultra-small, low-cost, high-performance, multi-channel COTS solution for PCM data synchronization, decommutation and simulation applications. Building on the legacy of the Lumistar LS-45, LS-50, LS-55 and LS70 series of products, the LS-68-M enhances the feature sets of each of these product lines and supplies them in a format requiring no hardware drivers in an “OS-less” environment. The LS-68-M utilizes a high-speed Gigabit Ethernet interface for primary



controls and data streaming.

The LS-68-M employs the most current sophisticated Digital Signal Processing (DSP) technologies.

The LS-48-M can communicate through any one of three physical interface paths. The three interfaces include: an RS-232 serial interface, a USB 2.0 serial interface, and a 10/100/1000Mbps Ethernet serial interface. Each of these communication interfaces function at all times. Simultaneously operation is allowed.

SPECIFICATIONS:

Category:	Specifications:	Details:
Mechanical		
	Envelope Dimensions (all slices)	6.00"(L) x 4.00"(W) x 1.11" (H)
	Form Factor	Modular Brick
	Weight	~ 20oz.
Electrical		
	Individual power requirements	9-42VDC; Nom. +24VDC @ 0.875A
	Total Power (all streams)	~ 22 Watts (mode and data rate dependent)
Performance		
	1 or 2 PCM Bit Synchronizer	1kbps to 45Mbps (NRZ)
	1 or 2 PRN PCM Generators	PRN Pattern Generators; 1 per PCM Synchronizer
	PRN Baseband Output	15 Pre-mod filters; Variable output Voltage
	IRIG Time	A, B G; Generator and Reader
	Precision Time Protocol (PTP)	IEEE-1588
	Data Sources	TTL, Diff, Int. Bit Sync, Int. PRN
	Minor Frame Data Size	16 bits; not user selectable
	Data Packaging Framing	3 to 65536 minor data frames
	Bit Sync Inputs	Single-Ended 1 and 2; Differential; SIM
	Data Recording/Playback FLASH	Available per channel; 64GB each (optional)
	Data Streaming	Raw or Throughput Modes Only
Connectors		
	Digital I/O Connector	(3) MicroDSub-25 Plug
	Power/Digital I/O Connector	(1) MicroDSub-25 Receptacle
Environmental		
	Temperature, Operational	-40 to 85 C (Industrial)
	Temperature, Storage	-40 to 125 C
	Humidity, non-condensing	<40C 0-90%, >40C 0-75%

Lumistar LS-48-M Data Sheet



This is a partial list of all possible options. Pricing is dependent upon the selection of options. Please consult Lumistar Sales to define the exact model required.

For more information, we recommend the user consult the User Manual

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Specifications are subject to change. Please verify the latest specifications at time of order.

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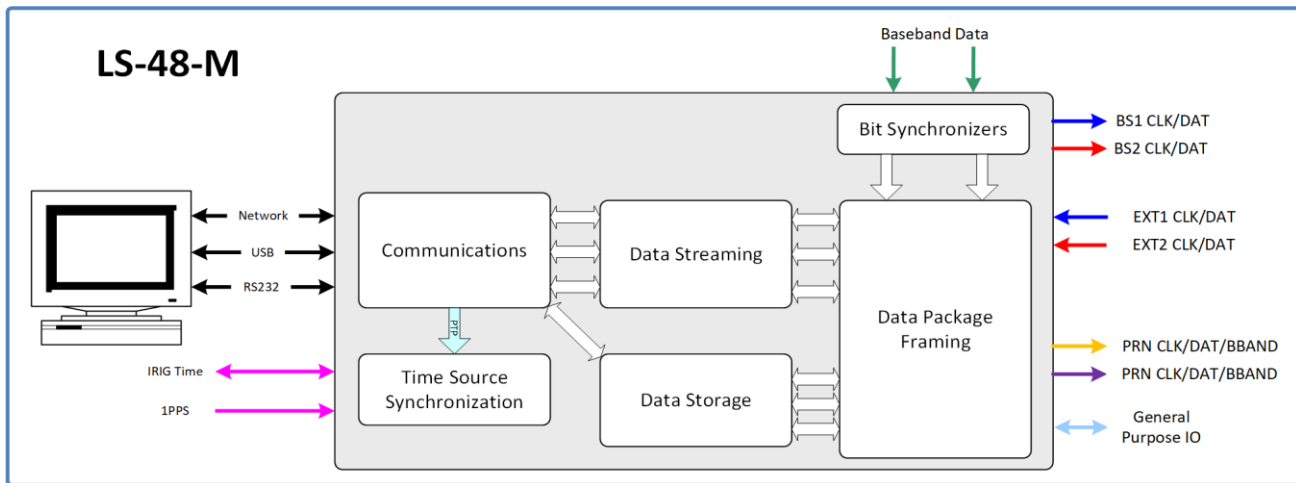


