Esterline

Control & Communication Systems

RNA Series

Rugged Network Adapters for Crewstation-over-IP in mission-critical environments

The RNA Series of Rugged Network Adapters provides desktop distribution (DVI-D, audio, USB-HID) via standard IP streams and 10G network switches. These devices enable real-time pixel-perfect remote desktops for multiple users accessing multiple computers.

Real-time KVMA switching

High-quality video, audio and other data can be shared over IP with sub-frame latency, supporting real-time interaction with remote servers.
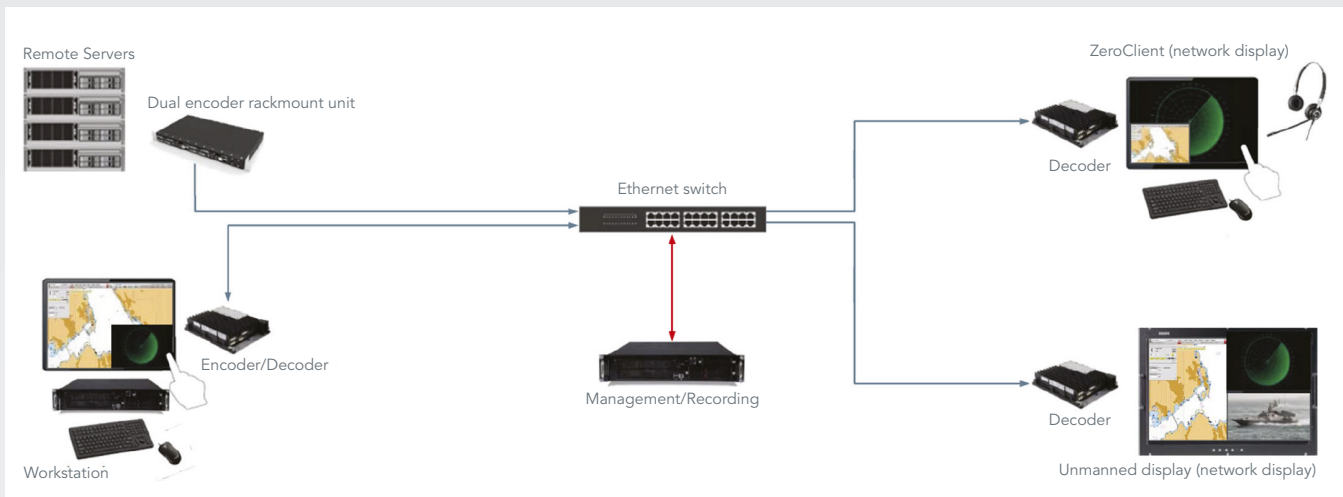
Designed for defense critical applications

RNA devices are ruggedized and MIL-STD qualified. They also feature advanced failover configurations and built-in monitoring mechanisms to ensure continuous system availability.

Flexible configuration

The RNA adapters are highly flexible and can be configured as a decoder, encoder, or both. They support simultaneous streaming of uncompressed and compressed data which enables remote collaboration and screen recording.

Multi-desktops

The RNA decoders allow real-time compositing of multiple high-resolution sources per output display, supporting concurrent control of multiple remote computers from a single HMI. Compositing can also be used for displaying multiple sources on overview displays.

Key features:

Unique performance
- Sub-frame latency
- Pixel perfect images
- Deterministic user interaction (keyboard, mouse/trackball, touch/multi-touch)

High reliability and system availability
- MIL-STD qualified
- Dual Ethernet port for network redundancy
- Built-in monitoring
- Safe pass-through (video, audio, USB). No interference with host system.

Hybrid open standard encoding/decoding
- Uncompressed (RFC 4175: "RTP Payload Format for Uncompressed Video")
- Compressed (RFC 3984: "RTP Payload Format for H.264 Video")

Highly modular and configurable
- Encode and decode simultaneously
- Connect any user to any computer
- Share any display with multiple users
- Full control over remote desktop servers
- Multiple displays per user
- Multi-source compositing per output display

Remote Servers · Dual encoder rackmount unit · ZeroClient (network display) · Decoder · Ethernet switch · Encoder/Decoder · Management/Recording · Decoder · Workstation · Unmanned display (network display)

Technical specifications

Streaming video standards	IETF RFC4175 (uncompressed) IETF RFC3984 (H.264)	
Video	Up to 4x SL DVI-D at 1920x1200, 60Hz - 2 inputs and 2 outputs - 4 inputs - 4 outputs Up to 2x DL DVI-D at 2560x1600 or 2048x2048 - 1 input and 1 output	
Input devices	1x USB type B to host 4x USB type A to HMI devices	
Audio	2xLine-in/Line-out 1xMic-in 1xHeadset out	
Safe pass-through	DVI, Audio, USB	
GPIO	2xdiscrete inputs 2xdiscrete outputs	
Network connections	2x 10GBASE-SR or 1000BASE-T	
Dimensions	Single fanless module (HxWxD mm): 57x207x272 Dual rack unit (HxWxD mm): 44x430x300	
Weight	Single fanless module: 3kg Dual rack unit: 6kg	
System availability	Failover modes Built-in monitoring (I/O's & network faults) MTBF: Naval Sheltered typ. 20000h @ 25°C	
Setup / control	Control API via https Configuration via web service	
Power	100-240 VAC autorange, 50/60Hz Power Consumption: 45W (typical)	
Evironmental conditions	Shocks	MIL-STD-810G 30g/ 12.5ms
	Vibrations	MIL-STD-167-1 Sinusoidal (operating and non-operating) 5-20 Hz: 1.27 mmp (0.05" p) 20-2000 Hz: 2 g
	EMI/EMC	MIL-STD-461F Navy ships (below deck)
	Temperature	MIL-STD-810G Operating: 0-50°C Storage: -40-+70°C
	Humidity	MIL-STD-810G 95% @ 40°C non condensing
	Drip Proof	MIL-STD-810G Up to 45°
	Altitude/Low pressure	MIL-STD-810G Operating up to 25000 ft Non-Operating up to 40 000 ft
Other certifications and compliances	FCC-A, EN 55022/24, IEC 60950 (CE), EU RoHS, EU REACH	

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