



- Compact
- Scalable
- Versatile

- Supports up to 4-serial ports
- Dual LAN Ethernet ports
- Serial to LAN Protocol Conversions
- LAN to LAN Filtering
- Software configurable
- Stand-alone configuration
- Front panel indicators
- TCP/IP and UDP/IP protocols



RICI - Real Time Interface & Conversion Item

Small Footprint • Huge Functionality

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 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.



Serial Data Interfaces
Desktop Model

Technical Specifications:

System Interface Characteristics				
Serial Port Controls	Ethernet	Protocols	Message Format	Clock Sources
RS-232 (V.28) RS-422 X.21 (V.11) V.35 (V.35 & V.28) EIA-530A (V.10 & V.11) RS-449/V.36 (V.10 & V.11) RS-485	10BASE-T 100BASE-T IEEE-802.3	Synchronous Asynchronous HDLC/SDLC Bi-Sync Mono-Sync TCP/IP UDP/IP	ASTERIX CD-2 / ASR-9/11 Radar Mode 4 / Mode S MAR / TPS75 / ARTS AIRCAT-500 SGF ADS-B Custom	DCE DTE Split Clock Note: RICI can generate and/or receive clock on each port

Specifications	RICI Unit	Dual RICI Panel	Power Requirements
Height	3in./76mm	3.50in./89mm	North America - 110/120 VAC
Width	7in./177mm	19in./483mm	
Depth	5in./127mm	5in./127mm	European - 220/240 VAC

Description	Specifications	Standard Achieved
Low Temperature Operating	0°F (-17°C), uncontrolled humidity	MIL-STD-810F – Method 502.4
High Temperature Operating	100°F (38°C), uncontrolled humidity	MIL-STD-810F – Method 501.4
Low Temperature Storage	Constant: -58°F (-50°C)	MIL-STD-810F – Method 502.4
High Temperature Storage	Cyclic: 115°F to 133°F (42°C to 56°C)	MIL-STD-810F – Method 501.4
Humidity Operating	55°F to 85°F, 85% Humidity (12°C to 30°C, 85% Humidity)	MIL-STD-810F – Method 507.4
Humidity Non-Operating	86°F to 133°F, 95% Humidity (30°C to 56°C, 95% Humidity)	MIL-STD-810F – Method 507.4
Altitude Operating	Low Pressure (Altitude) Operating/Air Carriage -200 to +10,000 feet	MIL-STD-810F – Method 500.4
Altitude Non-Operating	Low Pressure (Altitude) Storage/Air Transport +50,000 feet	MIL-STD-810F – Method 500.4
EMC Compliance	Federal Communications Commission (FCC)	Part 15, Class B
Safety Compliance	Underwriters Laboratories	(UL) 60950
Environmental Compliance	RoHS (Restriction of Hazardous Substance)	EU Directive 2002/95/EC

Product Overview:

Dual RICI - Rackmount Model



Rear View



Also available
in Desktop Model