

Verifone Biometric Module Installation Guide

Verifone Part Number: DOC574-001-EN-A, Revision A00.5



www.verifone.com

Verifone Biometric Module Installation Guide
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Preface

This guide is the primary source of information for setting up the Verifone Biometric Module.

Audience

This guide is intended for the users involved in the biometric module installation.

Organization

This guide is organized as follows:

- Chapter 1: [Device Overview](#) - Provides an overview of the biometric module.
- Chapter 2: [Device Setup](#) - Provides instructions on installing the biometric module.
- Chapter 3: [Specifications](#) - Provides the power requirements and dimensions of the biometric module.
- Chapter 4: [Maintenance and Cleaning](#) - Explains how to maintain the module.
- Chapter 5: [Service and Support](#) - Furnishes information on contacting local Verifone representatives or service providers, as well as details on ordering accessories or documentation from Verifone.
- Chapter 6: [Accessories and Cables](#) - Provides information regarding the accessories with corresponding part numbers.

Related Documentation

To learn more about the biometric module, refer to the following document associated with the Verifone Part Number (VPN).

Verifone Biometric Module Quick Installation Guide VPN DOC574-002-EN

Conventions

The following table describes the conventions and provides examples of their use.

Convention	Meaning	Example
Blue	Text in blue indicates terms that are cross-referenced.	See Conventions .
 NOTE	The bulb icon is used to highlight important information.	If exchanging cables use a Verifone-approved cable.
 CAUTION	The caution symbol indicates possible hardware or software failure or loss of data.	Avoid placing metallic objects at the front of the card reader.
 WARNING	The lightning symbol is used as a warning when a bodily injury might occur.	For safety, do not string cables or cords across a walkway.

1. Device Overview

The VeriFone biometric module is an advanced authentication solution designed to make a breakthrough in payment technology. A fully portable and fraud-resistant solution that seamlessly integrates with not only VeriFone payment terminals, but also kiosks, tablets, POS systems, etc engineered for effortless integration. It mechanically couples with existing payment terminals, enabling advanced facial and palm vein authentication for unmatched security and convenience.

The VeriFone Biometric Module utilizes Bluetooth to support two authentication methods: facial recognition and palm vein scanning.

This biometric system combines facial recognition with palm vein scanning to deliver a highly secure and contactless authentication solution. Facial recognition identifies unique facial features, while palm vein technology maps the internal vein patterns of the hand, offering a robust, fraud-resistant method of identity verification suitable for high-security environments.

Features and Benefits

Following are the features and benefits of the biometric module.



- **Advanced Biometric Security:** Facial and palm vein recognition delivers secure, fraud-resistant, touchless authentication.
- **Seamless Integration:** Easily connects via USB to existing payment terminals, no complex installation required.
- **Compact & Portable Design:** Lightweight and fully portable for flexible deployment across retail environments.
- **Future-Ready & Cost-Efficient:** Designed for use with VeriFone and selected third-party payment terminals*, maximizing interoperability.

*Third-party compatibility may depend on connection types and is applicable primarily for lane-specific use cases.

2. Device Setup

This section outlines the setup procedures for the VeriFone biometric module covering the following segments:

- [Environmental Factors](#)
- [Unpacking the Shipping Carton](#)
- [Examining the Device Features](#)
- [Connecting to the Power Supply](#)
- [Biometric Module Installation](#)
- [Biometric Module-Use Cases](#)
- [Cable Connections](#)
- [Bluetooth Pairing- Biometric Module](#)

Environmental Factors

- 1 Avoid using the device in areas with excessive heat, dust, humidity, moisture, caustic chemicals, or oils. Keep the device away from direct sunlight and any heat-emitting sources.
- 2 For optimal performance, ensure adequate lighting. Position the biometric module to avoid harsh light or glare on the lens (e.g., direct sunlight or a spotlight pointing on the lens).
- 3 To reduce data errors, select a location free from magnetic interference, keeping a safe distance from objects or devices that generate magnetism.

Unpacking the Shipping Carton

Open the shipping carton and carefully inspect its contents for possible tampering or shipping damage.

To unpack the shipping carton

Remove the items from the shipping carton.
The standard package contains Biometric Module.

Refer to [Accessories and Cables](#) for more information about related accessories and cables.


CAUTION

Remove any protective cover from the front of the unit before use, or the unit may not work properly.

Retirez tout couvercle de protection de l'avant de l'appareil avant utilisation, sinon l'appareil risque de ne pas fonctionner correctement.


