



Seamless Airport Communications Solutions

Airport



data communications

Innovative Access Solutions

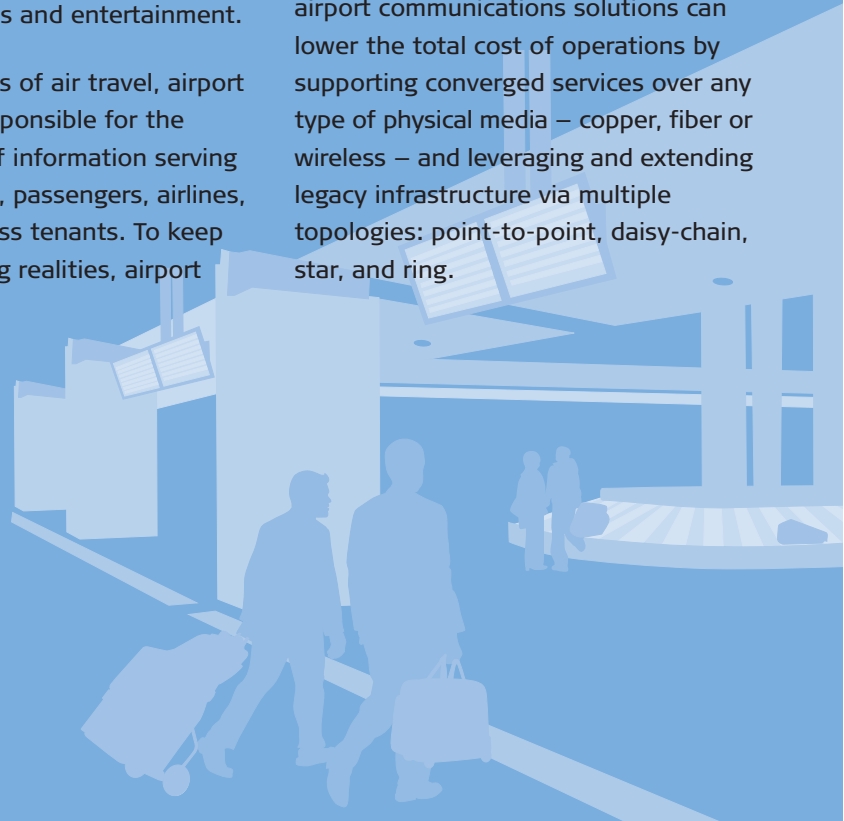
Bolster Airport Information Capacity with a Seamless Communications Network

The air transportation industry has experienced considerable turbulence in the past decade that has challenged airport information technology and networks. Airport network capacity has been stretched by a dramatic increase in voice, video and data traffic fueled by unprecedented security requirements, the growth in passenger traffic, and the transformation of airport terminals into centers of business and entertainment.

As the gatekeepers of air travel, airport authorities are responsible for the continuous flow of information serving security personnel, passengers, airlines, and airport business tenants. To keep pace with changing realities, airport

networks must be ramped up to ensure support for newer information technologies and efficient and reliable communications.

RAD Data Communications has served the needs of the air transport industry for decades, providing end-to-end, cost-effective data communications and telecommunications products. RAD's airport communications solutions can lower the total cost of operations by supporting converged services over any type of physical media – copper, fiber or wireless – and leveraging and extending legacy infrastructure via multiple topologies: point-to-point, daisy-chain, star, and ring.





Intelligent, End-to-End Connectivity

RAD has solutions for reliable end-to-end transmission of data, voice and video over discrete or converged networks for all airport communications applications, including in-terminal communications, air traffic control and ground control. RAD's product range includes fiber modems, SHDSL modems, wireless multiplexers, multiservice access multiplexers, and LAN bridges to deliver and aggregate single or multiple services from multiple points across any transport network: SDH/SONET, ATM or IP. An SNMP-based central management platform gives network managers the ability to monitor and configure remote units among heterogeneous networks. For economical multiple-site connectivity, RAD supports local access rings over redundant, long distance rings, adding resiliency and saving on multiple long distance links.

Air Traffic Control

The continuous increase in air travel creates a challenge for airports to maintain and upgrade their communications infrastructure to ensure the highest level of air traffic safety. Air traffic control centers use diverse communications, including voice, low speed data, high speed data, SCADA, radio, and video. With air traffic monitoring, there is no room for miscommunications. Information must be transferred reliably and efficiently to central dispatcher sites. RAD's multiservice access multiplexers are well suited for air traffic control systems. They aggregate voice, video and data communications in air traffic control centers for transmission to central radio sites and from the radio sites to airplanes.

