

Nomad™ 60 Wireless

User Guide

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Product description

The Nomad™ 60 Wireless is a mobile, tenprint fingerprint capture device that has a thin and lightweight form factor with integrated user guidance and image quality confirmation.

The Nomad 60 Wireless reader can capture flat prints and is ideal for mobile, fast, and reliable identity verification or enrollment.

The Nomad 60 Wireless reader uses capacitive thin-film transistor (TFT) technology that is suitable for a variety of environmental situations and can maintain a display that is visible to operators, even in direct sunlight.

Safety and handling

The sensor on the Nomad 60 Wireless can be cleaned gently with a microfiber cloth. Before you wipe off the unit, make sure there is no sand or gritty material on the sensor.

Important! The Nomad 60 Wireless sensor is glass and can easily be scratched. If the sensor is scratched, it will render the unit to be unusable.

FCC Compliance Statement

FCC ID#: Q9Y7680

CAUTION: Changes or modifications not expressly approved could void your authority to use this equipment.

This device complies with Part 15 of the FCC Rules. Operation to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada Statement

IC: 7944B-7680

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Initial setup

TFT Essentials SDK

To complete the initial setup of the Nomad 60 Wireless, the TFT Essentials SDK is required. The SDK includes applications for setting up connections between the Nomad and a computer or mobile device and applications for testing connections. The included configuration app is for setting up connections and the demo apps are for testing connections.

The included apps are intended as general examples that you can refer to when developing custom applications.

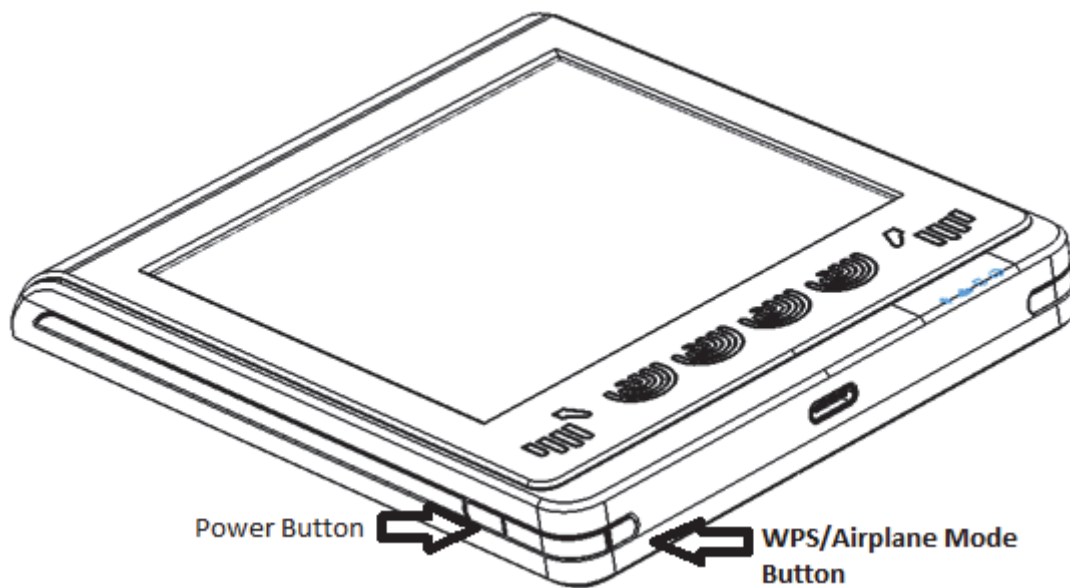
USB cables and charging

The cables provided with the Nomad 60 Wireless include USB-C to USB-C to be used with the charging brick for high-speed charging and USB-C to USB 2.0 to be used to connect the Nomad to a computer and for low speed charging.

Before first use, charge the unit until the Charge light turns green.

Button functions

The Power button and the WPS/Airplane Mode button on the Nomad 60 Wireless reader have multiple functions.



Power button

Power button functions are described in the following table.

Table 1 Power button functions

Function	Power button action	Description
Power on	Press once	Turns on the Nomad

Table 1 Power button functions (Continued)

Function	Power button action	Description
Power off	Press and hold for 2 seconds	After 2 seconds you will hear a beep and then you can release the button.
Sleep mode	Press once	The Nomad enters into or wakes from sleep mode. Tip: To save battery life, put the device in sleep mode when not in use.
Check battery level	Press twice	The battery level is indicated by the fingertip LED lights on the Nomad. (Note: There might be a slight delay before the indicators light up.) Battery life remaining indicators: 4 green lights = 80-100% 3 green lights = 60-79% 2 green lights = 40-59% 1 green light = 20-39% 1 red light = less than 20% Note: When the battery charge is depleted, a unique tone sounds when the unit is about to turn off.
Factory reset	Press 10 times	Resets the Nomad to factory settings. For a successful reset, you must press the button 10 times consecutively within 2 seconds. A unique tone sounds upon a successful reset attempt.
Hard power off	Press and hold for a minimum of 5 seconds	Powers off the Nomad completely. To minimize the risk of firmware corruption, a hard power off is not recommended unless the unit becomes unresponsive or is not working as expected.