WARNING

Do not use a unit that has been tampered with or otherwise damaged. If the component appears damaged, immediately notify the shipping company and your VeriFone representative or service provider.

N'utilisez pas un appareil qui a été altéré ou autrement endommagé. Cette unité est équipée d'étiquettes inviolables. Si une étiquette ou un composant apparaît endommagé, informez immédiatement la compagnie maritime et votre VeriFone représentant ou fournisseur de services.

Examining the Device Features

Review the features of the biometric module before proceeding with the installation.

 Pin Hole Button Power Button Camera and Sensor Array	Power Button: is located on the top of the biometric module. It provides multiple functionalities, depending on the length of the press: • Power ON - a short press and release of the button for less than 2 sec will power ON the module. • Power OFF - an extended press and release of the button for more than 10 sec and less than 20 sec will power off the module. • Reset - a greater than 20 plus sec press and release of the button will reset the module. Pin Hole Button - is located on the top of the biometric module. A short press and release of the button for 2 seconds will make the module enter into maintenance mode. LEDs, Cameras, and Sensors - the front panel of the biometric module has the following indicators: • 2 White LEDs for enhanced palm imaging. • 2 IR LEDs for palm vein detection. • dToF sensor for depth measurement. • RGB and IR Cameras for accurate facial and palm recognition.
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 USB-C Ethernet NFC	The rear panel of the biometric module features interface ports for power and communication. You can establish connections with other devices using any of the following connection types: • NFC Antenna Connector • Ethernet port • USB-C port
	Corner Indicator LEDs The module includes 4 corner LEDs on the front, providing visual status indicators: • Flashing Green: Boot • Flashing Yellow: Bootloader Mode • Flashing Red: Boot Error • Solid Yellow: Maintenance Mode (with Pin Hole button press) • Running Yellow (1 --> 4): Download in Progress • All OFF: Module Ready • White: Biometric Capture Active • Green: Biometric Capture Successful • Red: Biometric Capture Error • Running White (1 --> 4): Powering Off

Connecting to the Power Supply

To power on the biometric module, follow these steps:

- 1 Insert the USB-C plug into the module's USB-C port.
- 2 Connect the other end to the AC power pack and plug it into a wall outlet.



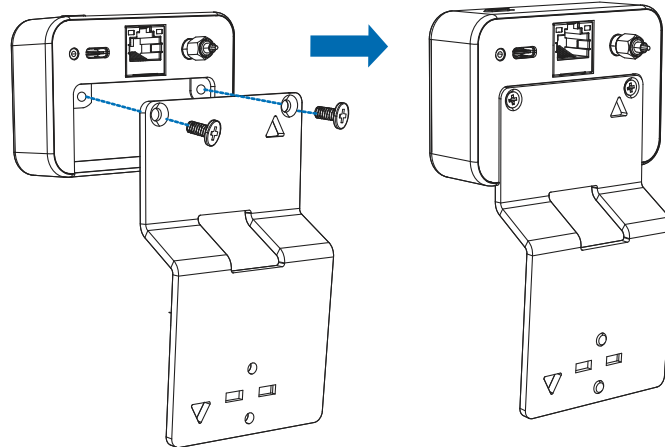
NOTE

To protect against possible damage caused by lightning strikes and electrical surges, VeriFone recommends installing a power surge protector.

Biometric Module Installation

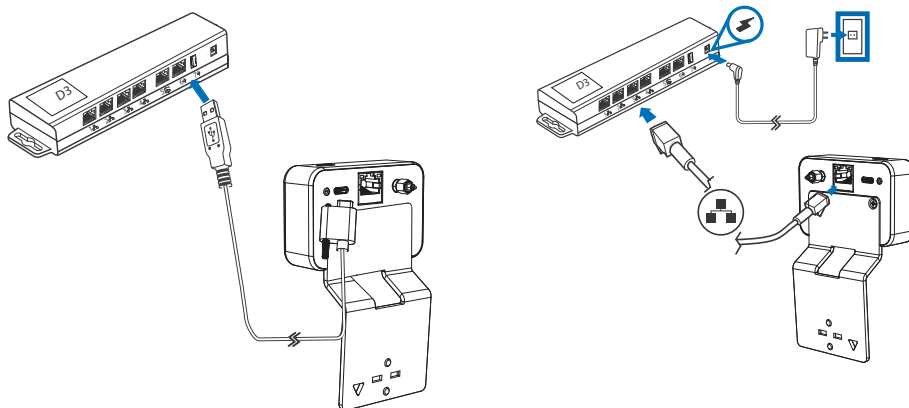
Follow the steps below to properly install the biometric module:

- **Mount the Biometric Module to the Bio Plate**
 - Align the biometric module with the mounting holes on the bio plate. Secure it by tightening the screws to ensure a firm and stable connection.



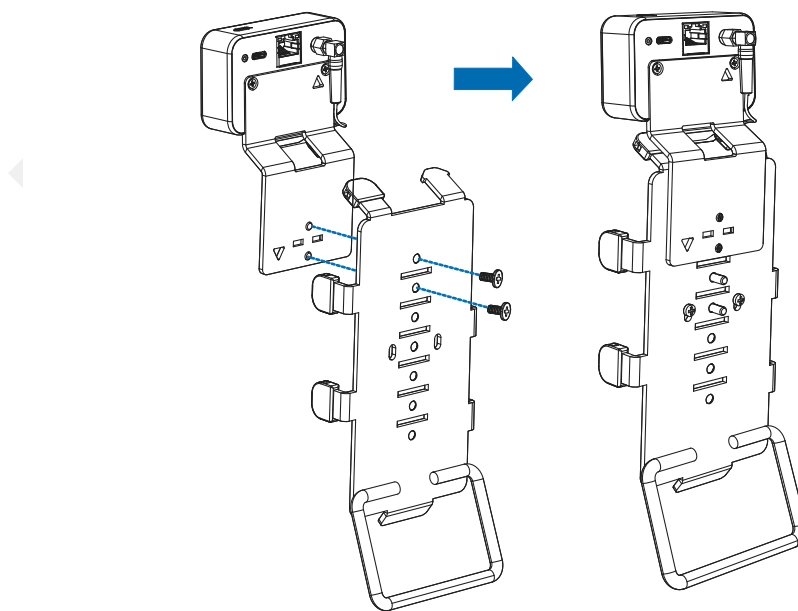
- **Connect the Cables**
 - Locate the connectors at the rear of the biometric module. Use the debug cable to connect the module to the orange dongle, ensuring each

connection is secure and properly seated to maintain data and power integrity.



- **Attach the Module to the Rear Bracket**

- Position the biometric module onto the rear bracket and fasten it using the appropriate screws. This provides structural support and ensure that the module is securely housed.



- **Mount the Terminal on the Rear Bracket**

- Carefully place the terminal on the rear bracket, aligning it with the mounting points. Tighten the screws to securely attach the terminal, completing the installation.



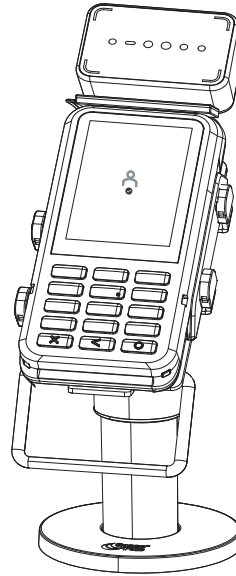
Ensure all connections are secure and components are properly aligned before powering on the system. Using the correct tools and recommended torque settings is important to avoid damaging the hardware.

Biometric Module-Use Cases

The biometric module supports multiple use cases:

- **In-Lane and Kiosk Payment Terminals:** Enables customers to authenticate using face or palm for loyalty linking, and secure payments.
Connectivity: Ethernet for IP, USB-C for terminal connection.
- **Countertop Terminals:** Supports biometric checkout via countertop terminals.
Connectivity: USB-C.
Includes mounting features for poles, stands, and wearables.
- **Biometric Module - Pole Mounting:** The biometric module is specifically designed for front-mount installation on a pole, eliminating the need for additional external mounting hardware. Its built-in mounting mechanism allows it to be securely and directly attached to the pole structure, streamlining the setup process.
This design not only simplifies installation but also ensures a stable and compact configuration, ideal for environments where space and aesthetics are important. Always ensure the module is properly aligned and securely fastened

to maintain optimal functionality and durability in daily use.



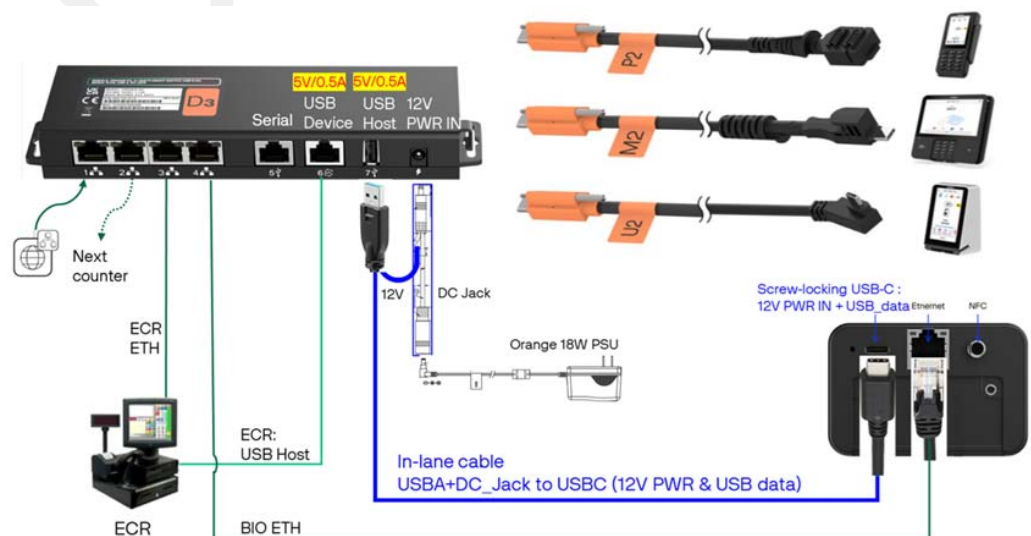
Note: Mounting may differ based on the device; the diagram provided shows the setup for P630 device.

- **Kiosks and Vending Machines:** The biometric module is designed for integration with kiosks and vending machines, allowing customers to authenticate using facial recognition and palm scanning for secure payments.

Cable Connections

The VeriFone Biometric Module connects to the VeriFone dongle through several interfaces, enabling power, data communication, and device integration.

Here are the various connection types typically involved.



Bluetooth Pairing- Biometric Module

The Verifone Biometric Module can pair with both Verifone and non-Verifone payment devices via USB or Bluetooth.

To pair via Bluetooth:

1 Power on the Module

- Ensure it is charged.
Press and hold the power button for 3–10 seconds to turn it on.
- **Blue LEDs ON (5 sec):** Device is already paired.
- **No pairing:** Device enters Bluetooth pairing mode.

2 Enable Bluetooth on the Terminal

- Go to **Settings > Bluetooth** and turn it ON.

3 Search & Pair

- On the terminal, select the **Verifone Biometric Module** from the list of available devices.
- Follow the on-screen instructions to complete the pairing process by entering the key (either enter the pairing code manually or scan the QR code).
Once pairing is successful, a “**BT Connected**” message will be displayed.
- **Blue LEDs:** Indicates a successful Bluetooth connection.

3. Specifications

This chapter provides details on the power requirements, dimensions, and additional specifications of the VeriFone Biometric Module.

Power Supply	• 12V / 5V
Temperature	• Operating temperature: -5°C to 45°C (23°F to 113°F) • Storage temperature: -20°C to 60°C (-4°F to 140°F) • Relative Humidity: 5% – 90% RH non-condensing
Memory	• Flash: 16 GB • RAM: 4 GB
Processor	• Quad-Core A53 @2GHz
Dimensions	Biometric module • Length: 75 mm (2.95 in) • Width: 50 mm (1.96 in) • Height: 23 mm (0.90 in)
Weight	• 68g (2.39 oz)
Camera	• RGB camera: 3264 x 2488 (8MP) • IR camera: 1920 x 1080
Wi-Fi	• 802.11 b/g/n (2.4Ghz) • 802.11 a/n/ac (5Ghz)
Bluetooth	• Bluetooth 5.0

4. Maintenance and Cleaning

General Care Your device exemplifies superior design and craftsmanship. The following recommendations are provided to help safeguard your warranty coverage:

- Avoid storing the device in hot areas, as elevated temperatures can diminish the lifespan of electronic components, harm batteries, and cause deformation or melting of certain plastics.
- Refrain from storing the device in cold areas, as the return to normal temperatures may lead to moisture formation inside the device, potentially damaging electronic circuit boards.
- Exercise caution to prevent dropping, knocking, or shaking the device, as rough handling can result in the breakage of internal circuit boards and delicate mechanics.

These recommendations are equally applicable to both your device and any accompanying attachments or accessories. If your device is experiencing operational issues, kindly visit the nearest VeriFone authorized service provider for maintenance or replacement.

