



Enabling tomorrow's defence network capabilities

Transition to modern communication technologies without risk or disruption

Modern solutions to modern challenges

Facing multiple drivers of change, including cybersecurity threats, cloud computing, increased mobility requirements, and environmental challenges, defence organisations want robust modern networks with a reduced footprint but full functionality.

Armed forces' networks must handle high volumes of traffic from diverse sources, including both classified and unclassified traffic. Defence organisations rely on secure gateways that support multiple protocols, with redundancy, high-performance, continuity, and interoperability with legacy networks and vendor Air Traffic Management (ATM) solutions.

Particularly in contested and congested environments, managing reliable and secure communications in a single tool is critical. Frequentis enables intelligent routing and system management, able to meet armed forces' Command, Control, and Communications (C3) strategies.

Able to meet both security and safety requirements Frequentis networks support single and dual security domain (RED/BLACK) transmissions for mission-critical tactical and operational applications.

Frequentis offers solutions for integrated voice, surveillance, and data communication for defence, drawing on our expertise in the safety-critical air, blue-light, and utility industries.

Offering unparalleled safety, security, and performance, our solutions enable end-to-end control and enhanced application survivability. By brokering between application needs and current network state, we maximise application performance and minimise bandwidth consumption.

Using Frequentis technologies, armed forces can integrate new solutions with legacy systems, ensuring interoperability with other services, and better manage more complex sets of networks. Frequentis solutions can reduce both total cost of ownership and the network attack surface, and bridge the gap between conventional IP networks and the specific requirements of defence applications.

Challenges in defence communication networks

Ensure resilience

Armed forces rely on robust, resilient platforms for mission-critical communications, carrying both secure and non-secure traffic.

Evolve capabilities

Across multiple layers, including air defence, national security, Command and Control, and global communications, armed forces must improve operational capabilities.

Minimise disruption

To maintain operational readiness, new solutions must run alongside legacy systems during an orderly phase-out, all monitored from a single point.

Optimise integration

Forces must improve integration between existing and new solutions through better monitoring, prioritisation and routing of traffic at the service level.

End-to-end control

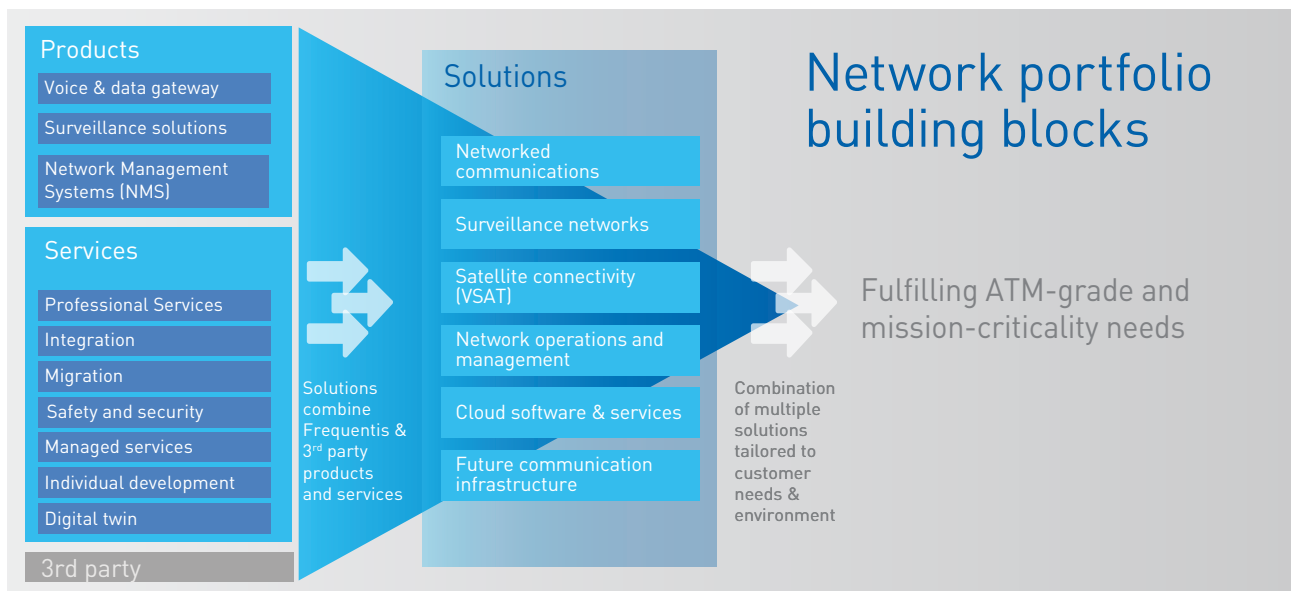
Defence networks must provide intelligent routing to ensure the delivery of critical services even when partly impaired or disabled.

Maximise impact, minimise disruption

By making the change to IP solutions, the defence industry will be able to take advantage of existing infrastructure while enhancing security and resilience. However, when introducing new network technologies and data content it is vital to preserve interoperability and ensure close integration with existing networks and users.

As military organisations continue to expand and update existing networks while simultaneously deploying, new networks solutions, significant integration and operational challenges arise. Integrating, maintaining, monitoring, and running these varied networks is becoming more complex and demanding. To help address these issues, Frequentis offers comprehensive intent-based networking capabilities, able to integrate multiple legacy

communications platforms and offer full-service interoperability. Based on open standards, Frequentis solutions combine real-time network performance information with application needs and provide pre-defined mitigation scenarios. Frequentis solutions bridge the technical gap between conventional IP networks and the very specific and heterogeneous requirements of defence applications.



Solutions ready for defence deployment

Frequentis defence solutions meet industry standards, including software development standards and controls, as well as software development security standards. The solutions deliver:

- Support of high data volume
- Modernised, hardened, survivable, and resilient C3 networks
- Versatile, robust, and responsive C2 solutions
- Real-time monitoring and control of services running over the network for full situational awareness
- Real-time optimising of voice, surveillance and other data traffic based on user specific QoS requirements
- Enhanced network service delivery, diversity, and resilience
- Improved service availability, reliability, and security

Comprehensive mission-critical networks solution portfolio

Frequentis offers a complete range of network and communications solutions specifically designed to meet the demands of armed forces. By combining real-time network performance information with an understanding of application demands and pre-defined mitigation scenarios, our solutions enable converged networks to serve all applications from mission-critical to administrative.

At the technical level, Frequentis solutions constantly measure network performance indicators, such as packet loss, delay, and jitter, using active and passive network segment probes to detect degradation in performance and intelligently route traffic to meet the

overall mission objectives. As a result, our solutions bridge the gap between legacy serial, analogue, digital and radio on one side and IP-based communications networks on the other, enabling smooth and non-disruption modernisation.

Setting the standards for mission-critical networks in defence

- Secure shared situational awareness for inter-service and inter-agency coordination
- Full redundancy and extreme resilience to support round-the-clock operational readiness
- Fixed and mobile capabilities support go-anywhere operational capabilities
- Intelligent, application-aware routing of voice and data across complex networks
- Modernisation without disruption: support for legacy standards alongside the latest technologies
- System integration and turnkey delivery enable fast, low-friction deployment.

Frequentis solutions for defence networks

Modern, standards-based solutions that meet or exceed defence industry requirements around security, safety and resilience.

Extensible modular solutions enable rapid and easy integration with existing systems and networks, including legacy communication equipment.

Real-time, intelligent routing prioritises application traffic according to criticality and time-sensitivity, and automatically compensates for degradation or failure of network elements.

Versatile network management solutions enable control over the entire network and the state of individual elements from the point of view of a central C2 system.



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