



RADIO INTERFACE UNIT (RIU)

The Sentinel Radio Interface Unit (RIU) enables voice communications between users on the Sentinel All-IP network and those on networks with an audio interface: e.g., combat net radios or intercom systems.

In addition, it can be configured to provide back-to-back rebroadcast connection between individual radio nets. The RIU has six interfaces which can be individually configured to support the audio properties of various types of HF/VHF/UHF radios or intercom systems.

The RIU is a 1U high, 19-inch, rack-mounted equipment designed for use in military environments. It complements the other rack-mounted Sentinel equipment, such as the LDS101 Ethernet LAN Switch.

It connects to the IP network via ethernet, which is also used to feed power to the unit (Power over Ethernet). Interface, power and LAN status indicators are provided on the front panel.

A specific radio network can be accessed by a single phone user (dedicated user access) or by a number of phone users (multi-user access) where the voice traffic is combined. Access to the radio network is presented to the user as another voice call and, therefore, can be managed with other calls using the supplied telephony services (e.g., Call Hold).

To establish a connection to a radio, the Sentinel VoIP Phone user either dials a directory number for the particular radio interface or selects a radio from a predefined pick list from the phone display.

Generally, the RIU is used with half-duplex transceivers using pressel and over-over procedures to control the Tx/Rx cycles. It can also be used full duplex via a pair of transceivers on split frequencies. The connection between the phone and the RIU is configured to have silence suppression in both directions, so there is only traffic when the phone user talks or there is output from the radio Rx.

SENTINEL RIU

RIU management is provided by the Sentinel Management System (SMS) that is also used to manage the rest of a Sentinel All-IP Network. The RIU provides an SNMPv2 MIB interface for use by third party management clients.

Interfaces

Six audio interfaces, individually configurable according to the type of radio or intercom, each supporting:

- Audio line in/out (at 150ohm or 600ohm impedance, balanced or unbalanced analogue)
- Digital voice in/out (16kbit/s bal CDM)
- Press-to-Talk out (DC)
- Network interface (10/100 Base-TX) with PoE to 802.3af.

Design features

- Multi-radio or intercom net monitoring
- Radio/Intercom selection from phone display menus
- Remote management
- Power over Ethernet (PoE) avoids need for separate power infrastructure
- Front panel status indications.

Military features

- Precedence and pre-emption
- Supports a range of HF/VHF CNRs
- Plug and play deployment
- CE marked
- RoHS compliant.

TECHNICAL SPECIFICATION

Power consumption	<5W
Dimensions	19 inch rack mounting
	1U height
Weight	<5Kg
Network protocols	ITU-T H.323
	SNMP v2

CLIMATIC ENVIRONMENT

Humidity	0%-98% non-condensing
Temperature	Storage -20°C/70°C
Operating	-20°C/40°C
Driving Rain	Def Stan 0035: Test CL27
Dust/sand	Def Stan 0035: Test CL25
Snow and ice	Def Stan 0035: Test CL18 and CL10

INDUCED ENVIRONMENT

Vibration	0.02g2 / 20Hz to 500Hz
Shock	15gN 11ms half sine
Drop	Def Stan 0035: Test M4
EMC	Mil Std 461 E