WPS/Airplane Mode button

The Wi-Fi Protected Setup (WPS) button is used to initiate the push-button authentication process needed for establishing a Wi-Fi Direct connection or establishing the Nomad 60 Wireless unit to act as an access point (AP).

Activating Airplane Mode stops all wireless (Wi-Fi and Bluetooth) radios on the Nomad.

WPS/Airplane Mode button functions are described in the following table.

Table 2 WPS/Airplane Mode button functions

Function	WPS/Airplane Mode button action	Description
WPS authentication	Press once	Starts a 2-minute Wireless Protected Setup (WPS) authentication process.
Airplane Mode	Press and hold for 2 seconds.	The Nomad enters or wakes from Airplane Mode. Airplane Mode (RFKill) deactivates the radio transmitters to conserve power.

LED indicator lights

The LED indicator lights at the top of the Nomad 60 Wireless unit include Power, Charge, Wi-Fi, and Bluetooth.

Power

The Power light is green when the unit is powered on and red while in sleep mode. Flashing red indicates that the battery charge is below 20%.

Charge

The Charge light is orange to indicate high-speed charging when the unit connected to a brick, using A/C power. The light is red to indicate low-speed charging when connected to a computer. A green light indicates the unit is fully charged.

Wi-Fi

The Wi-Fi light is white when Wi-Fi is turned on, and is not illuminated when Wi-Fi is turned off.

When the WPS authentication process is active, the light flashes. (This is used during Wi-Fi Direct setup and access point authentication.)

Bluetooth

The Bluetooth light is blue when turned on. When the blue light is flashing quickly, the unit is discoverable in pairing mode. When the blue light is flashing slowly, the unit is paired.

Connection types

You can connect the Nomad 60 Wireless reader to a mobile device using a USB cable, Bluetooth, the Nomad access point, Wi-Fi Client, or Wi-Fi Direct.

Advantages and disadvantages of connection types are outlined in the following table.

Table 3 Connection type comparison

Connection type	Connection type advantages	Connection type disadvantages
USB	Does not require a password to connect The mobile device Wi-Fi connection is maintained while the Nomad is connected to it.	Requires a cable USB is not supported by some Android devices (such as the Pixel by Google)
Bluetooth	Does not require a password to connect A Wi-Fi connection is maintained during a Bluetooth connection.	Bandwidth is significantly less than Wi-Fi Cannot be used for rolls You must manually reconnect if either the Nomad or the device is rebooted.
Nomad as an access point	The connection resumes automatically after the Nomad or the mobile device is rebooted.	Consumes the Wi-Fi connection on the computer or mobile device.
Wi-Fi Client	Allows multiple devices to connect to a single Nomad Internet access Connects to either 2.4 or 5 GHz wireless frequencies	Any device on the network can access the Nomad.

Table 3 Connection type comparison (Continued)

Connection type	Connection type advantages	Connection type disadvantages
Wi-Fi Direct	Does not require a password to connect Internet access	

Setting up a connection

You can connect the Nomad 60 Wireless reader to a mobile device using a USB cable, Bluetooth, the Nomad as an access point, Wi-Fi Client, or Wi-Fi Direct.

Assumption: The setup, configuration, or demo apps from the TFT Essentials SDK will be installed on the mobile device or computer.

On Android devices, copy the NomadSetup app from the TFT Essentials SDK to the mobile device.

On Windows computers and mobile devices, install the TFT Essentials SDK. (The NomadConfiguration app will be located in a directory similar to C:\Program Files (x86)\Crossmatch\TFT Essentials\Nomad 60.)

Before you begin the connection setup, take note of the serial number on the back of the Nomad.


Tip: You can test a connection using a demo app from the TFT Essentials SDK (see [Testing the connection on page 11](#)).

Bluetooth

Use the procedures in this section to set up a Bluetooth connection between the Nomad 60 Wireless reader and a mobile device. Before you begin, ensure that the Nomad 60 Wireless is powered on.

Note: The Nomad 60 Wireless reader creates a personal area network, which does not allow Bluetooth to function simultaneous to an active Wi-Fi connection on a mobile device.

Android

- 1 Power on the Nomad. After the device is fully powered up, the Bluetooth indicator light on the Nomad will blink (for up to 3 minutes), indicating that it is in pairing mode.
- 2 On the Android device, swipe down from top of the screen.
- 3 Click the Settings icon  and then select Connected Devices.
- 4 Select Bluetooth and make sure it is turned on.
- 5 Select Pair new device and then select the available device that matches the serial number on the back of the Nomad (similar to 7680-EN000xx). The Nomad is now listed under Paired Devices.
- 6 Click on the Nomad serial number again. The status changes to Connected.

Windows

- 1 Power on the Nomad 60 Wireless. After the device is fully powered up, the Bluetooth indicator light on the Nomad will blink (for up to 3 minutes), indicating that it is in pairing mode.
- 2 On the Windows computer or mobile device, open the Bluetooth settings.
- 3 Select the item with the Nomad serial number and click Pair. The Nomad and the computer or mobile device are paired.
- 4 On the computer or mobile device, open the list of devices and printers.
- 5 Locate the device with the Nomad serial number (this might be listed under Unspecified), right-click on it, and then select the option to connect using the Access Point.


Nomad as an access point

This connection type provides a wireless connection between the Nomad and the computer or mobile device using the Nomad access point.

Use the procedures in this section to set up the Nomad 60 Wireless access point to connect to a computer or mobile device.

Note: Changing the Wi-Fi Direct connection frequency from one setting to the other (2.4 GHz or 5 GHz) requires a reboot of the Nomad for changes to take effect.

Android

- 1 Swipe down from top of the Android screen and open the Settings .
- 2 Open the Network & Internet settings and turn on Wi-Fi.
- 3 From the list of networks displayed, select the network that matches the serial number on the back of the Nomad (for example *DIRECT-7680-EN000xx*).
- 4 Enter the password (the factory default is LiveScan1) and then click Connect. The screen shows that it is connected to the Nomad but with no Internet.

WPS Push Button option

- 1 Swipe down from top of the Android screen and open the Settings.
- 2 Open the Network & Internet settings and turn on Wi-Fi.
- 3 Open Wi-Fi and then Wi-Fi preferences.
- 4 Expand Advanced.
- 5 Select WPS Push Button. A popup is displayed with a progress bar.
- 6 On the top of the Nomad, press the WPS/Airplane Mode button. The Android device shows the Nomad as connected.

Windows

- 1 Open the NomadConfiguration app.
- 2 Select the listing that matches the Nomad serial number and click Connect.
- 3 On the Wireless tab, select the WiFi Direct option and then close the app.
- 4 In the lower right corner of the Windows desktop area, open the list of available networks.
- 5 From the list of networks displayed, select the network that matches the serial number on the back of the Nomad (for example, *DIRECT-7680-EN000xx*).
- 6 Enter the password (the factory default is LiveScan1) to connect. The screen indicates a connection to the Nomad but without Internet access.

USB

Use the procedures in this section to set up a USB cable connection between the Nomad 60 Wireless reader and a mobile device.

Note: Some Android devices (such as the Pixel by Google), do not support a USB connection.

Android

Note: Some Android devices might require an on-the-go (OTG) cable adapter to be able to recognize and connect to the Nomad 60 Wireless network.

- 1 Connect the Nomad 60 Wireless reader and the Android device using the appropriate cable and OTG adapter (if applicable).

- 2 On the Android device, open the Nomad Demo app. The following message is displayed: *Allow the app Nomad Demo app to access the USB device?*
- 3 Select the **Use by default for this USB device** check box and click OK. (This message is a standard USB message for Android and must be selected each time the Nomad is connected.)

Windows

- 1 Connect the Nomad 60 Wireless reader and the Windows computer or mobile device with the cable.

Wi-Fi Client

For this connection type, you configure the Nomad 60 Wireless with an existing access point and then connect the computer or mobile device to the same network. This allows the computer or mobile device to connect indirectly to the Nomad through the router.

The steps in this section provide a general overview of setting up a Wi-Fi Client connection.

Android

- 1 On the Android device, open the NomadSetup app.
- 2 Configure the Nomad to connect to the access point.
- 3 Connect the Android device to the same access point.

Windows

- 1 On the Windows computer or mobile device, open the NomadConfiguration app.
- 2 Configure the Nomad to connect to the access point.
- 3 Connect the computer or mobile device to the same access point.

Wi-Fi Direct

Wi-Fi Direct is the default connection method for the Nomad 60 Wireless. This method, supported on Android devices and on computers or devices with Windows 10, allows a direction connection to the Nomad without requiring a wireless router.

