

Real-Time Interface & Conversion Item



Sunhillo's Real Time Interface and Conversion Item (RICI) is a versatile and modular platform designed for surveillance sensor data formatting, filtering, and protocol conversions. The RICI is an ideal solution for networks requiring low-density, high-speed system interfacing to multiple serial ports with the ability to scale to future network demands.

The RICI is a compact FPGA-based signal processing platform that enables synchronous, asynchronous, Bi-sync plus HDLC serial / LAN interconnectivity and can be programmed to perform essentially any data format conversion. Generally, the units are pre-configured to your specifications at the factory.

Common conversions performed by the RICI include message format transformations between surveillance data in ECGP, CD-2, ASR, various ASTERIX categories (e.g., CAT 01, 02, 33, 34, 48, and others), ADS-B, MAR, TPS75, Mode 4, ARTS, SGF, AIRCAT-500, Mode S, in addition to sync, async serial and LAN formats.

The RICI provides IP-based network connectivity via dual Ethernet ports located on the front panel. Each RICI serves as the interface to 4-serial ports of data or the unit can also be used exclusively for LAN-to-LAN data formatting, filtering and/or data conversion. In the Serial-to-LAN data configuration, standard serial cables connect directly to the rear of each DB-25

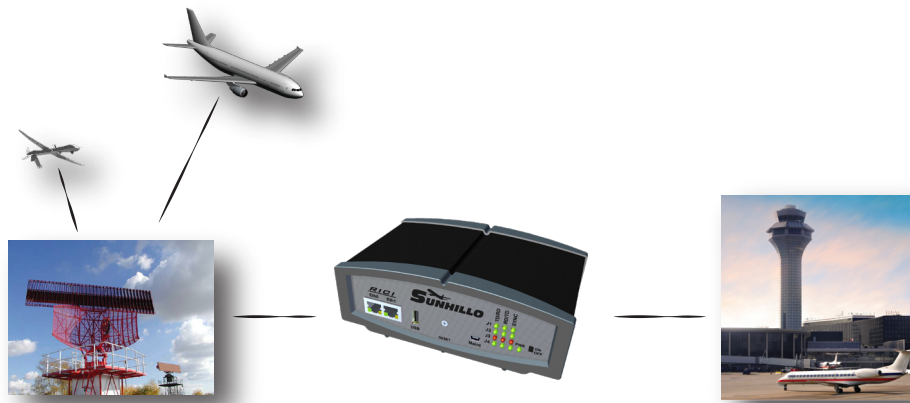
FEATURES

- QUICC Engine™ technology for HDLC, Bisync, and Async serial communications.
- 533 MHz Processor Speed 32-bit DDR3 SDRAM memory with ECC support / 32 KB L1 Cache
- Dual LAN Ethernet / Interface up to 4-Serial Ports
- TCP/IP and UDP/IP Serial to LAN Protocol Conversions

connector, maintaining independent high speed connectivity. Sunhillo's RICI can be ordered with a standard North American Wall Plug-in AC power supply or the European 220/240VAC version.



RICI: Real-Time Interface & Conversion Item



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

Ethernet

- 10BASE-T, 100BASE-T, IEEE-802.3

Protocols

- Synchronous, Asynchronous, HDLC/SDLC, Bi-Sync, Mono-Sync, TCP/IP, UDP/IP

Message Formats

- ASTERIX, CD-2, ASR-9/11, Mode 4, Mode S, MAR, TPS75, ARTS, AIRCAT500, SGF, ADS-B, Custom

Clock Sources

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

Agency Certifications

- FCC Part 15, Class B
- UL 60950
- ROHS - EU Directive 2002/95/EC

Power

- North American - 110/120 VAC
- European - 220/240 VAC

Dimensions

- Height: 3in / 76mm
- Width: 7in / 177mm
- Depth: 5in / 127mm

Temperature / Humidity / Altitude

- Operating: 0 to 100°F (-17 to 38°C)
- Non-operating: -58 to 133°F (-50 to 56°F)
- Humidity Operating: 55 to 85°F, 85% Humidity
- Humidity Non-operating: 86 to 133°F, 95% Humidity
- Altitude Operating: Low Pressure Operating/Air Carriage -200' to +10,000'
- Altitude Non-operating: Low Pressure Storage/Air Transport +50,000'



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