

Unified Cloud Network Management System (UcNMS)

Freedom to deploy on Public Cloud/ On-Premise/ Hybrid mode

The Unified Cloud Network Management System (UcNMS) is a web-based interface designed to centrally control, monitor, configure, and manage all HFCL Wi-Fi Access points/Routers and HFCL UBR*** devices in the network. It offers centralized visibility, monitoring, and management capabilities and is compatible with HFCL's entire "io" product lineup. UcNMS is a robust and scalable management infrastructure that provides comprehensive and userfriendly centralized management for networks of varying sizes

TECHNICAL SPECIFICATIONS

Smart Fault Management

Event and Fault Management

Provides notifications for various network events and faults, including:

- Wired port down
- Wireless port down
- STA (Station) abnormal drop
- AC master backup switch
- Device online and offline status
- Online user list
- Alarms for system CPU and memory

Offers instant alerts for degraded performance and faults.

Alarm Management

Supports alarm filter, confirmation, clear, and delete functions.

Provides alarm filtration options for displaying and sorting alarms based on:

- Alarm sources
- Alarm categories
- Alarm priority levels
- Alarm timestamps (time)

Network Management

Network Status Overview

Offers a single-page view displaying the complete network status, including:

- Device status
- Performance status
- Alarms and audit logs

Graphical Status Dashboard

Provides graphs on a dashboard to easily check the status of all network elements.

Colored Icons for Alarm State

Indicates alarm state of Network Elements through bell icon notification.

Site-Based Graphical Maps

Represents the network topology through site-based graphical maps organized hierarchically.

Dynamic Status and Configuration Information

Offers dynamic status, statistics, and comprehensive configuration information for managed devices.

Smart Configuration

Centralized Management and Provisioning

Centralizes management and provisioning through an intuitive Graphical User Interface (GUI).

Single Console for Account and Inventory Management

Provides a single console for streamlined Account and Inventory Management tasks.

Performance Management

Centralized Performance Management	Provides centralized performance management for all supported Wi-Fi and UBR*** devices.
Data Analysis and Graphical Representation	Analyzes captured data and represents it through informative graphs.
Performance Reports	Generates performance reports for different time intervals, such as hour, day, week, month, etc.
Export Options	Allows users to export reports in various formats, including xlxs, .csv, and more for data analysis.

Functionalities

WIDS/WIPS System	Rogue AP detection and prevention. Prevention from MAC spoofing, Man-in-the middle attack, denial of service attack and unauthorized associations.
Hotspot Features	Built-in support for voucher-based authentication. Built-in hotspot manager for voucher creation and guest management.
Captive Portal and Access	Captive portal feature for on-boarding clients. Customization of Captive Portal to show content and ads.

Software Deployment

Central Web-Based Management	Provides centralized management through a web-based interface for ease of control.
Deployment Flexibility	Supports both OnPrem and OnCloud deployment, including 1+0 and 1+1 deployment modes.
Scalability	Offers an infinitely scalable architecture to accommodate growing needs.
Disaster Recovery (DC + DR)	Supports 1+1 DC (Data Center) + DR (Disaster Recovery) deployment for enhanced resilience.
Integration Capability	Can be seamlessly integrated with any monitoring platform using an API stack, ensuring compatibility with existing systems.
Cloud Deployments	Virtual Machine (VM) based modular architecture makes it suitable for cloud deployments (For Lite Enterprise only) TIP & non-TIP AP Management

Licensible Wi-Fi Solutions

Advanced Analytics	Offers advanced analytics capabilities for in-depth insights and data-driven decision-making and troubleshooting.
Enterprise Parental Control	Provides enterprise-level parental control features for managing access and content.
Customized Solutions	Offers multiple customized solutions tailored for different market segments or use cases.

SOFTWARE FEATURES

Zero-Touch Deployment

- Zero-touch deployment of Access Points.

Security and Authentication

- Detection and blocking of tethering, with alarms sent to cNMS for processing.
- Support for secondary Radius servers for authentication and accounting.
- RADSEC proxy for secure communication.

Quality of Service (QoS) and Bandwidth Control

- Built-in QoS support.
- Threshold-based detection of spikes in usage and bandwidth consumption by clients.

Access Control and Filtering

- Built-in parental control, URL filtering, and bandwidth control.
- Local AP MAC ACL (Access Control List).

Management and Provisioning

- Centralized management and provisioning with an intuitive graphical user interface.
- One-touch provisioning for newly installed network elements (NIDs).
- Record maintenance of all installed NE (Network Element) resources.
- Integration with any monitoring platform using API stack.
- Performance management of NEs, Wi-Fi hotspots, and sites.(UBR***)
- Load monitoring over NEs/Sites/Zones, active user connections, access point restarts, and more.*

Reporting and Analytics

- Anomaly report support.
- Real-time events for Access Points.
- Analysis of captured data with graphical representation.
- Daily management, operation, logging, and browsing functions for admin users.

Roaming and Mobility

- Open Roaming capabilities.
- Roaming over Mesh.

Customization and Advertisement

- Global WMM defaults.
- Customizable AP beacon advertisements.

Compliance and Standards**

- Compliance with TEC (Telecom Engineering Centre) standards.

Health Monitoring**

- Health monitoring of UBR*** devices, Ethernet, and multi-technology networks.

Fault Management and Alerts**

- Instant alerts for degraded performance and faults.
- Event and fault management, including wired and wireless port status, abnormal drops, and more.
- Support for alarm filtering, confirmation, clearing, and deletion.
- Alarm filtration options based on various criteria.

Note : *for Access Point
**for Unlicensed Band Radios
*** available in Future Release



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