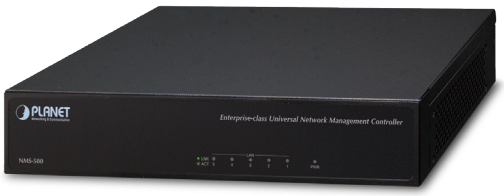
Enterprise-class Universal Network Management Controller



Enterprise-class Universal Network Management Controller

PLANET's NMS-500 Network Management System can monitor all kinds of deployed network devices, such as managed switches, media converters, routers, smart APs, VoIP phones, IP cameras, etc., compliant with the **SNMP Protocol**, **ONVIF Protocol and PLANET Smart Discovery** utility. It thus enables the administrator to centrally manage a network of **up to 512 nodes** from a central office, greatly boosting network and power management efficiency. With its user authentication management, the NMS-500 enhances data transmission security in the modern factory automation systems.

Watch Over Network within Minutes

The domain information web page presents a managed devices list and topology view, providing the at-a-glance and efficient summary of your management network. It lets you have a valuable information on the current wired and wireless network statuses via data-driven graphical charts. The topology viewer and event reports enable you to visualize the system usage and node status in real time so as to address whatever issue they may have.

Industrial-grade Physical Hardware

- 5 10/100/1000BASE-T Gigabit Ethernet RJ45 ports
- Intel® Celeron® N3350 up to 2.6 GHz
- RJ45 type console interface for basic management
- 2 USB 3.0 ports for configuration backup and restoration
- Desktop design for easy placement

Network Devices Management

- **Dashboard:** Providing the at-a-glance view of system and wireless network status
- **Node Discovery:** To detect PLANET managed devices available and allow AP grouping to accelerate AP management.
- **Auto-Topology Viewer:** A topology of network devices compliant with SNMP, ONVIF, Smart Discovery and LLTD Protocol.
- **Event Reports:** The status of a network can be reported via network alarm, system log.
- **SMTP Alarm:** To send an email alert to the administrator via the SMTP server.
- **Batch Provisioning:** Enabling multiple APs to be configured and upgraded at one time by using the designated profile.
- **Coverage Heat Map:** Real-time signal coverage of APs on the user-defined floor map to optimize Wi-Fi field deployment.
- **Customized Profile:** Allowing the creation and maintenance of multiple wireless profiles
- **Auto Provision:** Multi-AP provisioning with one click
- **Cluster Management:** Simplifying high-density AP management
- **Zone Plan:** Optimizing AP deployment with actual signal coverage
- **Authentication:** Built-in RADIUS server seamlessly integrated into the enterprise network
- **User Control:** Allowing on-demand account creation and user-defined access policy
- **Scalability:** Free system upgrade and AP firmware bulk upgrade capability

Network with Cybersecurity Helps Minimize Security Risks

With the UNC-NMS, the NMS Series comes with enhanced cybersecurity to fend off cyberthreats and cyberattacks. The data transition supports TLS and SSL protocols to provide strong protection against advanced threats. The cybersecurity feature of the NMS Series protects the network management and enhances the security of the mission-critical network without any extra deployment cost and effort.

- **Maximum Scalability:** 200 floor maps, 512 nodes, 64 AP groups, 64 SSID profiles, 512 managed APs, 10,000 clients, 10,000 RADIUS user accounts, 25 RADIUS user groups and 512 RADIUS clients.

Network Management Characteristics

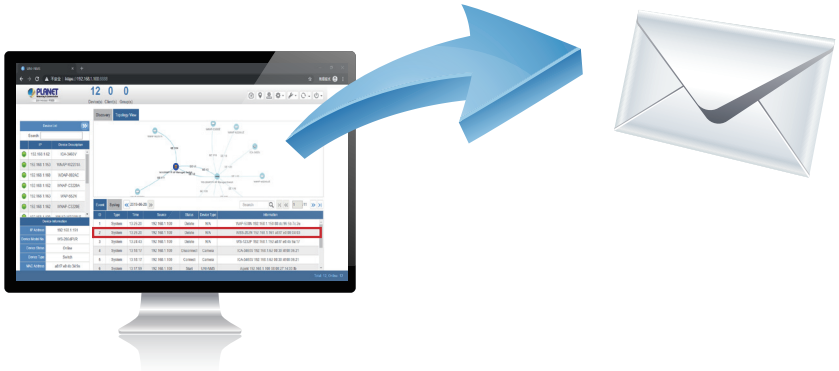
- Built-in DHCP Server
- Built-in Radius Server
- Console/Telnet command line interface
- SSL secure access
- Web-based GUI management interface
- SNMP v1, v2c, and v3 management
- Supports PLANET DDNS/Easy DDNS

Three Steps to Manage Nodes with Ease

The NMS-500 enhances user experience by providing more user-friendly Web GUI (Chrome only*) and obvious step-by-step guidance on each related function. Unlike other third-party software, it reduces training time and allows even non-technical users to be able to set up wireless network within minutes.

Real-time Centralized Monitoring and Event Alarm System

As the NMS-500 can come out with a topology view of the network of the deployed powered devices, it enables to detect which device is online (blue) or offline (red). The real-time centralized monitoring of these devices can help the administrator know what the current statuses of these devices are. The SMTP alarm function is designed to send an email alert to the administrator via the SMTP server where syslog information can be found once an abnormality is detected. This can prompt MIS personnel to quickly fix the identified trouble in the network.



Optimizing Wi-Fi Deployment with Floor Maps

With the floor maps, devices can be located according to the field deployment, thus saving your time and cost of on-site support and monitoring. The current statuses of devices are shown in real time and the heat map is able to show the wireless signal coverage and strength to help the administrator fine-tune the overlapping of the adjacent devices anytime to optimize the wireless network performance.

Browser-based Control on IPC Linux Platform

As it is browser-based, the NMS-500 does not need to be downloaded, making its direct connection to a network via a PC, laptop or tablet easier for the administrator. It can be operated from anywhere via Web browser and network adapter that are able to access managed nodes on a DHCP-enabled network, thus controlling multiple devices through a single PC, laptop or tablet.

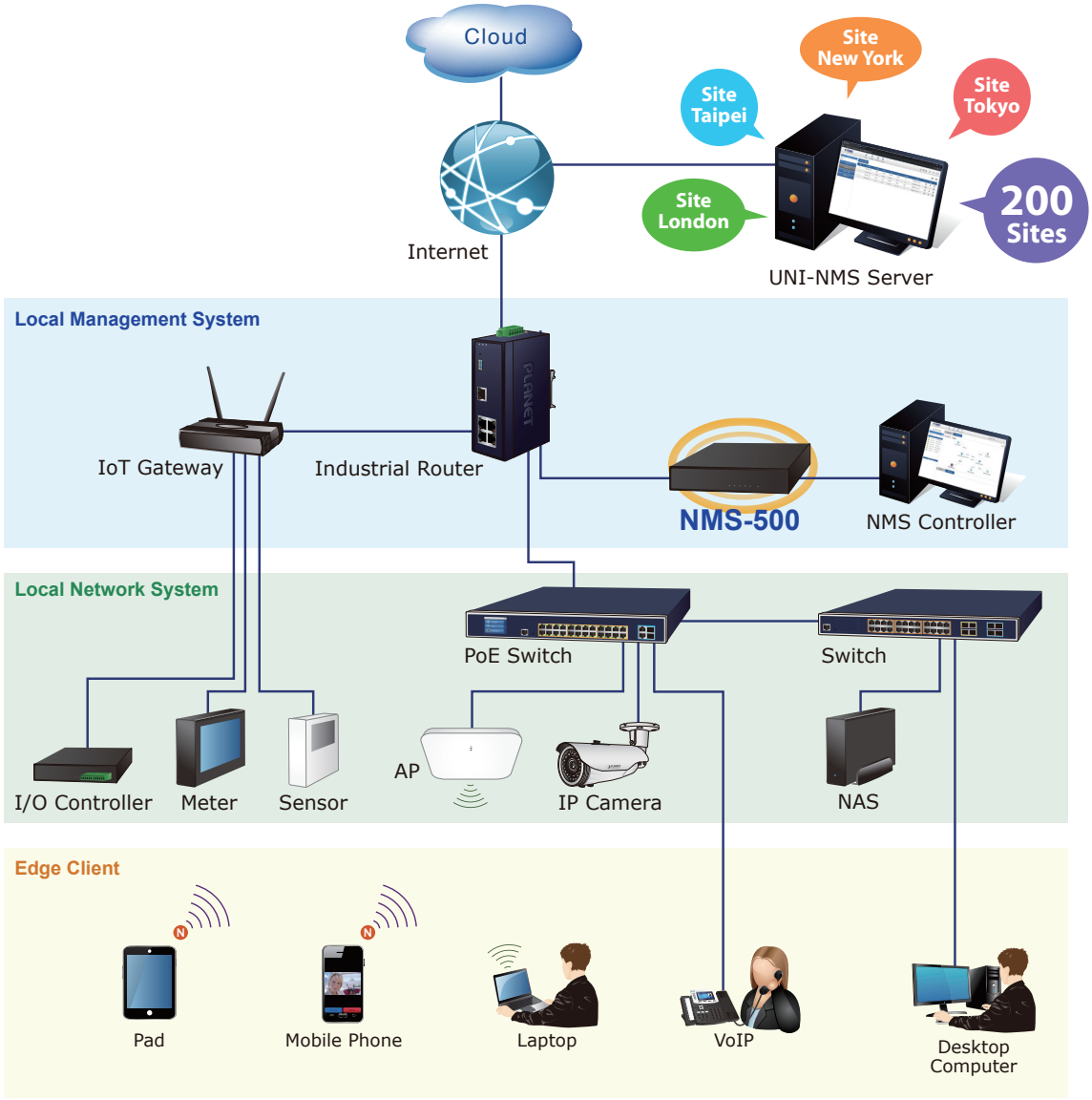
Let Network Device Management Make Operations Easier

Applications

Economical Central Network Management Solution for SMBs

PLANET NMS-500 helps service providers and IT managers control all PLANET network devices at the same time and enables administrator to effectively manage a local network of up to 512 managed nodes simultaneously without having to purchase any license and hardware-based controller, and pay an expensive annual subscription fee.

The administrator can automatically discover and configure device profiles, batch provisioning/firmware upgrade, and built-in SAPC (Smart AP Control) that customize Wi-Fi planning against floor maps, and monitor all managed APs through a single Web-based interface. It allows operating across different platforms through virtualization software, which helps SMBs save costs on the need to configure the wireless APs one by one if done manually.



