io by HFCL

HFCL

Banking Network Solution

Regulatory-Ready Networks.

From Central IT to the Last-Mile Branch | Interoperable by Design | Operational Simplicity

Trusted Across India's Most Demanding Banking Networks

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Why Banking Networks Are Fundamentally Different

Banking networks are not conventional enterprise networks. Banks must ensure uninterrupted connectivity across centralized IT environments, zonal aggregation layers, regional offices, and thousands of branch locations while adhering strictly to central bank cybersecurity directives, global compliance frameworks, and equipment certification requirements. This combination of regulatory, scale, and uniform policy enforcement across distributed sites creates demands that general enterprise infrastructure cannot address.

Five characteristics make them uniquely demanding

01 **Regulatory-First Design**
Mandates compliance with central bank directives, CISO policies, and regional regulatory frameworks to ensure security baselines and governance standards

02 **Multi-Tiered Architecture**
Consists of Centralized IT/Development Centers, Zonal aggregation layers, Regional Offices, and highly distributed Branch networks

03 **Strict Interoperability Requirements**
Requires seamless integration with existing infrastructure involving NAC, AAA, Firewall, and centralized NMS platforms

04 **Continuous Audit Readiness**
Requires VAPT-compliant configurations, log traceability, patch enforcement, and rollback capability consistently across all network layers

05 **Zero Tolerance for Downtime**
No connectivity disruptions directly impacting employee operations across branches, regional offices, and central IT environments

IO by HFCL Built For Banking Networks

HFCL delivers a purpose-built, end-to-end networking solution tailored for banking environments, designed around a multi-tier architecture that mirrors how banks operate globally

Tier-Specific Infrastructure Design

- Each network tier- Central IT, Zonal/Aggregation, Regional Office, and Distributed Branch- is equipped with purpose-built components that address its specific operational, security, and scalability requirements.
- Enterprise-Grade Wi-Fi Access Points, high-capacity core switches and next-generation firewalls anchor the Central IT layer; compact branch firewalls and PoE switches standardize the distributed edge.

Seamless Integration with Existing Banking

- Standards-based architecture integrates natively with existing NAC platforms (Cisco ISE, Aruba ClearPass), AD/LDAP directories, RADIUS/AAA systems, and centralized NMS, preserving existing investments and established workflows without disruption.
- Northbound Integration (NBI)-ready NMS enables seamless connectivity with the bank's existing management systems.

Compliance-Driven Architecture

- Designed to support global regulatory frameworks and central bank cybersecurity directives across operating jurisdictions, ensuring infrastructure is secure, auditable, and continuously compliant.

Five Scenarios. One Architecture.

IO by HFCL's policy-driven architecture is designed to support the specific operational workflows that define day-to-day banking across all network tiers. Each use case demonstrates how security, segmentation, and compliance requirements are enforced by the network.

01

Wired Access and Segmentation

Teller systems, desktops, cameras, biometric devices, and IP phones each map to a dedicated VLAN, isolated at Layer 2 and governed by firewall policies at inter-VLAN boundaries. Standardized configurations replicate across every branch. A compromised endpoint can be contained without impacting adjacent segments.

02

Secure Wireless for Employees and Guests

One physical infrastructure. Two controlled access models. Employees authenticate via 802.1X with identity-based VLAN assignment. Guests land on a captive portal, receive internet access only, and operate under enforced session limits and bandwidth controls, fully isolated from internal systems.

03

Role-Based Access and Dynamic Segmentation

Access follows identity, not location. A teller, an auditor & a third-party vendor on the same switch receive entirely different network profiles: VLAN, ACL, and resource privileges dynamically applied via 802.1X and centralized AAA/NAC. Policy updates propagate centrally and apply at the next authentication event across all locations.

04

Device and IoT Onboarding

Headless devices, including cameras, biometric systems, and kiosks, are onboarded via MAC-based authentication and device profiling. Each is auto-segmented into an isolated VLAN and restricted to predefined communication paths. With ZTP-enabled deployments, no manual configuration is required at each site.

05

Centralized Policy Enforcement and Visibility

Policies are defined once in centralized AAA/NAC & enforced uniformly across every switch, AP & firewall. Continuous telemetry flows to the NMS, delivering real-time monitoring, historical analysis & audit trail from a single interface, meeting incident reporting & log retention requirements across regulatory frameworks.

IO by HFCL Product Portfolio

IO by HFCL's banking portfolio spans nine product categories across every tier of the network.

Product	Key Capabilities
CORE LAYER	
Next-Gen Firewalls	Inspection | Segmentation | Threat protection | Layer-specific variants
NMS	Monitoring | Alarms | Analytics | NBI integration
AAA	RADIUS | Access control | Logging | NAC integration
Secure Access Gateways	Policy enforcement | On-prem or virtualized
Aggregation Switches (SFP-Based)	High-throughput uplinks | Traffic consolidation
Wireless Controller	AP provisioning | Centralized monitoring | On-prem or cloud
ACCESS LAYER	
L2 Access Switches (PoE/Non-PoE)	8/24/48-port | 802.1X | NAC-ready
Branch Switches (PoE/Non-PoE)	Compact | Cost-optimized | Branch-grade
Wi-Fi 6 Access Points	WPA3 | BYOD | IoT | High-density

Proven at Scale

Public Sector Bank | 1,600+ Branches | Enterprise-Grade Connectivity

A century-old public-sector bank deployed 2,800+ enterprise-grade 24-port switches across 1,600+ branches nationwide through a phased migration, ensuring continuity of operations during the transition. The deployment demonstrated seamless NAC integration, secure authenticated access across all locations, and uninterrupted operations throughout the transition.

Our Trusted Clients

Global IT Centre: India's Largest Public Sector Bank

165
Wi-Fi 6 Acess Points

2x
Productivity Increase

3x
Faster Service Delivery

Government-Owned Insurance Giant

8,000+
Corporate Branches

2,500+
Managed Switches

$500B
assets under management

Mission-Critical Results

- Consistent access control using NAC-integrated authentication across all locations
- Controlled migration with no disruption to branch operations
- Improved network segmentation and policy enforcement across diverse user and device categories

Proven across some of Asia's largest and most demanding banking and financial services networks.

Purpose-Built Across All Tiers

Tier	Central IT / Data Centre	Zonal / Aggregation Hub	Regional Office	Distributed Branch
Switching	L2 Access Switches (PoE/Non-PoE)	Aggregation Switches (SFP -Based), L2 Aggregation Access Switches	Aggregation Switches (optional), L2 Branch Switches	Branch Switches (PoE/Non-PoE)
Security	High-Capacity Firewalls, Secure Access Gateways	Mid-Range Firewalls, Secure Access Gateways	Right-sized Firewalls, Secure Access Gateways	Entry-Level Branch Firewalls
Wi-Fi & Management	NMS, AAA, IO Canvas Controller, Wi-Fi 6 APs	Wi-Fi 6 APs with centralized policy integration, AAA Integration (via NBI)	Wi-Fi 6 APs + PoE Switches	Wi-Fi 6 APs + (Optional) PoE Switches

4-Stage Delivery Model

Flexible engagement models available: Full Turnkey | Phased | À la Carte

Stage 01

Network & Security Design

Network architecture design, VLAN segmentation blueprints for branches; 802.1X integration design with existing NAC to ensure no disruption and complement already-established security posture

Stage 02

Site Surveys & Standard Templates

RF site surveys, standard branch profiles, heat maps, Switch & AP placement recommendations, pre-configured SSID/VLAN/ACL templates, and BOMs for rapid replication across hundreds of locations

Stage 03

Deployment & Cutover

Staged rollout with zero-touch provisioning, coexistence planning, weekend/after-hours migration, and on-site cutover validation with rollback procedures

Stage 04

Optimization & Handover

AI-driven NMS performance tuning, complete network documentation, configuration handover (VLANs, RADIUS, captive portal settings), audit-ready artifacts aligned with applicable regulatory frameworks.

Get Your Network Assessment Done Today

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IO by HFCL | Globally Proven | ISO 27001 Certified | Wi-Fi Alliance Member