

SPECTRA
Defense Technologies



RIPR

RECORDER, INTEGRATED PROCESSOR, AND ROUTER
1401 SERIES

SPECTRADEFENSE.TECH

DATA SHEET



RIPR 1401 SERIES

Recorder, Integrated Processor, and Router

The 1401 RIPR delivers multi-channel, multi-format recording with modular I/O expansion for air, sea and land platforms. Built on Spectra's field-proven data acquisition foundation, the 1400 series recorders combine digital and analog recording capabilities with integrated processing and routing in a compact, stackable form factor.

The baseline controller provides essential data I/O. Stackable I/O modules expand capabilities to match specific mission requirements, from ISR data collection to flight test instrumentation. Field-configurable architecture enables mission-specific deployment across commercial and military applications.

KEY FEATURES

Baseline Controller Module includes the most commonly requested control and data acquisition interfaces, providing a flexible foundation for a wide range of applications. Standard interfaces include:

- 2 channels 1Gb Ethernet
- 2 channels RS232/422 Com
- 1 channel Mil-Std 1553 MUX Bus
- 2 channels PCM RS422 differential input
- 2 channels analog audio
- 4 discrete input and 4 discrete output.

The module features two programmable PCM RS-422 output channels, capable of streaming PCM data in multiple formats, including CH7 TM output, Ethernet over Serial Streaming (EOSS) HDLC, or CH4 PCM.

Baseline Controller Module

Time Synchronization over Ethernet IEEE-1588, IRIG B/G AM or DC, Mil-Std 1553, or with optional integral GPS Receiver providing both time sync and TSPI record.

Ethernet and serial control and status

- Easily reprogram MAC and IP addresses, vary link types and speeds
- Integrable device status for real-time monitoring of all data links
- Ethernet publish of any recording channels selected

Customized COTS data and video I/O

The 1401 RIPR can be configured with up to 4 stackable COTS I/O modules. Modules are offered to include 8 channels of RS422 or single-ended PCM, 8 Channels Mil-Std 1553, 8 Channels Std Def Video, 16 Channels ARINC 429, 34 Channels of RS 232 Receive. Other data types available upon request or developed for your specific needs.



APPLICATIONS

Integrated Sensor System Recording

EO, IR, Radar, EW, HUD/HMD/HDD

Flight Test Instrumentation

Analog & digital sensors, avionics & weapons busses, video sources

Training and Mission Debrief

Weapons employment data, EW detection and avoidance

Command and Control

Real-time video capture and streaming, open architecture API

All data subject to change without notice

RECORDER, INTEGRATED PROCESSOR, AND ROUTER — 1401 series

KEY FEATURES, cont'd

Rugged MIL-STD performance

Qualified for operations in the harshest of environments, delivering assured performance through high shock, vibration and other environmental hazards.

Minimized SWaP

The 1401 RIPR offers an advantage in platforms and pods that require minimized SWaP and maximized processing capabilities. Baseline power supply is 28 vdc 75 W with 50 ms holdup — recorder can be powered directly with 5 vdc source.

Removeable Medias

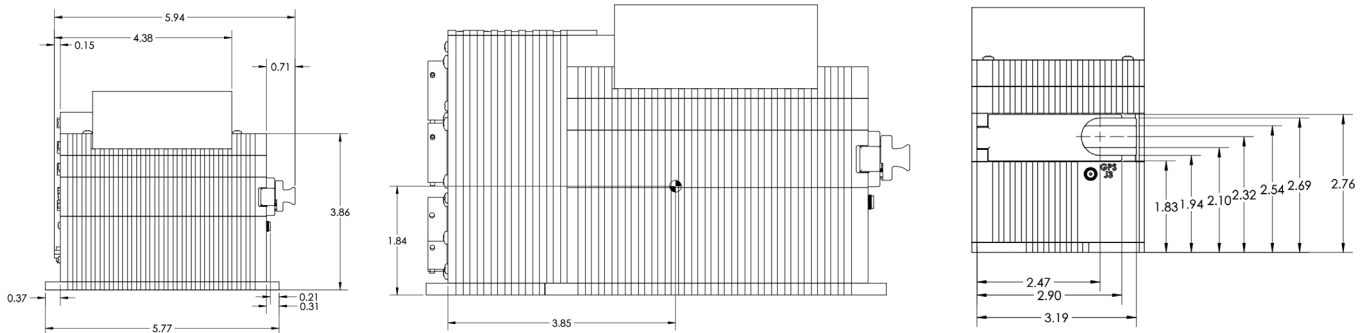
Record Media as CFast SSDs with write speeds up to 500 Mbps - available in capacities 256 GB, 512 GB, and 1TB. A 1 TB CFast drive is available as an AES-256 Data At Rest Self Encrypting Drive.

