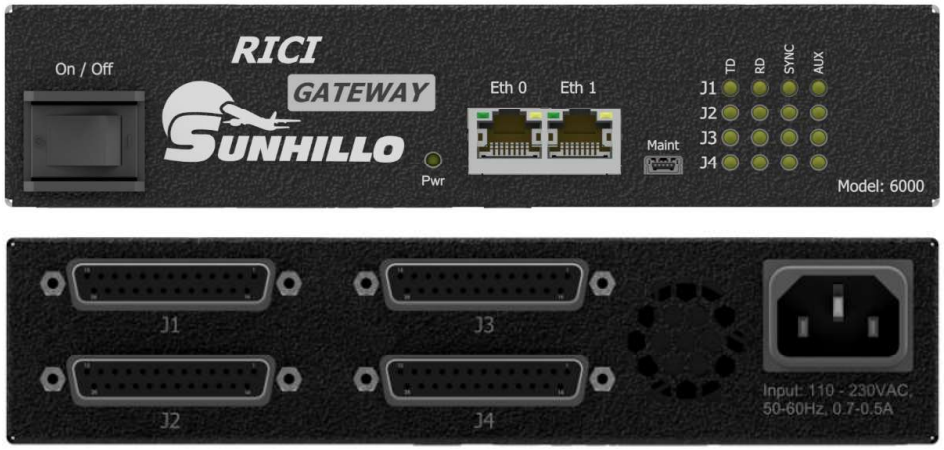
RICI Gateway

TDM to IP Solution



FIPS 140-3™

Features

- ✈ **Fully User Configurable**
- ✈ **FTI/FENS Compatible**
- ✈ **CMHP Certified**
- ✈ **Each module features 4 rear serial ports**
- ✈ **1U rack mountable or table-top design**
- ✈ **Redundant configurations available**

The RICI Gateway was specifically designed to address the needs associated with the elimination of leased TDM lines, which traditionally are used for transporting serial data. As such, the product comes equipped with a suite of built-in user configurable options. This allows the users to configure the unit for their required needs depending on where they are in the migration path relative to the elimination of leased TDM lines, or, as commonly referred to Sun Setting on TDM.

Interfaces:

The RICI Gateway is intended to interface to a number of different devices such as NAV Aid Devices (VOR, RVR, ALS…), Weather Sensors (ASOS/AWOS), and Radar Flight Data Equipment. The RICI Gateway supports up to 4 serial ports.

Additionally, the RICI Gateway has been designed to provide a CMHP RMLS connection that provides monitoring of the RICI Gateway hardware, and individual channel configuration and status.

Configurations:

The RICI Gateway offers the following user configurable options for converting:

SAI (Async) ⟷ **CMHP, SWIM, ActiveMQ**

790 (HDLC) ⟷ **CMHP, SWIM, ActiveMQ**

All of the options listed can also be configured to be transported over the FAA FTI network. By offering the above flexible configuration, as well as both serial and IP connectivity, the RICI Gateway allows the user to switch over gradually or immediately depending on where they are in the migration phase.

Software:

The software running on the RICI Gateway is a SureLine® Core application that provides user access for operation control and maintenance. Access to the unit is provided by a Web UI (web browser's GUI), a console port or network connection to STUI (Sunhillo Terminal User Interface), and SNMP. The CMHP Gatelink is a text-based curses application used to configure and control the RICI Gateway network and serial port connections.

FIPS 140-3 Inside - certificate #5003 The RICI Gateway uses Sunhillo's FIPS 140-3 certified cryptographic module to provide validated cryptography for the protection of sensitive information where encryption is used (i.e., https, ssh).

RICI Gateway Protocols/Decoders

General Protocols	790 to SAI Protocols	790 to SAI Decoder Support
CMHP	TDWR	ASWON HNRM to CMHP (ADAS) support of SSM38 delay
SAI (Async)	VORDME	HNRM to CMHP (ADAS) support of SSM38 delay
790 (HDLC)	RVR NEXTGEN	EIDS-DASI to CMHP
ActiveMQ	ITWS	EIDS-ACEIDS - ASOS to CMHP
SWIM (future capability)	ALS	EIDS-ACEIDS - AWOS to CMHP
ASWONGWY	NON FED AWOS	EIDS-IDS-4 to CMHP
ASYNC BRIDGE	MKRMSC	EIDS-RBDT to CMHP
HNRM Bridge	MKLOC	EIDS-SAWS to CMHP
EIDS-Time Source	MKGS	EIDS-SWSWME to CMHP
	MKIM	ASYNC to CMHP - Server
	ALSF-2/SSALR	ASYNC to CMHP - Client

Technical Specifications

Part Number / **Description**
- 010-18-GTW-S01 — RICI Gateway, 4 Port Version
- 010-U-RMS — Rack Mounting Sleeve Kit
- 33070025 — Null Modern Adapter, DB25 F/F

RICI Gateway Model
- 6000

Serial Port Controls
- RS-232 (V.28), RS-422, X.21 (V.1 1), V35 (V.35 & V.28), EIA-530A (V.10 & V.1 1), RS-449/V.36 (V.10 & V.1 1)

Ethernet
- 10BASE-T, 100BASE-T, 1000BASE-T, IEEE-802.3

Message Proxys
- DME (Selex), BD40 (Modbus ASCII), UXTM (Modbus TCP), UXTM (Modbus RS485), NS710 (Modbus TCP), VOR (Gen 2)

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

Power
- Power usage: 17.2W Max per unit
- 100-230 VAC, 50-60Hz, 0.7-0.5A

Dimensions
- Height: 1.61in / 41mm (Standard 1U)
- Width: 7.31in / 185.68mm
- Depth: 9.17in / 233mm

MTBF
- 1,306,558 hours at 30°C, per Telcordia SR-322 (Issue 3)

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 RICIs

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%, non-condensing
- Operating Altitude: -300 ft to 10,000 ft

Certifications and Compliance
- CE & UKCA Mark
- RoHS3 Directive EU 2015/863
- REACH
- FCC Part 15, Class B
- UL/CSA/IEC/EN 62368-1
- ETL for Canada and US, 3023031
- FAA-G-2100J: Power
- FIPS 140-3 Level 1 (Certificate #5003)

RICI Gateway Configuration: