

Education Brochure

Student-Approved Networks Seamless Learning Everywhere

AI-powered networking infrastructure designed for universities and schools

100%

Campus Coverage

24x7

Always On



The Campus Network Challenges

Modern education institutions operate like distributed digital ecosystems.

They must support thousands of students, faculty, researchers, guests, and connected devices across classrooms, hostels, libraries, laboratories, auditoriums, and outdoor spaces, while maintaining security, performance, and operational simplicity.

Traditional networking deployments create four critical gaps:

High-Density Performance Challenges

Classrooms, hostels, and campus events generate unpredictable traffic spikes, often overwhelming legacy Wi-Fi infrastructure not designed for extreme device density.

24/7 Digital Campus Connectivity

Campus networks never sleep. Students rely on uninterrupted connectivity across hostels and study spaces at all hours for learning, collaboration, and research, placing constant demand on network performance.

Operational Complexity for Lean IT Teams

Managing hundreds of access points, switches, and other network infrastructure (e.g. firewalls, NAC etc) across multiple buildings creates significant operational overhead.

Fragmented Infrastructure

Separate vendors for Wi-Fi, switching, authentication, and monitoring lead to integration complexity, inconsistent performance, and slow troubleshooting.



IO by HFCL – Integrated Campus Network Platform

Three components. One unified solution.
Zero operational complexity.

IO by HFCL delivers a Make in India networking platform designed specifically for education environments, combining high-density Wi-Fi performance, unified management, and simplified operations.



Wi-Fi Access Points
High-density campus Wi-Fi with seamless roaming and role-based access



Managed Campus Switches
PoE support for APs, IP cameras, and IoT devices with enterprise-grade reliability



IO Canvas Cloud Management
AI-powered monitoring, centralized configuration, and lifecycle control

High-Density Wi-Fi Built for Learning Environments

IO by HFCL delivers a complete Wi-Fi portfolio engineered for different campus environments:



Wi-Fi 7 Indoor Access Points
Built for high-density auditoriums, exam halls, and campus events



Wi-Fi 6 Indoor Access Points
Designed to deliver high-performance connectivity across every campus environment



Wi-Fi 6 Outdoor Access Points
Reliable connectivity across walkways, courtyards, sports grounds & event spaces

This density-aware architecture ensures consistent performance even during peak academic hours and campus events.

Campus Switching Built for Always-On Learning Environments

IO by HFCL managed switching portfolio provides a high-performance, scalable, and energy-efficient wired backbone for campus networks.



Flexible L2 Switch Options
8 / 24 / 48-port configurations for classrooms, hostels, and admin blocks



PoE-Enabled Infrastructure
Power access points, IP cameras, and IoT devices through a single cable



High Availability Design
Link aggregation and failover for uninterrupted network performance



Energy-Efficient Operations
Optimized power consumption for lower operational costs



Seamless Campus Integration
Works as a unified layer with Wi-Fi and network management

The result: A resilient, always-on campus network that supports learning, security, and operations without complexity.

Unified Network Management for the Entire Campus

IO Canvas, HFCL's AI-Powered Network Management Platform, simplifies operations across the entire campus network.

- ☑ Single-pane visibility across Wi-Fi and switching infrastructure
- ☑ AI-powered monitoring and predictive analytics
- ☑ Zero-touch provisioning for rapid device onboarding
- ☑ Cloud-managed or on-premises deployment options
- ☑ Hierarchical visibility with centralized control

The result: less operational complexity and faster issue resolution for campus IT teams.

Seamless Authentication for Students, Faculty & Guests

Education networks must support diverse identities while ensuring security.

- ☑ 3rd party NAC integration
- ☑ Google Workspace (G-Suite) login integration
- ☑ OpenRoaming
- ☑ Microsoft Azure AD authentication
- ☑ Captive portals for guest access
- ☑ Role-based network access policies

This enables secure and seamless connectivity across the entire campus ecosystem.

Comprehensive Networking Services for Education Institutions

IO by HFCL delivers a complete lifecycle approach to campus networking.

01

Campus Network Design

High-density Wi-Fi architecture, coverage planning, and capacity modeling tailored to academic environments.

02

RF Surveys & Network Planning

Detailed campus RF analysis, optimal access point placement, and deployment blueprints for large campuses.

03

Deployment & Campus Rollout

Zero-touch provisioning, phased building rollout, and seamless migration from legacy networks.

04

Optimization & IT Enablement

AI-driven performance tuning, operational documentation, and training for campus IT teams.



Proven at Scale: Transforming Digital Campuses Across India

High-Performance University of Delhi Deployment Supporting Hundreds of Thousands of Students

One of India's largest universities successfully modernized its campus network infrastructure with IO by HFCL education networking platform.

The deployment delivered high-performance Wi-Fi across academic buildings and residential hostels while simplifying network management for campus IT teams.

Mission-Critical Results

- Reliable high-speed connectivity supporting 400,000+ students and faculty
- Seamless Wi-Fi across classrooms, hostels, and academic buildings
- Centralized management improving IT operational efficiency



Our Trusted Education Deployments

Scan to explore
detailed case studies



IIT Delhi

High-density campus network deployment supporting major university events and festivals across a 25-acre campus.



Central University of Kerala

Managed Wi-Fi deployment across a 310-acre campus delivering reliable connectivity for students and faculty.



Leading IITs and NITs

High-performance campus networks supporting research, collaboration, and digital learning initiatives.

Core Technical Capabilities

Category	Specifications
High-Density Wi-Fi Architecture	Wi-Fi 6 indoor, outdoor, and wall-plate access points
Unified Campus Network Platform	Integrated wireless, switching, and security architecture delivering a unified network fabric across academic buildings, hostels, and outdoor campuses
Network Management (IO Canvas)	Cloud or on-premises deployment
AI-Driven Network Operations	Real-time monitoring with AI-enhanced predictive analytics
Authentication & Identity Access	NAC integration
Campus Switching Infrastructure	L2 managed PoE and non-PoE switches
Security & Compliance	WPA3 wireless security
Security Integration Framework	Standards-based architecture enabling integration with AAA servers, NAC platforms, captive portals, security gateways, and other campus security systems
Deployment & Automation	Zero-touch provisioning for rapid campus rollout
Scalability	Cloud-managed, on-premises, or hybrid deployment models

Get Your Campus Network Assessment Today

Schedule a 30-minute consultation with IO by HFCL campus networking specialists to evaluate your existing infrastructure, student connectivity needs, and digital campus roadmap.

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