

Serial Communications Adapter



Features

- PCI Express based solution for PC's, Workstations, and Servers
- API, Device Drivers, Tools, and Documentation provided
- Interface up to 8 DB25 Serial Ports
- Sunhillo ICA/SCA64 Replacement Card

The Longport Express is an intelligent PCI Express serial communications adapter providing highly configurable hardware functionality and an open software development platform. Sunhillo's Longport Express serial communications adapter is the latest in a series of proven FAA-deployed Longport hardware and software products. The Longport Express is a premium interface board compatible with standard X1, X4, X8, and X16, PCI Express slots. A single breakout cable from the high speed 160 pin connector adds eight DB25 serial ports.

The Longport Express's architecture features a Freescale PowerPC P1012 processor, QUICC Engine, and four FPGA-based Z85230 UARTs with hardware assisted 13-bit synchronous input streaming for receiving CD-2 RADAR and similar surveillance

data protocols. This powerful architecture works in harmony to provide high speed serial communications with minimal impact on the host system's CPU load.

Each of the eight serial ports is individually configurable to a wide range of controls and both standard and non-standard baud rates. In RS-485 mode, the Longport Express provides automatic control of the driver in hardware, eliminating the need for application software control. This allows the Longport Express to be used with standard serial communications applications, removing any risk of bus contention or data corruption.

Further, as is critical to optimal multi-drop communication, RS-485 network termination can be selectively added via DIP-switches.

In addition, Sunhillo provides APIs, device drivers, tools, and documentation to make the transition from older ICA/SCA64 based boards to the Longport Express as seamless as possible.

Longport Express: Serial Communications Adapter

FEATURES / BENEFITS:

- High performance architecture provides reliability, speed, and compatibility
- Included 36" breakout cable provides eight high speed RS-232 serial ports
- Each serial port is individually configurable and can generate or receive clock
- All serial ports support a data rate of up to 2 Mbps at a distance of up to 150 feet for RS-232, or 4000 feet for RS-422 and RS-485

Technical Specifications

Serial Port Controls

- RS-232 (V.28), RS-422, X.21 (V.11), V35 (V.35 & V.28), EIA-530A (V.10 & V.11), RS-449/V.36 (V.10 & V.11), RS-485

Supported OS

- Linux, CentOS, Fedora, Ubuntu, AIX 4+up, Solaris, Win7+up (available by customer request)

Protocols

- CDRADAR (13-bit radar), TPS-75 Radar (9-bit radar), Asynchronous, Bi-Sync, Interfacility, HDLC Transparent, HDLC DTE/DCE, HDLC ADCCP/ADCCP_P

Clock Sources

- DCE, DTE, Split Clock, Unit can generate and/or receive clock on each port

Architecture Features

- Freescale PowerPC P1012 processor, QUICC Engine, and 4 FPGA-based Z85230 UARTs

Power

- Total Wattage 5.788

Dimensions

- Standard Height PCI Express Bracket
- Weight: < 1 lb

Max Data Rate

- 2.0 Mbps

Max Data Distance

- 150 feet (RS-232)
- 4000 feet (RS-422/485)

Environmental (Tested to MIL-STD-810G)

- Storage Temperature: -50°C to +60°C
- Operating Temperature: 0°C to +50°C
- Operating Relative Humidity Range: 10-95%, noncondensing
- Operating Altitude: -300 ft to 10,000 ft

Certifications and Compliance

- RoHS2 Directive 2011/65/EU as amended by (EU) 2015/863
- FCC Part 15, Class B

