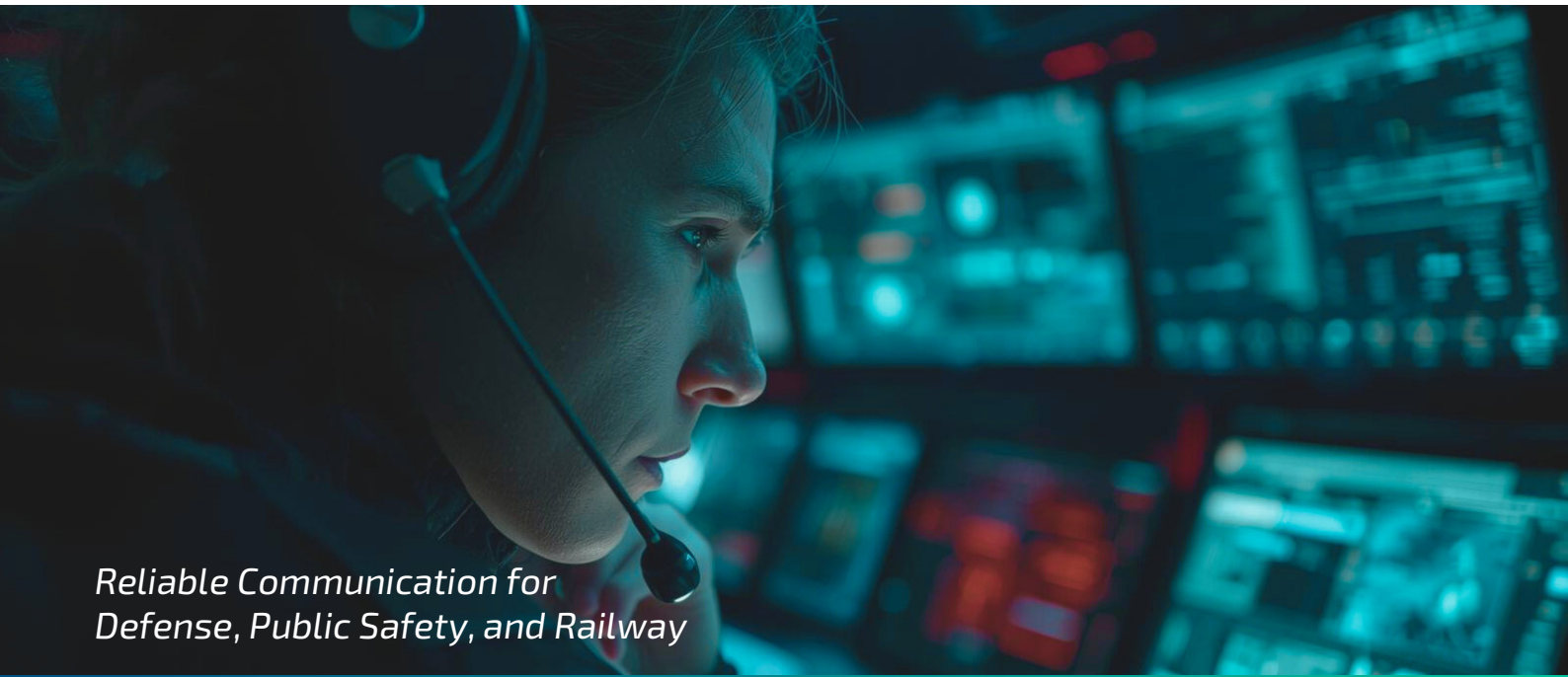


KONTRON

MISSION CRITICAL VOICE SOLUTIONS

USE CASE

A close-up, profile view of a person wearing a headset with a microphone, looking intently at multiple computer monitors in a dimly lit control room. The screens display various data and maps, with blue and red light reflecting off the surfaces.

*Reliable Communication for
Defense, Public Safety, and Railway*

THE NEED FOR MISSION CRITICAL SOLUTIONS

In critical environments, **communication can't fail**. Whether in **defense, public safety (PPDR), railways, airports, utilities, or industrial operations**, reliable voice and data are the backbone of safe and efficient collaboration. Standard commercial networks are not built to meet these demands — but Kontron is.

