APC USB Wi-Fi Device
Frequently Asked Questions

APC USB Wi-Fi Device (AP9834) is an optional accessory to enable wireless communication on APC Smart-UPS and 1-Phase Symmetra UPS that use the Network Management Card 3 (NMC3). Customers can choose to purchase either the AP9641 or AP9643 Network Management Card or purchase a UPS that bundles or integrates these NMC3 Cards. This document addresses the Frequently Asked Questions about the APC USB Wi-Fi device.

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1. What are the main benefits of the APC USB Wi-Fi Device?

The APC UPS Wi-Fi device offers,

- Flexible, simple installation replacing the traditional wired network cabling

- Efficient maintenance with lesser ethernet cabling plus the costs savings that come with it (cables & labor)

- Easy adaptation as the network configuration or the size changes with time.

2. What devices is the APC USB Wi-Fi Device compatible with?

The APC USB Wi-Fi Device is compatible with UPS Network Management Cards 3 only,

- SmartSlot Cards – AP9641, AP9643

- Smart-UPS & single phase Symmetra shipping with pre-installed or embedded Network Management Card 3 (**Note**: To know whether your APC UPS has a Network Management Card 3, please refer to the "Transition Rollout" document published here).

3. How is the Wi-Fi device setup and configured to function with Network Management Card 3?

The Wi-Fi device can be setup in 3 simple steps,

1. Insert the device into an available NMC3 USB port

2. Enable and configure Wi-Fi via the NMC web UI (Configuration > Network > Wi-Fi navigation path) or Command line interface ("wifi" command) [configuration details below].

3. LED flashes green when Wi-Fi has been successfully configured and connected.

Configuration Details:

The Wi-Fi Device can be configured with either of the following approaches,

- **From Network Management Card Web UI**: Navigate to Configuration > Network >Wi-Fi; Check the "Enable" checkbox in Wi-Fi settings while providing the Network Name (SSID) (Figure 1 below) and choosing the relevant "Security type" supported by the Wi-Fi network, along with Wi-Fi password (Figure 2 below). Wi-fi Enterprise settings need to be provided on choosing "WPA2-Enterprise" network type.

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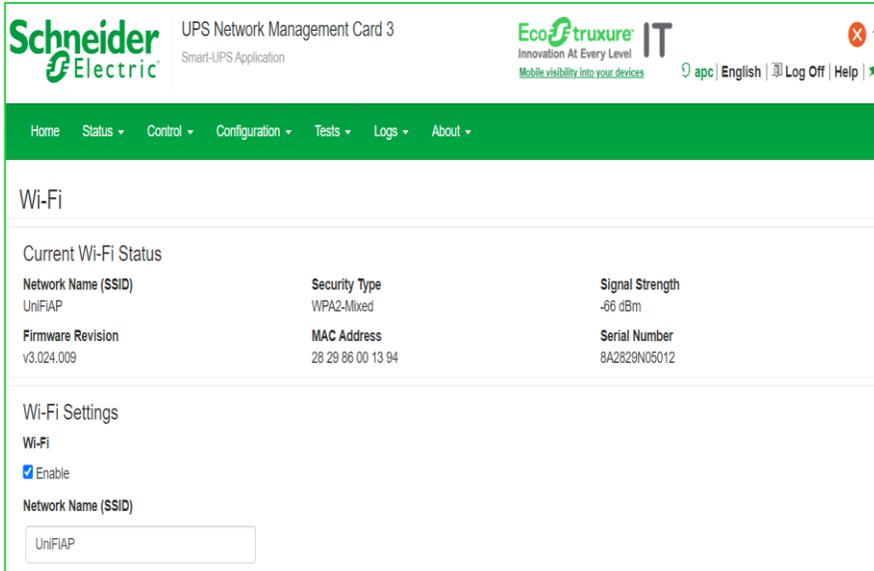
Figure 1: Wi-Fi configuration page
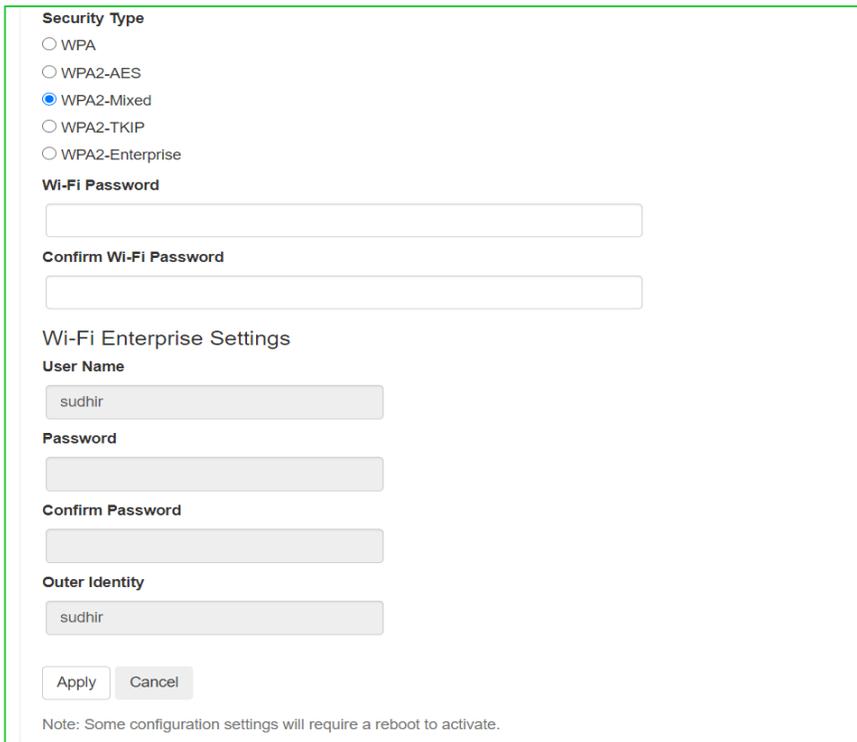
Figure 2: Security options for the Wi-Fi network

