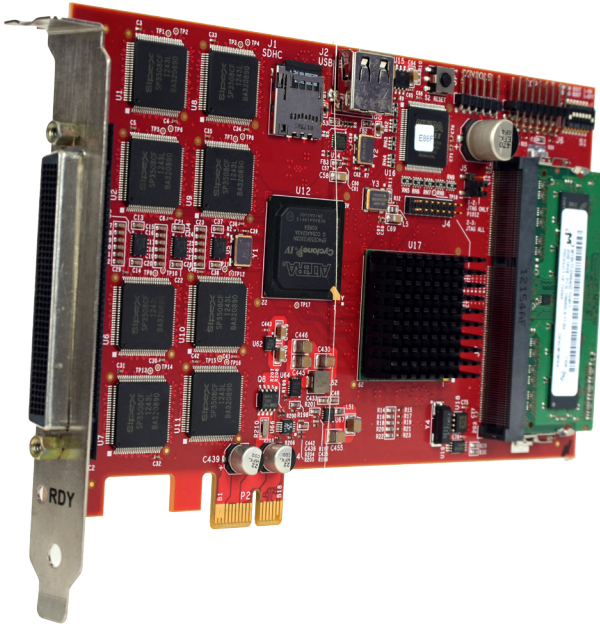


## Serial Communications Adapter



**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

## 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**
- **Synchronous and Asynchronous Protocols**
- **Sunhillo ICA/SCA64 Replacement Card**

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/SCA 64-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

### Agency Certifications

- UL 60950
- ROHS - EU Directive 2002/95/EC

### 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)

### Temperature / Humidity / Altitude

- Operating: 50 to 104°F (10 to 40°C)
- Non-operating: -58 to 140°F (-50 to 60°F)
- Humidity Operating: 10 to 80%(RH non-condensing)
- Humidity Non-operating: 0-100% (condensing)
- Altitude Operating: Low Pressure Operation/Air Carriage -300' to +10,000'
- Altitude Non-operating: Low Pressure Storage/Air Carriage 0' to +50,000'



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