Why Mission-Critical Communication?

When lives, security, or vital services are at stake, organizations need:

- Guaranteed connectivity in any situation
- Instant, clear communication across teams and locations
- Resilient infrastructure that keeps working during crises
- Compliance with global standards for interoperability

KONTRON'S MISSION-CRITICAL VOICE SOLUTIONS

Kontron delivers a carrier-grade 5G Core with integrated cloud IMS (cIMS) and Mission Critical Services (MCx) platform. Our solution is designed for low latency, high reliability, and prioritized communication, making it an ideal fit for mission-critical sectors.

Industry Scenarios

In a large manufacturing plant, IMS/MCx enables instant, secure group calls, real-time video sharing, and priority messaging over 5G. Workers and supervisors communicate seamlessly across the facility, improving safety and response times during emergencies.

Mining Scenarios

In mining operations, IMS/MCx provides mission-critical push-to-talk and real-time video communication between underground workers and surface control. It ensures instant alerts for hazardous conditions, coordinates evacuation procedures, and supports hands-free voice commands, enhancing safety and operational efficiency in harsh environments.

Healthcare Scenarios

In a large manufacturing plant, IMS/In hospitals, IMS/MCx enables secure, real-time voice and video communication between doctors, nurses, and emergency teams. It supports priority calls for critical patient care, instant group coordination during emergencies, and seamless handover improving response times and patient outcomes.

Military Scenarios

Soldiers use rugged 5G devices with seamless handover between cells, ensuring uninterrupted secure voice, video and data exchange for coordinated maneuvers, rapid threat alerts, and emergency support, even in contested or noisy environments.

Ports/Airports Scenarios

IMS/MCx enables instant, secure group communication among ground staff, security teams, and logistics coordinators. The solution supports push-to-talk, priority messaging, and real-time video sharing over 5G networks, ensuring smooth operations, quick response to incidents, and seamless coordination even in noisy, high-traffic environments.

Banking Scenarios

In banking, IMS/MCx enables secure, instant communication between branch staff, security teams, and central operations. Push-to-talk and priority messaging help coordinate cash handling, respond rapidly to security incidents, and ensure smooth customer service operations across multiple branches and ATMs.

Railways Scenarios

In railways, IMS/MCx provides mission-critical voice and data communication between train drivers, control centers, and maintenance teams. Push-to-talk, group calls, and real-time video sharing enable quick coordination during delays, emergency response, and track maintenance, ensuring passenger safety and operational efficiency.



Key capabilities include:

- Complete 3GPP IMS implementation with the P-CSCF, S-CSCF, I-CSCF, and optionally E-CSCF and IP-SM-Gw to support the full VoLTE/VoNR deployment.
- Fully developed in Go-lang with cloud principles and features.
- Supports 3GPP Release 18 and GSMA IMS, SMS, roaming and security recommendations.
- S-CSCF and IP-SM-Gw include auto-chaining features for local delivery reducing the signaling. Convenient for isolated private networks.
- Integration via SIP trunking supports flexible options for Breakout to other networks.
- Deploy-able in the public or private cloud or in a private constrained resources setup.
- Future-proof technology aligned with 5G, NIS2/ANSSI requirements.

Mission-Critical Mobile Broadband enables

- Multimedia-rich services within an expanded ecosystem.
- Improved situational awareness to protect people and assets.
- Seamless migration path toward FRMCS standards.
- Integrated support for Train Control & Management Systems.
- Enabler of Automatic Train Operation for future rail networks.
- More efficient working environments in a fast-changing industry.
- Increased productivity and enhanced worker safety.
- Greater operational control with higher accuracy and fewer resources.
- Faster, more reliable handling of operations—24/7x4.0.

WHY KONTRON?

Kontron's 5G, cIMS and AI Voice platform is optimized for **industrial-grade performance**, **low power edge deployments**, and **open integration** with third-party automation systems. Combined with our deep experience in embedded systems, telco software, and industrial computing, Kontron is uniquely positioned to support manufacturers on their **Industry 4.0 and digital transformation journey**—starting with a compact **Starter Pack** and scaling to full-factory coverage.