Figure 1: Functional Block Diagram

LS-48-M Multi-Channel PCM Bit Synchronizer & Recording System with UDP Streaming

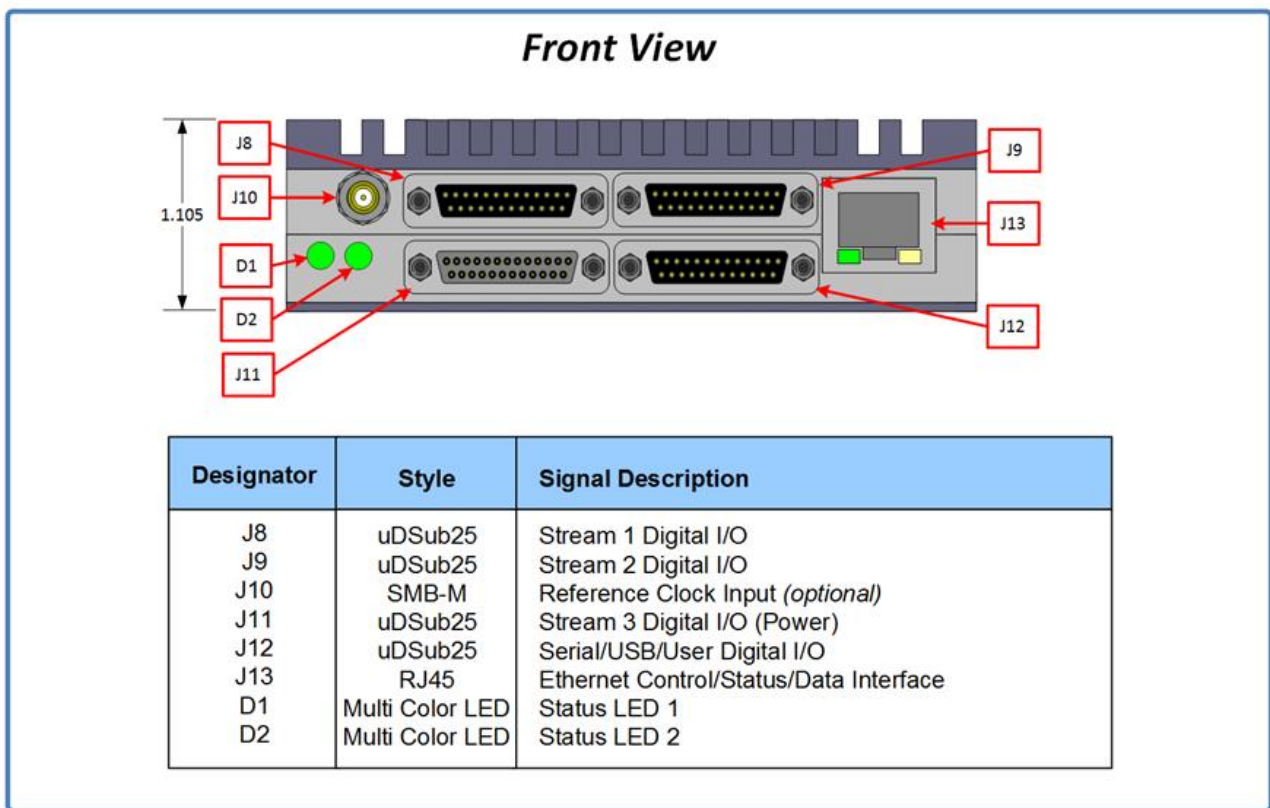


Figure 2 : Connector I/O

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