Datasheet: VCX-IP
Integrated voice and data gateway

VCX-IP is an advanced gateway for voice and data communications complying with European and international VoIP standards for civil and military air traffic management (ATM). It provides protocol conversion for radio, phone and data, enables ATM-specific contingency scenarios using intelligent routing and optimises ATM applications used by civil and military air navigation service providers.

Key features

Migration to IP

VCX-IP provides a cost-efficient, step-wise migration path to manage the transition from legacy infrastructure to IP in the most optimum way. A wide range of legacy as well as IP interfaces, even low-speed data services still used with radar systems, are supported.

High performing radio and data network

Optimise ATM applications with bi-directional dynamic delay compensation over hybrid (TDM, IP and satellite) networks, echo-free side tone with over-the-air loop check ensure safe and comfortable operation for controllers, deterministic network behaviour for all voice and data communication flows.

High availability for safe operations

Fully redundant hardware and software compliant with European and international quality and safety standards will provide highest levels of business continuity, supporting parallel multi-technology hybrid WAN backbones and zero-downtime configuration changes.
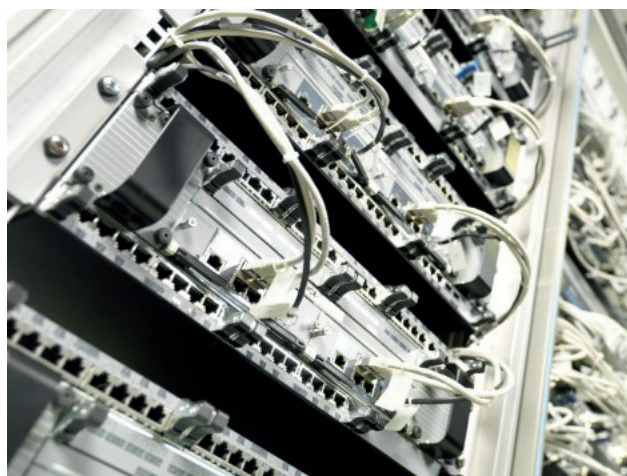
VCX-IP at a glance

- Frequentis pioneered countrywide radio network solutions specific to ATM since 1995

- Frequentis customers have successfully provided more than 125M hours of safe air travel powered by VCX-IP network solutions worldwide

- Installations in 50 countries on 6 continents

- The largest VCX-IP deployments integrate hundreds of radio, phone and data services, consisting of more than 1,500 network nodes and connecting more than 70 sites with multiple centres.

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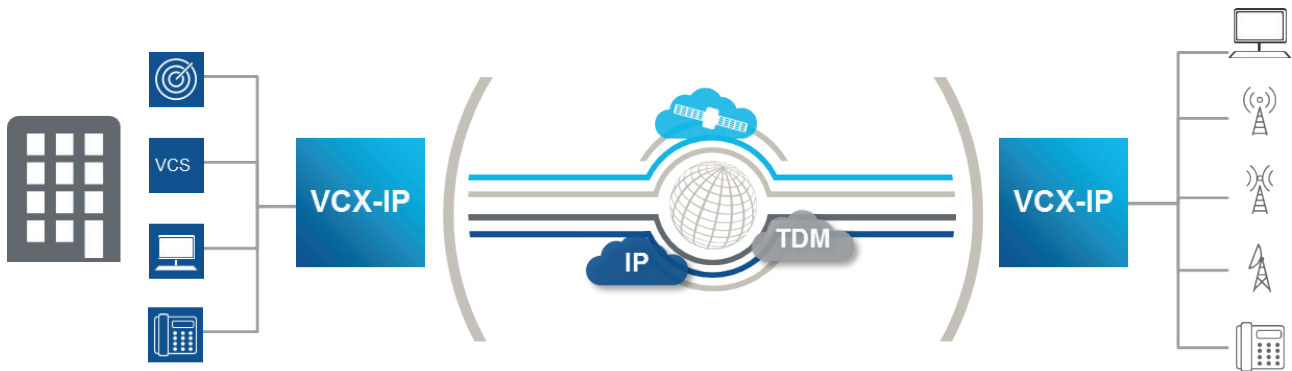
Benefits

Increased radio network performance

Echo-free voice communications compliant with international ATM VoIP standards; deterministic network behaviour for all voice and data communications flows.

Highest levels of business continuity and safety

A safety-driven architecture using fully redundant hardware and software in compliance with ED-153

SWAL3 provides high availability and fast switchover times in case of link failures, maintaining voice and data connections.

Reduced total cost of ownership

Supports multiple legacy voice and data interfaces within an all-IP environment. Proven interoperability with other vendors' equipment based on the ED-137 standard. Ten years of life-cycle support. Operational cost savings through voice compression, ATM specific bandwidth optimisation, and flexible routing.

VCX-IP: Technical aspects

Availability	Up to 99.9999% – hot-pluggable interfaces, boards and active cooling components
Configuration	Zero downtime for configuration changes
Power supply	Redundant: 110/240 VAC and/or 24 VDC
Standards compliance	ED-137, ED-153 SWAL3
Voice codecs	G.711 A-law and µ-law, G.729, G.728 Gatwick
Radio interfaces	IP (ED-137), 4w E&M, 4w contact, 4w inband, E1 CAS, VCX-QSIG
Phone interfaces	IP (ED-137), ATS-QSIG, 2Mbit QSIG, ISDN, MFC-R2, MFC N5, LB, LCEN, VCX-QSIG, FXO, FXS
Data interfaces	IP, RS232/RS422 synchronous (2.4 – 512 kbps) and asynchronous (50 bps – 115.2 kbps), X.21, V.35
Recording interfaces	4wire, E1, RTSP, ED-137
Others	SSH, SNMPv2 and SNMPv3