Security and Video Surveillance

With the heightened state of alert, security and surveillance coverage at airport facilities have taken on a new dimension. No point can be left uncovered. Surveillance has been expanded to remote areas in the airport and its vicinity, including underground parking lots, railway stations and surrounding roadways. CCTV surveillance forms a vital link in the chain of airport security measures, backed by a seamless communications network that ensures no error or delay in relaying essential audio and visual information.

Connecting CCTVs over a converged network to a central control area creates a platform for airport-wide security, including video and data inputs from baggage surveillance and runway alarm systems. RAD's modems, remote Ethernet bridges or wireless connectivity can achieve extended camera coverage and transmission of video and audio data to a central control area. Multiservice access multiplexers can also play an important role in border security, enabling reliable, real-time transmission of voice, data and video to airport-wide security personnel. RAD's data and voice multiplexer provides true Ethernet extension to transfer IP-based video services, and to enable connectivity to external DVR and video surveillance management centers. RAD products can aggregate n x 64 kbps or Ethernet video transmissions and E1/T1 PBX connections over the SDH/SONET, IP or ATM transport networks.

Ground Communications

For ground-control communications, leading airports are migrating from analog radio communications to advanced TETRA networks, which support applications needed to meet increased security demands. Transmitting real-time voice and data communications, the TETRA system is deployed around a wide area in the airport, serving ground services and security personnel. RAD's TETRA solution establishes secure, cost-effective connectivity among the receiving points.

RAD's versatile multiplexers are ideal for TETRA traffic, offering multiple user ports, a variety of low speed and high speed data user interface modules, and a wide range of main link interface modules. The multiplexers efficiently aggregate and groom traffic from a large number of base transceivers and transport the voice and data over a few high speed main links. Efficient backhauling from remote dispatcher sites to the central mobile switching office (MSO) and dispatcher center with RAD's solution streamlines network performance and minimizes transport bandwidth requirements and line costs for TETRA applications. The RAD solution also establishes E1 or SHDSL rings with self-healing and E1 or ISDN backup to ensure communications in the event of a failure in one section.



Broadband Access

Internet access has become a basic commodity demanded by air travelers, whether equipped with laptops or in search of an Internet station. Internet access is a service the airport authority must offer to airport tenants. The extension of Internet access is also a source of revenue for airports to offset the increased costs of security and advanced communications infrastructure. RAD has a portfolio of products for fixed or wireless broadband access ideally suited for installation at airports.

Using RAD's products, cafes, restaurants and lounges, dispersed in wide areas in the airport, can easily connect to airport Ethernet services over varied infrastructure.

Long lines and delays caused by new security requirements have also created demand for self-service e-ticketing and check-in kiosks financed by airlines. These traveler-friendly stations, served by Ethernet access links, are another added value revenue service for airport authorities.

Flight Information Displays

Airports can also use broadband extension to set up Ethernet-based flight information displays. Increased security measures have created new demand for the rapid dissemination of travel information in airports. Flight information displays must be widely visible to inform travelers of delays, cancellations and changes in gate information. Travelers with long waits need access to flight information in more points, including restaurants, duty free shops and lounges. RAD's modems and SHDSL repeaters, which extend ranges between modems, seamlessly transport information from a central location to viewing points installed over a wide area. RAD products can support ring and drop-and-insert topologies to enable display connectivity over any infrastructure, while ensuring high reliability of information thanks to line protection mechanisms.

RAD's airport communications solutions can lower the total cost of operations by supporting converged services over any type of physical media



Flexible Communications Solutions

RAD's Benefits

- Cost-effective:** Attractively priced solutions reduce the number of links utilized in networks for additional savings.
- Flexible:** Products are designed to transfer any service over any network. IP modules create the option for migration to IP-based networks.
- Scalable:** Solutions are designed for expanding networks.
- Economical:** Leverage any existing infrastructure to keep CapEx under control.
- Manageable:** End-to-end network is controlled via a central management platform based on SNMP.
- Profitable:** Create an advanced network infrastructure that can offer services to airport tenants, creating new revenue streams.

Communications Services

Broadband Access

Flight Information Displays

Ground Communications

Security and Video Surveillance

Air Traffic Control



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