

Surveillance Data Conversion



Sunhillo's Real-Time Interface & Conversion Item (RICI) 5000 is a versatile and modular platform designed for surveillance and sensor data formatting, filtering, and conversions.

The RICI 5000 is now more powerful than ever with an 800MHz Dual Core processor and the latest technology insuring the RICI is supportable for the foreseeable future. The updated RICI is a form, fit, and function direct replacement to the current RICI with multiple upgrades including the option of hardware Encryption.

The RICI 5000 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. Running Sunhillo's SureLine® Core software, the RICI 5000 is a compact FPGA-based signal processing

platform that enables synchronous, asynchronous and Bisync serial plus LAN inter-connectivity.

Common conversions performed by the RICI 5000 include message format transformations between surveillance data in ECGP, SGF, CD-2, ASR, ASTERIX, ADS-B, MAR, TPS75, Mode 4, ARTS, AIRCAT-500, and Mode S, in addition to sync, async serial, and LAN formats. Visit the Sunhillo SureLine Software Suite webpage for a full conversion capability matrix. We are constantly adding new conversions. If the conversion you require is not listed, please contact us.

The RICI 5000 provides IP-based network connectivity via dual Gigabit Ethernet ports located on the front panel. Each RICI serves as the interface to 4 serial ports of data. The unit can also be used for LAN-to-LAN data formatting,

Features

- Fully supported by the SureLine® Software Suite
- TCP/IP, UDP/IP, and Serial to LAN Protocol Conversions
- Each unit features 4 rear DB25 Serial ports
- Dual Front Gigabit Ethernet ports
- 1U rack mountable or table-top design

filtering, and/ or conversion. Standard serial cables connect directly to the rear of each DB25 connector, maintaining independent high speed connectivity in the Serial-to-LAN data configuration.

Front and Rear Panels



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, 1000BASE-T, IEEE-802.3

Protocols

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

Message Formats

- ASTERIX (e.g., CAT 001, 002, FAA 033, 034, 048, and others), CD-2, ASR-9/11, Mode 4, Mode S, MAR, TPS75, ARTS, AIRCAT-500, ECGP, SGF, ADS-B, custom, and more

Encryption Plug-in

- Processor includes Crypto-Accelerator for future plug-ins

Clock Sources

- DCE, DTE, Split Clock (individual clock receive and transmit on each port)

Power

- 13.5W Max per unit
- 100-240 VAC, 50-60Hz, 2A Max

MTBF

- 794,626 Hours at 30°C

Optional Rackmount Sleeve Kit (P/N 010-U-RMS)

- 1U rackmount for standard 19-inch racks
- Captive fasteners allow for fast removal and replacement
- Rackmount sleeve has space for up to two RIC1 5000s

Dimensions

Single RIC1 5000:

- Height: 1.61 in / 41 mm
- Width: 7.31 in / 185.68 mm
- Depth: 9.17 in / 233 mm

Populated 1U Sleeve:

- Height: 1.75 in / 44.45 mm
- Width: 17 in / 431.8 mm
- Depth: 9.25 in / 234.95 mm

Weight (unpackaged)

- Single RIC1 5000: 3 lbs / 1.36 kg
- Empty Sleeve: 3 lbs / 1.36 kg
- Fully Populated Sleeve: 9 lbs / 4.08 kg

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

- CE Mark
- RoHS2 Directive 2011/65/EU as amended by (EU) 2015/863
- REACH
- FCC Part 15, Class B
- UL/CSA/IEC/EN 62368-1
- ETL for Canada and US, 3023031
- FAA-G-2100H: Power