Specifications

Model		NMS-500
Platform		
Form Factor		Desktop
Processor		Intel® Celeron® N3350 up to 2.6 GHz
Memory		2GB SDRAM, DDR3L-1866, 256M*16bit
Physical Specifications		
I/O Interface		Five10/100/1000BASE-T RJ45 ports with auto-MDI/MDI-X
		2 USB 3.0 ports (They cannot be used at the same time.)
		1 RS232-to-RJ45 console port (115200, 8, N, 1)
		1 DC jack power input
		1 power switch
		1 reset button
Storage		8GB EMMC5.1, 15nm/2 eMLC
Dimensions (W x D x H)		232 x 153 x 44 mm
Weight		1.15 kg
Enclosure		Metal
Power Requirements		60W adapter 12V 5A with DC jack AC 100~240V, 3~1.5A, 60~50Hz.
Environment & Certification		
Temperature		Operating: 0 ~ 40 degrees C Storage: -20 ~ 75 degrees C
Humidity		10 ~ 85% relative humidity (non-condensing)
MTBF (Hours)		120,000
Network Management		
Number of Managed Devices		512
Number of RADIUS Client Devices		512
Number of RADIUS User Accounts		10,000
Auto Discovery		Supports PLANET devices
Dashboard		Summarized system overview includes online device numbers, activated client numbers
Device List		Allows creation and maintenance of device profiles
Auto-Topology View		Provides visual topology view of connected PLANET devices
Status Monitoring		Real-time online/offline devices
Event and Syslog Report		Real-time system event and syslog server supported
Event Alarm Define		Allows event alarm item option
SMTP Alarm		E-mail alert to the administrator via the SMTP server
SSID/RF Profile		Allows creation and maintenance of multiple wireless profiles
Cluster Management		Allows AP grouping for bulk provisioning and batch upgrading
Bulk AP Provisioning		Supports bulk AP provisioning with user-defined profiles
Bulk AP Firmware Upgrade		Supports bulk AP firmware upgrade
Coverage Heat Map		Enables real signal coverage of managed AP reflecting on the uploaded zone maps
Graphical Statistics		Real-time and historical visibility of wireless traffic flow
Backup/Restoration		Provides system and profile backup/restoration
SSIDs-to-VLANs Mapping		Allows to configure SSIDs-to-VLANs mapping in supported APs
RADIUS Authentication		RADIUS server is integrated for client authentication in a large-scale enterprise network
User Account Management		Supports on-demand account creation per user-defined access policy
Secure Management Interfaces		TLS 1.2 w/ UNC-NMS, SSLv3, SNMPv3
Network Services		
Network	DDNS	Supports PLANET DDNS/Easy DDNS
	DHCP	Built-in DHCP Server for auto IP assignment to APs
	Management	Console; Telnet; SSL; Web browser (Chrome is recommended); SNMP v1, v2c, v3
	Discovery	Supports SNMP, ONVIF and PLANET Smart Discovery
Maintenance	Backup	System backup and restore to local or USB HDD
	Reboot	Provides system reboot manually or automatically per power schedule
	Diagnostic	Provides IPv4/IPv6 ping and trace route
Standards Conformance		
Regulatory Compliance		CE, FCC

Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab Gigabit 1000BASE-T IEEE 802.3x Flow control and back pressure IEEE 802.3z Flow control with Rx thresholds and Tx pause frames IEEE 802.3az (EEE)

[Remarks]

Router: Log in to the router's Web user interface and **enable the SNMP** function.

Switch: Log in to the switch's Web user interface and **enable the SNMP and LLDP** function.

AP: Log in to the AP's Web user interface to **configure the AP to "Managed AP"**. In support of SNMP AP, **enable the SNMP** function.

IP Cam: The **ONVIF** function is enabled by default.

Ordering Information

NMS-500	PLANET Enterprise-class Universal Network Management Controller

Related Products

VR-100	5-Port 10/100/1000T VPN Security Router
VR-300FW-NR	5G NR Cellular + Wi-Fi 6 AX 1800 Dual Band + 1-Port 1000X SFP VPN Security Router
ICG-2515W-NR	Industrial 5G NR Cellular Wireless Gateway with 5-Port 10/100/1000T
WGR-500-4PV	Industrial Wall-mount Gigabit Router with 4-Port 802.3at PoE+ and LCD Touch Screen
IGS-6329-8UP2S4X	Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 1G/2.5G SFP + 4-Port 10G SFP+ Managed Ethernet Switch
GS-6320-24UP2T2XV	L3 24-Port 10/100/1000T 802.3bt PoE + 2-Port 10GBASE-T + 2-Port 10G SFP+ Managed Switch with LCD Touch Screen and Redundant Power
IGS-5225-8P2S2X	Industrial L3 8-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP + 2-Port 10G SFP+ Managed Ethernet Switch
GS-5220-24UPL4XV	L2+ 24-Port 10/100/1000T Ultra PoE + 4-Port 10G SFP+ Managed Switch with LCD Touch Screen
WDAP-C1800AX	Dual Band 802.11ax 1800Mbps Ceiling-mount Wireless Access Point w/802.3at PoE+ & 2 10/100/1000T LAN Ports
WDAP-W1800AXU	Dual Band 802.11ax 1800Mbps In-wall Wireless Access Point w/802.3at PoE+ and Type C USB
ICA-3480F	H.265+ 4MP Full Color Bullet IP Camera
ICA-4480F	H.265+ 4MP Full Color Dome IP Camera

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