Aviation solutions for safe, on-time and connected journeys
Do you know that Nokia is the mission-critical aviation solutions provider?

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The Nokia communications networks help operators address the aviation industry challenges

Air to Ground (A2G)
- Top line growth
- Provide broadband internet connectivity during the flight
- Improve Airline competitive position

Air traffic control
- Operational excellence
- Safe and Ultra Reliable Ground to Ground network

Airports
- Improve the passenger experience
- Operational Awareness and Excellence
- Financial success
- Safety
Nokia is a unique vendor in the industry with a complete end-to-end mission-critical Aviation communications portfolio.
Bringing affordable broadband to the skies with Nokia Air to Ground (A2G)

- High Capacity cellular LTE ground network to establish link between ground and airplane
- In-Cabin Ultra Broadband Passenger Connectivity through WiFi
- Improved on-board cabine services and safety (IoT, Video Surveillance)
- A2G supports prioritized backup channel for cockpit communication

Broadband at high velocity (up to 1200 km/h)
Large cell range (up to 150 km radius)
No interference with terrestrial LTE network
Purpose build A2G antennas for sky coverage
Nokia’s mission-critical solutions efficiently address airport’s needs to establish a foundation for a smart, connected airport.
Nokia’s IP/MPLS solutions fully address ATC’s needs for a Ground-to-Ground critical communication network

IP/MPLS for ATC

- Topology agnostic technology
- Better use of Bandwidth with Traffic Engineering
- Scalable Traffic Isolation technology
- Legacy traffic integration
- Fast resiliency
- Flexible Bandwidth usage
- Optimized network usage for all applications
- Mature and Future Proof Technology
References in aviation

Air Traffic Control
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Airport
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Airlines – A2G
Europe, 30 countries
European Aviation Network
The world’s first

Integrated air-to-ground and satellite network of Deutsche Telekom and Inmarsat powered by technology from Nokia and Thales for MSS S-band frequencies

First successful flight tests in commercial network in November 2016 – throughput beyond 75 Mbit/s

First customer International Airlines Group (IAG)

Service launch in 2017
Nokia aviation solutions...

ATC
Ground to Ground Managed Services

Airlines
Air to Ground
Optical LAN Networks (MRO)

Operational
Network Solutions
LTE Networks
Campus Networks
LAN Passive Optical Networks
IOT Connectivity
IOT Management
Managed Services
Datacenter Connectivity
VMS (Surveillance, Analytics)

Passenger
Network Solutions
DAS Networks
WiFi Networks
Augmented Reality Solutions
Google Accelerator Solutions

...for safe, on-time and connected journeys
Commercial airports looking to thrive in the years to come must address three major imperatives: enhancing passenger satisfaction, delivering operational excellence and ensuring commercial and financial success. The key to becoming future-ready and meeting these goals is the so-called Internet of Things (IoT).

Today’s airports can be future-ready now by leveraging the Internet of Things (IoT) – a fully connected ecosystem enabled through end-to-end connectivity with flexible, secure, horizontal platforms, advanced radio technologies, SDN and edge computing, device certification, and enhanced security.

Nokia is addressing these challenges by offering a full set of solutions that airports can begin implementing immediately, simplifying the management of IoT connections and development of applications. Nokia’s IoT solution for commercial airports combines radio and core networks, including mobile edge computing, with connectivity management, device management, data collection and application enablement components, while addressing end-to-end security. Looking ahead, Nokia will continue to build a collaboration community around IoT. Using a real-world business model, these technologies and services can be applied to use cases and partnerships that will make commercial airports future-ready, unleashing the full value of IoT.

For further information, case studies and commentary visit networks.nokia.com/aviation