After an initial Wi-Fi Direct connection is established, it will be remembered by the Nomad at subsequent connection attempts.

When you are using a Wi-Fi Direct connection, a reboot of the Nomad is required for changes to take effect in the following scenarios:

- The connection frequency is changed from one setting to the other (2.4 GHz or 5 GHz).
- The Nomad password is changed. New passwords must be a minimum of 8 characters.

Use the procedures in this section to set up a Wi-Fi Direct connection between the Nomad 60 Wireless and a computer or mobile device.


Android

Wi-Fi Direct allows the Android device to have a connection with the Nomad and another access point simultaneously while keeping the Nomad isolated on the network. If you choose the WPS Push Button option, the connection is between the Android device and the Nomad only.

- 1 Open the Nomad Demo app on the Android device.
- 2 Press the Wi-Fi Direct button on the home page.
- 3 Select the device that matches the serial number on the back of the Nomad (for example, *DIRECT-7680-EN000xx*).
- 4 When prompted, press the WPS/Airplane Mode button on the top of the Nomad.

After a connection is established the first time, it is remembered as the target device for subsequent connections to the Nomad. If needed, you can delete this connection on the Android device.

Windows

- 1 Open the NomadConfiguration app on the Windows computer.
- 2 If prompted, allow the NomadConfiguration app to communicate on private networks.
- 3 When the app opens, select the device that matches the serial number on the back of the Nomad (for example, *7680-EN000xx*) and click Connect. The Wireless tab opens.
- 4 Select the Wi-Fi Direct option.
- 5 If a message is displayed to confirm that you want to change the Wi-Fi mode, click Yes.
- 6 Close the NomadConfiguration app.
- 7 Press the Windows key and open the Settings .
- 8 Select Devices (Bluetooth, printers, mouse) > Bluetooth and then select the Nomad from the list (for example, *7680-EN000xx*).

Testing the connection

The demo applications provided with the TFT Essentials SDK are tools that you can use to test the connection between the Nomad 60 Wireless and a mobile device.

Android

- 1 Open the Nomad Demo app. The Select Device icon is displayed. If the icon does not appear, it indicates that there is no connection.
- 2 Click Select Device.
- 3 Select the device serial number (for example *7680-EN000xx*).
- 4 Select Open Device.
- 5 Press Start Acquire. On the Nomad, the right 4-fingers illuminate and slowly blink.
- 6 Press fingers on the sensor, ensuring that the base of the fingers are touching the bezel. (The bezel is the metal area just below the sensor.) The image is displayed on the Android device.
- 7 Hold fingers on the sensor and bezel until there is an indication that the prints were captured.
- 8 Select Close Device.

Windows

- 1 To test the connection, open a demo app.
- 2 If a Windows Firewall security alert is displayed, make sure to enable the option for NomadConfiguration to communicate with private networks.
- 3 In the Device List, select the item with the Nomad serial number (followed by the associated IP address) and then click Open Device.
- 4 Click Begin Acquire. On the Nomad, a finger lights up in the hand LED light, indicating it is ready to capture a fingerprint.
- 5 Press a finger on the sensor, ensuring that the base of the finger is touching the bezel. (The bezel is the metal area just below the sensor.) The image is displayed in the demo app.
- 6 Hold the finger on the sensor and bezel until the demo app indicates the fingerprint was captured.
- 7 Click Close Device and then close the demo app.

Support and Contact Information 3

Technical Support

You can obtain technical support by email, from our website, and by telephone or fax. Free technical support is available during the warranty period and is provided on a first-come, first-served basis.

If the warranty has expired, technical support can be provided at a specified cost per hour. For details, contact the Customer Care department.

General inquiries

For general inquiries, you can contact Customer Care using the following email address: cmcc@crossmatch.com.

Email-to-case or website-to-case

To open a case using email, send a message to customersupport@crossmatch.com and include your company name, software version(s), and a description of the issue.

To open a case from our website, complete the form at <http://www.crossmatch.com/Support/Support-Forms/Tech-Support-Form>.

After opening a case, you will receive an automatic email reply that references a case number. If you reply to the automatic email, your response will be logged in the case file. A technician will contact you to begin the troubleshooting process.

Telephone and fax

You can contact the Customer Care department Monday - Friday from 8:00 A.M to 6:00 P.M (EST).

Global Customer Support Numbers
Telephone: 1.866.276.7761 (Toll Free)
Telephone: 1.561.622.9210 (International)
Fax: 1.561.622.8769

When you contact the Customer Care department, make sure that you can provide the following information:

- Your company name and contact person
- The livescan device serial number (found on the back of product)
- Configuration information for the computer used with the device
- Any error messages that appear on the screen

Contact information

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