Similarly, the configuration can be set up via Telnet/SSH.

- **From Command Line Interface (CLI)**: The "wifi" command can be used in the Command line interface to enable or disable Wi-Fi and configure the Wi-Fi network's settings. Details of various options supported are captured in the "NMC3 Command Line Interface Guide", available for download from the "Documentation" section of AP9641/AP9643.

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4. Do you need to have an IP configured on the Network Management Card 3 to setup the Wi-Fi device?

If the Wi-Fi device is being configured via the NMC web UI, the NMC IP has to be configured to access the user interface & carryout the Wi-Fi configuration. However, if the configuration is being carried out from the Command line interface over the local console (micro USB) interface, the NMC IP need not be configured.

5. How does the Network Management Card 3 with Wi-Fi Device connect to a particular Wi-Fi network (SSID)?

The Network Management Card 3 with Wi-Fi Device does not scan for available Wi-Fi networks (SSID). The SSID of the Wi-Fi network to join needs to be entered manually.

6. What happens if both the LAN cable and Wi-Fi Device are connected to the Network Management Card 3?

It is to be noted that Wi-Fi is disabled by default. The Network Management Card can either be wired or wireless, but not both. When both LAN cable and Wi-Fi device are connected, the Network Management Card switches to Wi-Fi, based on whether Wi-Fi has been enabled in the card (via web UI or CLI or console interface), along with relevant security settings.

7. What is the operating range of the Wi-Fi device?

As the actual operating range of any wireless device is heavily dependent on the environment, specifying a range is not directly useful. Instead the output power as part of the RF specification is published in the Technical Specifications document here.

8. What network protocols are supported with Wi-Fi Device connected to Network Management Card 3?

All network protocols supported remain the same with wired and wireless (Wi-Fi) connection.

9. What is the security profile of the Wi-Fi Device?

- Enterprise level security username / password is stored securely on the Network Management Card 3, not on the Wi-Fi Device.

- Multiple encryption types are supported including,

    - WEP-PSK

    - WPA-Mixed-PSK

    - WPA2-AES-PSK

    - WPA2-Mixed-PSK

    - WPA2-TKIP-PSK

    - WPA2-Mixed-Ent (EAP-PEAP, MSCAPv2)

    - WPA2-AES-ENT (EAP-TLS)

- WEP & Open network (network without security) are not supported.

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For more information, please refer to the "[APC USB Wi-Fi Device (AP9834) Technical Specifications](#)".

10. How is the firmware on the Wi-Fi Device updated?

The firmware on the Wi-Fi Device can be upgraded via the Network Management Card's Command Line Interface (CLI). For more information, please refer to the "[Network Management Card 3 CLI Guide](#)".

11. How does the Wi-Fi connection affect the EcoStruxure IT connectivity (ITE/EAA)? Do customers get full functionality if connected through Wi-Fi?

Using the APC Wi-Fi device with the NMC3 to connect a UPS to EcoStruxure IT solutions (such as IT Expert and IT Advisor) does not impact or change the EcoStruxure feature set or user experience. Only the network connectivity from the "network cable-based LAN" to the "Wi-Fi LAN" is changed. All NMC protocols and features remain unchanged as does the EcoStruxure IT experience.

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