

RM5100 Series

The Voice Gateway and Telephony Integration Platform

The RM5100 Series is a highly specialized Voice Gateway designed for field shelters and mobile command posts where legacy analog communication systems must be bridged into modern IP networks. Utilizing an integrated Gateway processing core, it acts as an ultra-stable analog-to-IP converter, allowing deployment forces to retain robust, legacy field telephones and wire-bound analog lines while securely carrying voice traffic over modern IP backbones.

Key Features

Primary Network Role	Tactical Voice Gateway (Analog-to-IP Converter)
High-Density Analog Interfaces	Up to 8 FXS ports for legacy tactical phones
Voice-Optimized QoS	Hardware-accelerated echo cancellation and jitter buffering
Secure Voice Signalling	Supports SIPs and SRTP encryption
Dedicated Voice Processing	Voice-only processing with zero data footprint
Tactical Zeroization	Emergency wipe of encryption keys and configuration data

Capabilities

The RM5100 Series is a dedicated communication bridge designed specifically to integrate legacy analog infrastructure into modern, packet-switched IP networks. Built with a specialized analog-to-VoIP processing core, the system allocates 100% of its internal computation power exclusively to real-time voice signalling and synchronization, operating with a completely isolated data footprint to prevent inter-network interference.

The architecture supports a high density of physical FXS and FXO analog interfaces, enabling deployment forces to tie legacy field telephones, secure voice terminals, and wire-bound analog lines directly into a standard Ethernet grid. To guarantee dependable communication over unstable field connections, the gateway features hardware-accelerated echo cancellation and dynamic jitter buffering to continuously smooth and clear audio streams. On the network side, it enforces localized interface protection via rigid hardware access filters and protects voice packets directly over the wire using industry-standard, software-encrypted SIPS and SRTP signalling.

The capabilities of the RM5100 series include:

- **High-Density Analog Bridging:** Multi-port FXS/FXO interfaces to connect legacy field telephones to IP grids.
- **Isolated Voice Processing:** 100% internal processing allocation dedicated strictly to local VoIP signalling.
- **Hardware Audio Smoothing:** Dedicated echo cancellation and dynamic jitter buffering for clear communication.
- **Secure Voice Signalling:** Full native software support for call encryption via SIPS and SRTP protocols.
- **Network Traffic Filtering:** Strict access control and IP filtering to isolate local voice grids from main data grids.

Form factors

The RM5100 series offers different form factors depending on best fit for a particular use case.

Standard 19"/2 form factor	Customized form factor
	
▪ Form, fit and function over multiple generations ▪ Long-term roadmaps	▪ Project driven form factor

MilDef 19"/2 modular design

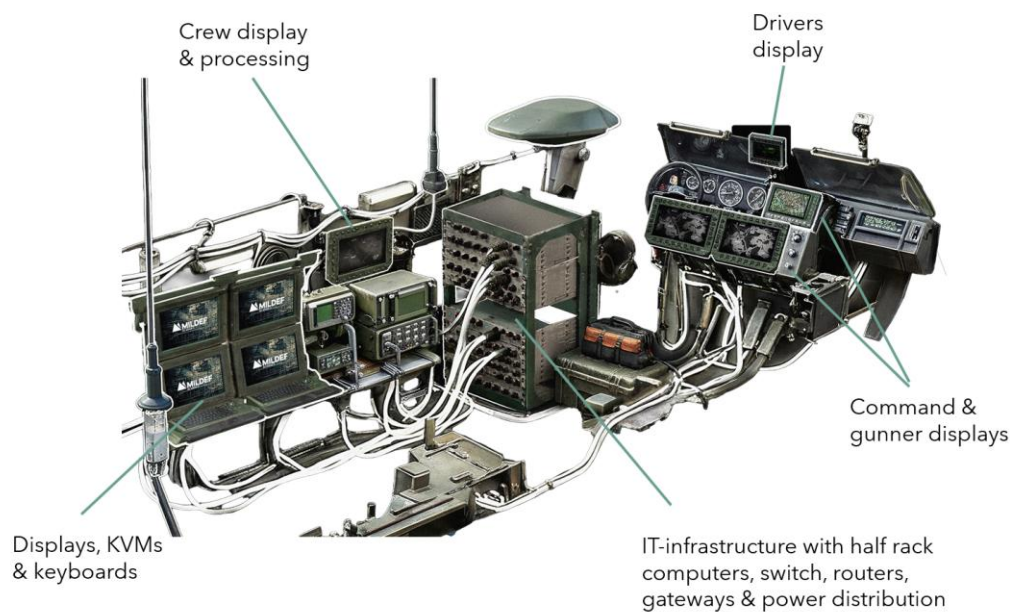
The MilDef 19"/2® addresses the requirements for small, high performance IT hardware. The modular design and broad product offering (computer, network, power and peripherals) enables the use of 19"/2® units as building blocks for creating built to purpose solution. Same form factor over multiple generations enable reuse of cable, mounting solution etc for midlife upgrades along the system life cycle.