Cleaning & Sanitizing Guidelines VeriFone devices should only be gently cleaned to remove dirt, residue, or debris using a lightly water-dampened, clean microfiber cloth. One or two drops of pH-neutral, non-scrubbing soap may be used. Do not use solvents, harsh detergents, or abrasive cleaners.

Using improper cleaning methods or products may result in functional and/or cosmetic issues that are not covered under warranty.

Important Guidelines:

- 1 Avoid Direct Application:** Never spray, coat, or pour any liquid, sanitizer, or disinfectant directly onto the device.
- 2 Caution Against Harsh Chemicals:** Avoid using bleach, hydrogen peroxide, thinner, trichloroethylene, or ketone-based solvents, as they can degrade plastic and rubber components.
- 3 Electrostatic Discharge (ESD) Prevention:** Exercise caution to prevent ESD by refraining from vigorously rubbing with a dry towel or similar actions, as they can cause ESD and trigger a tamper alert.



Cleaning Instructions

- 1 Turn off your device.
- 2 Disconnect it from the power source.
- 3 Clean it following the instructions and guidelines as mentioned above. Once completely dry, reconnect to power up.

5. Service and Support

The biometric module does not contain user-serviceable parts. Unless expressly directed, refrain from attempting any service, adjustments, or repairs on the unit under any circumstance.

For product service and repair information:

- USA – VeriFone Service and Support Group, 1-800-837-4366
Monday - Friday, 8 A.M. - 8 P.M., Eastern time
- International – Contact your VeriFone representative

Returning a Device for Service

You must obtain a Merchandise Return Authorization (MRA) number before returning the module to VeriFone. The following procedure describes how to return one or more modules for repair or replacement (U.S. customers only).



CAUTION

Customers outside the United States are advised to contact their local VeriFone representative for assistance regarding service, return, or replacement of modules and accessories.

Il est conseillé aux clients en dehors des États-Unis de contacter leur VeriFone local représentant pour obtenir de l'aide concernant l'entretien, le retour ou le remplacement des appareils Et accessoires.

- 1 Get the following information from the printed labels on the back of each biometric module to be returned:
 - Product ID, including the model and part number. For example, “VeriFone Biometric Module” and “M574-xxx-xx” and “PTID xxxxxxxx.”
 - Serial number (S/N nnn-xxx-xxx)
- 2 Obtain the MRA number(s) by completing one of the following:
 - Call VeriFone toll-free within the United States at 1-800-VeriFone and follow the automated menu options.
 - Select the MRA option from the automated message. The MRA department is open Monday to Friday, 8 A.M. to 8 P.M., Eastern Time.
 - Give the MRA representative the information you gathered in [Step 1](#).
 - Complete the Inquiry Contact Form at <https://www.verifone.com/en/us/contact/contact-us>.
 - Address the Subject box to “VeriFone MRA Dept.”

- Reference the model and part number in the Note box.



NOTE

Each module returned to VeriFone requires a distinct MRA number to be issued. Even if you are returning multiple modules of the same model, ensure that a separate MRA number is issued for each unit.

- 3 Describe the problem(s).
- 4 Provide the shipping address where the repaired or replacement unit must be returned.
- 5 Keep a record of the following items:
 - Detail the issue(s) with the module.
 - Furnish the shipping address for the return of the repaired or replacement unit.
 - Maintain a record of the following elements:
 - Assigned MRA number(s).
 - VeriFone serial number linked to the module being sent for service or repair (located on the back of the unit).
 - Shipping documentation, including air bill numbers utilized for shipment tracking.
 - Model(s) returned (model numbers can be found on the VeriFone label on the back of the module).

6. Accessories and Cables

VeriFone provides accessories and documentation for the biometric module. When placing orders, it is essential to reference the specific part numbers. Following are the available channels for ordering:

VeriFone online store:

- VeriFone - [Contact us](#)
- USA - VeriFone Customer Development Center, 1-800-837-4366
Monday - Friday, 7 A.M. - 8 P.M., Eastern time
- International - Contact your VeriFone representative

Part Number	Part Description
CBL445-031-01-A	M1 Cable
CBL561-001-02-A	P2 Cable
CBL184-700-06-A	U2 Cable
CBL000-016-01-A	RS232 to LAN
445-115-01-A	Orange Dongle D3
PWR390-001-0X-A	Orange 12V 18W PSU



NOTE

For EMVCo L1 compliance, please use the provided cables.

Verifone
2744N University Drive
Coral Springs,
FL 33065, USA



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