Recorder Media Format — IRIG 106 Ch 10 standard providing all acquired data channels to be recorded in a single file time aligned with microsec accuracy between channels.

QUALIFICATIONS & SPECIFICATIONS

MECHANICAL DETAILS

Weight Min. 2.6 lbs (1.18 kg) No stack modules w/out manifold
Max 7.0 lbs (3.18 kg) 4 stack modules w/manifold

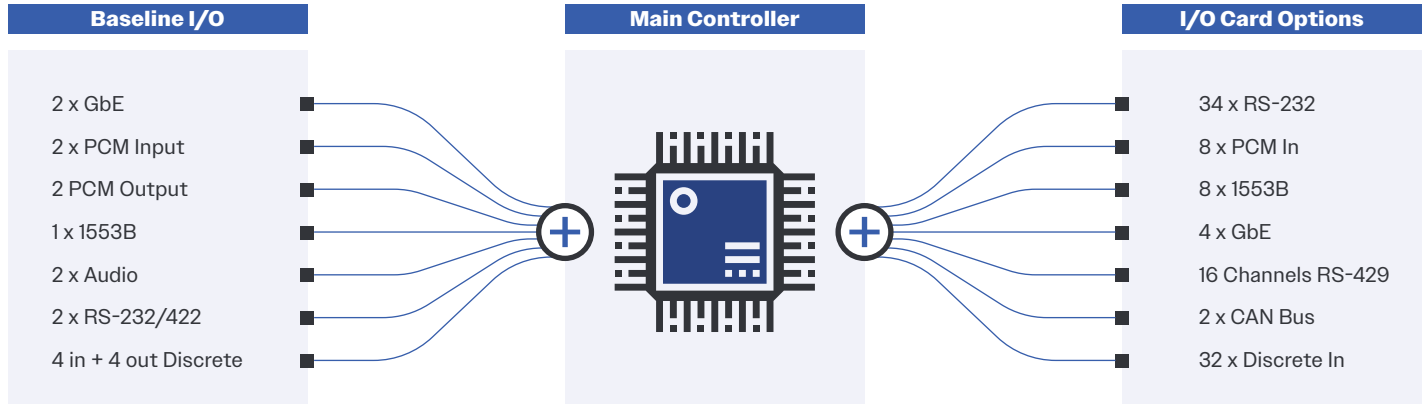


PRODUCT QUALIFICATIONS

Environmental	Per MIL-STD-810	Explosive Atmosphere	511.7 Proc I
Altitude	70,000 ft (operational)	Acceleration	Proc II
Temperature	-40°C to +71°C Operational, -55°C to +95°C Storage	Vibration	514.8, Cat 12
Humidity	5% to 95% non-condensing	Shock	516.8, Proc I 20G's and Proc V 40G's
Fungus	508.8, Inert	Gunfire Shock	519.8, F-15 Profile
Salt Fog	509.7, 24 hrs, +35°C	EMI per MIL-STD-461	CE102, CS101, CS114, CS115, CS116, RE102, RS103
Sand & Dust	510.7 Proc I & II	EMC per MIL-STD-704	28 VDC: Compliant w/50 msec holdup

SERIES 1401 FAMILY MODULAR OPTIONS

Impressive baseline port I/O and expandable capabilities through modular I/O stacking slices



SPECTRA

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Spectra Defense Technologies is a global provider of leading C5ISR solutions for aerospace and defense customers. With over 35 years of proven performance and differentiated expertise, we deliver fully integrated mission systems, data recorders, secure networking, edge computing, robust data-at-rest encryption and advanced visualization that capture, process, and display mission-critical data across air, land, sea, and space.

Backed by engineering, sales, and production teams in North America and Europe, Spectra combines global reach with agile innovation to meet evolving end-user needs with speed and precision. Guided by a culture of innovation and deep customer partnership, we build enduring trust through open-architecture designs, technical excellence, and resilient systems designed to meet today's mission needs and anticipate tomorrow's demands for the U.S. DoW, NATO, European defense organizations, and allied partners worldwide. Visit spectradefense.tech to learn more.

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