

## APC AP9643

# APC Network Management Card 3 (NMC3) Instruction Manual

Model: AP9643

## 1. INTRODUCTION

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The APC Network Management Card 3 (NMC3) is a UPS management adapter designed to provide essential and secure remote monitoring and management capabilities for your Uninterruptible Power Supply (UPS). This card enhances visibility into your UPS operations, ensuring mission-critical systems remain protected and operational. It supports environmental monitoring and Modbus communication, offering comprehensive control and data collection.

## 2. KEY FEATURES

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- **Secure Remote Monitoring and Management:** Enables essential and secure remote monitoring and management of a UPS.
- **Environmental Monitoring:** Included Universal I/O (UIO) ports support environmental monitoring.
- **Modbus RTU Support:** Serial RS-485 port supports Modbus RTU for industrial control systems.
- **High-Speed Processor:** Provides a fast and powerful experience with Gigabit Ethernet connectivity.
- **Multiple User Logins:** Supports simultaneous multiple user logins to the easy-to-use web user interface or Command Line Interface (CLI).
- **Advanced Security Compliance:** Features best-in-class security compliance, with firmware independently certified to IEC 62443-4-2 standard.
- **Software Integration:** Integrates with EcoStruxure IT for efficient equipment management, PowerChute Network Shutdown for graceful shutdown and VM migration, and other SNMP-enabled systems.

## 3. PRODUCT OVERVIEW

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### Network Management Card 3 (AP9643)

The APC Network Management Card 3 is a compact circuit board designed to fit into a SmartSlot on compatible UPS devices. It features various ports for network connectivity, environmental sensors, and console access.



Figure 1: Front view of the APC Network Management Card 3, showing the Ethernet port, USB ports, and console port.



Figure 2: Top view of the APC Network Management Card 3, highlighting the circuit board and internal components.

## 4. SETUP AND INSTALLATION

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### 4.1. Installing the Network Management Card 3

Follow these steps to install the NMC3 into a compatible UPS:

1. **Power Down UPS:** Ensure the UPS is powered off and disconnected from the main power source to prevent electrical hazards.
2. **Locate SmartSlot:** Identify the SmartSlot on your compatible APC UPS. This is typically a rectangular slot on the rear panel.
3. **Insert NMC3:** Carefully slide the NMC3 into the SmartSlot until it is fully seated. Ensure the card is oriented correctly.
4. **Secure Card:** Use any provided screws or retention clips to secure the NMC3 in place.
5. **Connect Network Cable:** Connect a standard Ethernet cable from your network to the Ethernet port on the NMC3.
6. **Connect Environmental Sensors (Optional):** If using environmental monitoring, connect the Universal I/O (UIO) sensors to the appropriate ports on the NMC3.
7. **Power On UPS:** Reconnect the UPS to the main power source and power it on. The NMC3 will initialize automatically.

### 4.2. Initial Configuration

After installation, the NMC3 requires initial network configuration:

- **Access Web UI:** Open a web browser and enter the default IP address of the NMC3 (refer to your UPS documentation for the default IP, often DHCP assigned or a fallback IP).
- **Login:** Enter the default username and password (typically 'apc' for both). You will be prompted to change these for security.
- **Network Settings:** Configure static IP address, subnet mask, gateway, and DNS settings as required by your network environment.
- **Date and Time:** Set the correct date and time, preferably using an NTP server.

## 5. OPERATING INSTRUCTIONS

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### 5.1. Monitoring and Management

The NMC3 allows for comprehensive monitoring and management of your UPS:

- **Web User Interface (Web UI):** Provides a graphical interface to view UPS status, battery health, load levels, and configure settings.
- **Command Line Interface (CLI):** Accessible via Telnet or SSH for advanced configuration and scripting.
- **Supported Protocols:** The NMC3 supports Telnet, SSH, HTTPS, and SSL for secure communication.

### 5.2. Environmental Monitoring

With connected environmental sensors, the NMC3 can monitor:

- Temperature
- Humidity
- Door contact status
- Other custom sensor inputs via Universal I/O ports.

Modbus RTU support via the RS-485 port allows integration with building management systems for centralized environmental data collection.

### 5.3. Software Integration

The NMC3 integrates with various software solutions:

- **EcoStruxure IT:** For cloud-based monitoring and management of your IT infrastructure.
- **PowerChute Network Shutdown:** Enables graceful shutdown of connected servers during extended power outages and supports VM migration.
- **SNMP-enabled Systems:** Allows integration with existing network management systems using SNMP protocol.

## 6. MAINTENANCE

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### 6.1. Firmware Updates

Regularly check for and apply firmware updates to ensure optimal performance, security, and compatibility. Firmware updates are typically available through the APC support website and can be applied via the NMC3's web UI or CLI.

### 6.2. Battery Management

The NMC3 monitors the battery status of the connected UPS. For information on UPS battery replacement and maintenance, refer to the specific user manual for your APC UPS model.

## 7. TROUBLESHOOTING

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### 7.1. Common Issues

- **No Network Connectivity:** Check Ethernet cable connection, network settings (IP address, subnet, gateway), and network switch status.
- **Cannot Access Web UI:** Verify IP address, ensure network connectivity, and try clearing browser cache.
- **NMC3 Not Detected by UPS:** Ensure the card is fully seated in the SmartSlot and the UPS is powered on.
- **Environmental Sensor Errors:** Check sensor connections and ensure they are compatible with the UIO ports.

For more detailed troubleshooting, consult the comprehensive documentation available on the APC support website.

## 8. SPECIFICATIONS

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Attribute	Value
Product Dimensions	4.25 x 4.76 x 1.5 inches
Item Weight	4.9 ounces (140 Grams)
Item Model Number	AP9643
Proprietary Slot Type	SmartSlot
Management	UPS Monitoring
Protocols	Telnet, SSH, HTTPS, SSL
Hardware Interface	USB
Compatible Devices	UPS
Data Link Protocol	USB
Manufacturer	APC
UPC	731304403319

## 9. OFFICIAL PRODUCT VIDEOS

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### APC for your Business

*This video provides an overview of APC solutions for businesses, highlighting the importance of reliable power protection.*

## 10. WARRANTY AND SUPPORT

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### 10.1. Warranty Information

The APC Network Management Card 3 includes a 1-year Secure NMC Subscription, which provides access to the latest firmware and security updates. For detailed warranty terms and conditions, please refer to the official APC warranty statement provided with your product or visit the APC website.

### 10.2. Technical Support

For technical assistance, troubleshooting, or product inquiries, please visit the official APC by Schneider Electric support website or contact their customer service. Support resources include FAQs, knowledge bases, and contact information for regional support teams.