LUMISTAR

LS-84-EC Economy Chassis Telemetry System
Data Sheet

The Lumistar LS-84-EC Economy Chassis Telemetry System offers a low cost, high performance COTS solution for a portable quick look ground/remote/airborne station. The unit has a built-in computer running Windows XP-Pro for stand-alone control or can be controlled remotely over TCP/IP. Using Lumistar's PCI-based line of telemetry cards, a complete telemetry ground station can be configured in a very small space. Functions such as RF reception, demodulation, bit synchronization, simulation, frame sync, decom, data archive and real-time display can all be handled in this unit. Data can be archived on an internal solid state drive or external serial ATA or USB 2.0 drive. A laptop using a network connection provides remote control and access to real-time displays. The I/O connections from individual PCI cards are hardwired internally within the chassis, thus allowing a bulkhead mount configuration on the rear panel of the chassis.

Lumistar PCI card products such as LS-25 FM Receivers or LS-25-D2/LS-27-D3 Down Converters, LS-35 Multi-mode IF Receiver, LS-40 Bit Synchronizers, LS-50 Multi-function PCM Decommutators, LS-71 DAC, & LS-70-S Dynamic Telemetry Simulators can be installed in this rugged high quality chassis. Using the Lumistar setup, control, and monitoring software on the local computer (or via network connection for remote control), an alternative to the often expensive, proprietary architecture products of other suppliers.

Key Features:

- **High Quality Rugged Aluminum Chassis**
- **Up to four PCI card can be installed in the chassis**
- **Secure internal bracing for PCI cards**
- **Ground, remote or airborne applications**
- **2.9 GHz Quad Core Duo processor**
- **8 Gbyte removable solid state hard drive (upgrade to 64 Gbyte)**
- **4" fan provides over 100 CFM of cooling to the boards and power supply**
- **110 V A-C converter to low ripple DC voltages used by PCI cards**
- **Rear panel is easily custom configurable to match installed Lumistar card set**
  - BNC, N, SMA, RG-45, PS2, USB, VGA, multi-pin D-connections
- **+28 VDC option for airborne applications**

LS-84-EC Rugged Aluminum Economy Chassis
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GENERAL SPECIFICATIONS:
The following PCI products can be installed in the LS-84-EC resulting in an extremely sophisticated telemetry data monitoring system in a small Rugged Economy Chassis computer.

FM Receivers:
- **LS-25 Multi-band FM Receiver with up to 12 IF Bandwidths/12 Video Filters**

Down Converters:
- **LS-25-D2 Multi-band Down Converter**
- **LS-27-D3 Dual Channel / Quad band Downconverter**

Digital IF Receivers:
- **for Multimode Demod formats and Diversity Combining applications**

Spectral and Time Base Displays
- **LS-22-SE Spectral and Oscilloscope Display - up to 3 channels**

Bit Synchronizers:
- **LS-40-DB Bit Synchronizer Daughterboard**
- **Bit Synchronizer firmware option in all multi-mode demodulators**

Multi-function Decoms:
- **LS-50 PCI Multi-function PCM Decom**
- **LS-55-DD Dual Multi-function PCI Decom**

Command Data Simulator with FM Modulator
- **LS-70-F Command Data Simulator with FM Modulator Option**
- **LS-70-M Command Data Simulator with ARTM Multi-mode Modulator Option**
- **LS-70-S Command Data Simulator**

Digital to Analog Converters
- **LS-71 series DAC cards**

Computer Specifications:

The Economy Chassis comes standard with a 2.9 GHz Quad Core processor running Windows XP-Pro with 4 Gbyte of RAM, removable solid state compact flash OS hard drive from 8 to 64 Gbyte and two USB 2.0 connections. The unit can be configured to add a serial ATA hard drive (optional) or an external USB hard drive (standard). VGA (1), PS2 Keyboard/Mouse(1), RJ-45 (1) connections are also provided. Standard I/O configuration includes two N-female (RF) and 20 BNC-F (for IF, AGC, AM, video demod, data, clock, modulation input/output, etc… signal types). Custom I/O configurations are available. Please consult Lumistar to define custom configurations.

Physical Specifications:
- **Size: 17" x 8" x 6'**
- **Weight: 12 lbs empty**
  - **up to 17 pounds with PCI cards installed**
- **Material: Anodized Aluminum**