

Delivering Scalable ICT Infrastructure for a Major International Airport Expansion

Overview

A leading international airport operator in India undertook a major passenger terminal expansion to increase airport capacity from 15 million to approximately 34 million passengers annually. The project included expansion of the passenger terminal, airside infrastructure, and supporting airport facilities to accommodate sustained growth in domestic and international traffic.

To support the expanded terminal, Black Box was selected to deliver the complete Structured Cabling System (SCS) and passive ICT infrastructure. The engagement covered more than 15,000 connectivity points across airport operations, security, passenger services, and building management systems, creating a resilient digital foundation for a major international airport expansion project.

Challenges

The terminal expansion required ICT infrastructure capable of supporting a broad range of airport operational systems while maintaining consistent performance across a large and complex environment. Multiple technology platforms needed to be integrated within tight construction schedules without impacting ongoing airport operations.

The project also demanded coordinated deployment across two core switch rooms, four distribution rooms, and more than sixty access locations. Delivering large-scale structured cabling while meeting stringent quality, safety, and operational standards required careful planning, disciplined execution, and close collaboration with multiple stakeholders.

AT A GLANCE

CHALLENGES

- Rapid passenger growth drove terminal expansion
- Large-scale ICT deployment across airport facilities
- Multiple airport systems required seamless integration
- Strict quality and operational compliance requirements

SOLUTIONS

- 15,000+ structured cabling connections deployed
- Passive ICT infrastructure for airport-wide systems
- Connectivity across 63 access and distribution locations
- Dedicated engineering and project delivery teams

RESULTS

- Complete ICT backbone delivered for terminal expansion
- Airport operational systems fully interconnected
- Reliable infrastructure supporting passenger operations
- Scalable platform for future airport growth

BENEFITS

- Supports significant passenger capacity expansion
- Reliable connectivity for mission-critical airport systems
- Simplified management of airport ICT infrastructure
- Future-ready platform for operational growth
- Improved passenger service and operational efficiency



Solutions

Black Box designed and deployed the complete passive ICT infrastructure supporting the passenger terminal expansion. The implementation included more than 15,000 structured cabling connections for airport systems including Access Control, CCTV, Wi-Fi, IP Telephony, PAVA, FIDS, Building Management Systems (BMS), Passenger Gates, and other critical operational platforms.

The deployment extended across two core switch rooms, four distribution rooms, and sixty-three access locations, supporting thirty-seven Passenger Boarding Bridges (PBBs) and the Airport Operations Centre (APOC). Black Box managed project execution through dedicated project management, engineering, design, quality assurance, and commissioning teams to ensure timely delivery and compliance with project standards.

Results

The project delivered a scalable ICT foundation supporting the expanded passenger terminal and enabling seamless integration of critical airport operational systems. The infrastructure provides reliable connectivity across passenger processing, security, communications, and facility management functions.

With a unified structured cabling platform in place, the airport now has a standards-based ICT infrastructure capable of supporting expanded operations, future capacity growth, and the reliable delivery of mission-critical airport services.

Why Black Box?

This engagement demonstrates Black Box's expertise in delivering large-scale ICT infrastructure for complex transportation environments. Combining structured cabling, project management, engineering, and quality assurance, Black Box delivered a resilient digital foundation that supports secure, reliable, and scalable airport operations while enabling future infrastructure expansion.