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LS-84-AP Rugged Aluminum Portable Data Unit
Data Sheet

The Lumistar LS-84-AP Rugged "Aluminum Portable" Telemetry Processing System offers a low-cost, high-performance COTS solution for a portable quick look ground station. Lumistar LS-25 FM Receivers or LS-27-D3 Down Converters with LS-35-R Multi-mode IF Receiver, Bit Synchronizers and Multi-function PCM Decommutators, Data Simulators, and LS-71 D/A Converters can be installed in this rugged high quality portable computer and bundled with the Lumistar setup / control and monitoring software to achieve an affordable alternative to the often expensive, proprietary architecture products of other suppliers. The flexible design allows the user to define the desired data acquisition card configuration to unique requirements.

The computer is a powerful yet portable system capable of handling processor and memory-intensive applications usually reserved for desktop workstations. It allows the ability to use standard add-on cards in application environments that prohibit the use of regular laptops or less rugged lunchbox style computers. It has features that include removable hard drives, shock absorbing bumpers, a large LCD protected by a shatter resistant glass, NEMA 4/12 compliant keyboard and pointing devices, dual cooling fans – all enclosed in a machined black anodized aluminum chassis.

Key Features:

- **High Quality Ruggedized Industrial Portable Computer**
- **4 Available PCI and 2 PCIe slots to accept Lumistar boards**
- **Excellent board cooling through the use of multiple fans**
- **Accepts:**
  - **Lumistar FM or Multi-Mode Receivers**
  - **Lumistar Bit Synchronizers**
  - **Lumistar PCM Decommutators**
  - **Lumistar D/A Converters**
  - **Lumistar Diversity Combiners**
  - **Lumistar Dynamic Data Simulators**
  - **Lumistar Modular Products, such as LS-28-DRSM or LS-68-M**
- **Lumistar LDPS / LRRS Setup, Control, and Display Software is included**

Typical Configuration: Model Number LS-84-AP-RBD includes the portable TM System chassis w/ computer, Receiver, Bit Synchronizer, and PCM Decommutator with display, control, and monitoring software. Please contact Lumistar Sales with your specific requirements.

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SPECIFICATIONS:

The following products can be installed in the LS-84-AP resulting in an extremely sophisticated telemetry data monitoring system in a portable computer.

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

Multi-mode Receivers (for FM, PM, BPSK, QPSK, OQPSK, SOQPSK, AQPSK):
- **LS-27-D3 Dual Channel Multi-band Down Converter with LS-35-R Multi-mode Digital IF Receiver/ Bit Sync with 8 IF Bandwidth selections**

ARTM Receiver
- **LS-25-D2 Multi-band Down Converter with LS-35-R Multi-mode Digital IF Receiver / Bit Sync (For ARTM Tier 0, Tier I, and Tier II)**

Diversity Combiner
- **LS-35-R Series Dual IF Receiver with Pre &Post-D Diversity Combiner and Multi-mode Demod (With bit sync and optional decom)**

Bit Synchronizers:
- **LS-40/45 DB Series Bit Synchronizer Daughterboard**
- **Bit Synchronizer clock/data output is standard in all LS-35-R multi-mode digital demodulators**

Multi-function Decoms:
- **LS-50-D PCI Single Stream Multi-function PCM Decom**
- **LS-55-DD Dual Stream Multi-Function PCM Decom**

D/A Converters:
- **LS-71-P16 16-Channel or P32 32-Channel D/A Converter**

Command Data Simulator (with or without RF Modulator)
- **LS-70-D Data Simulator**
- **LS-70-F Command Data Simulator with FM Modulator Option**
- **LS-70-M Command Data Simulator with ARTM Multi-mode Transmitter Option**

Computer Specifications:

With changing technology, minimum configuration as of this date would include:

- Machined hard anodized aluminum chassis with rubber corner bumpers. ATX motherboard. Internal cooling fan. Built-in speaker, machined card stabilizers, Pelican Air Cargo case with wheels, Manual and driver CD
- 108 key keyboard with trackpad
- AGP video card with 256 MB
- Dual Gbit Ethernet LAN, USB 2.0 x2, 3.2 x6
- 17" TFT display (Resolution 1280 x 1024) 250 cd/m2
- Quad i7 CPU or better with 1333 MHz Front Side Bus
- CPU fan for Pentium processor; 2 fans for board cooling
- Memory 16GB DDR4 RAM
- Power Supply: 400watt+, Auto sensing 110/220; 50/60 Hz
- Removable HDD 1 TB with locking enclosure
- DVD/RW (optional)
- Win 10 OS

Environmental Specifications:

Operating Temperature	5º C to +40º C
Non-Operating Temperature	-20º C to +60º C
Operating Humidity	0 to 95% @ 40º C (Non-condensing)
Non-Operating Humidity	Protect from moisture and contamination

Physical Specifications: Size: 17.2" x 13.4" x 9.3"   Weight: 44 Lbs. (20 kg) typical

Note: Computing specifications subject to change, please consult factory at time or order

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Specifications are subject to change. Please verify the latest specifications at time of order.   **10-1-24**