Solution provider

MilDef offers solution and integration delivering seamless, end-to-end solutions by integrating hardware and software into complete systems that meet customer requirements. Managing integration projects/programs to ensure alignment with mission objectives/business strategy and technological capabilities.

Hardware ECO-system

Our hardware offering including all the building blocks for complete IT infrastructure for the tactical edge, such as displays, network products, power products, docking stations, mounting solutions etc.



Use case

The RM5100 series is a core component of many tactical platform designs. Some use case examples are:

- **Command-Post Voice Systems:** Connects analog telephones and voice terminals to IP-based communications networks.
- **Communications Shelters:** Provides voice gateway services between legacy telephony systems and modern VoIP infrastructure.
- **Tactical Voice Networks:** Enables interoperability between field telephones, voice terminals, and IP voice services.
- **Military Bases and Fixed Installations:** Supports migration and integration of legacy telephony infrastructure.

Specifications

System & Interfaces			
Router Platform	Innovaphone IP29	Voice Interfaces	Multiple FXS/FXO Analog Interfaces
Primary Network Role	Analog Voice Gateway	Cellular Connectivity	None
WAN Interfaces	1 x shared Gigabit Ethernet Interface	Primary Traffic Type	Voice and Telephony Services
LAN Interfaces	Shared Ethernet Interface	PoE Capability	No
Core Capabilities			
Processing Capacity	Optimized for real-time voice communications with support for multiple simultaneous analog voice channels	Security Functions	SIP Security, SRTP Encryption, Voice Access Control
Encryption / VPN Capacity	Secure voice communications using SIPS and SRTP encryption	VPN Technologies	SIPS, SRTP
Firewall Capability	Basic Voice Access Control	Traffic Prioritization (QoS)	Voice Prioritization, Jitter Management, and Call Quality Optimization
Network Services	VoIP Gateway and Analog Telephony Integration	Secure Boot	Yes
Dynamic Routing Support	Not Applicable	Zeroization	Yes
Tactical & Mission Services			
Traffic Management	Voice Session Management and Optimization	Resilience Features	Echo Cancellation, Adaptive Jitter Buffering, and Voice Service Continuity
Communications Services	Analog and VoIP Communications Services		
Deployment & Architecture			
Primary Mission Use Case	Legacy Voice Modernization and Telephony Integration	Network Position	Communication Layer
Typical Deployment	Telephony Shelters, Communications Nodes, and Voice Networks		
Environmental			
MIL-STD-810			
Shock operating	Functional Shock. 40G/11ms	Noise level	Max noise level of 40 dB SPL 1 m (3.3 ft)
Temp. operating	-40 to 65°C (-40 to 149 °F)*	Salt fog	5 ± 1%
Temp. storage	-40 to 71°C (-40 to 160 °F)*	Temp. shock	55 °C (131 °F) / -40 °C (-40 °F)*
Humidity	Aggravated, 95 ± 4% RH	Vibration	Rotary wing aircraft - helicopter
IP Class	IP65*		Truck/trailer - loose cargo
Low air pressure	Rapid Decompression 8000 ft / 40000 ft Operation/Air Carriage 15,000 ft		Ground vehicles - ground mobile tracked
			Ground vehicles - ground mobile wheeled
Optional standards			
RTCA/D0160, VG, DEFSTAN, MIL-STD, etc can be included on request.			
EMC			
MIL-STD-461			
EMI/EMS	Ground Army	ESD	CS118
Optional standards			
RTCA/D0160, VG, DEFSTAN, MIL-STD, etc can be included on request.			
Power			
Vehicle Power	MIL-STD-1275		
Optional standards			
VG, DEFSTAN, MIL-STD, etc can be included on request.			

*Higher available on request