

# Introducing the semi-integrated solution



Semi-integrated (Genius) is the newest integration method to be used with Global Payments partners and merchants. This is a network-based integration with a robust feature-set that makes it simple to deploy new products as they go into production.

This method of integration has a unique configuration. The point of sale (POS) will still utilize processing credentials to identify the merchant account that is processing the payment, but will also require the IP or hostname of the device to queue card-present transactions. Since the device is not utilizing a USB connection to the POS computer and instead uses a direct connection to the internet, it allows for a more secure transaction process (no sensitive transaction data is passing through the computer). The device will be communicating directly with the gateway to pass card information and receive the transaction response. Because of this, the PIN pad will be able to communicate with multiple computers as long as the device and computer are connected to the same network.

### Box contents

You should have received the following:

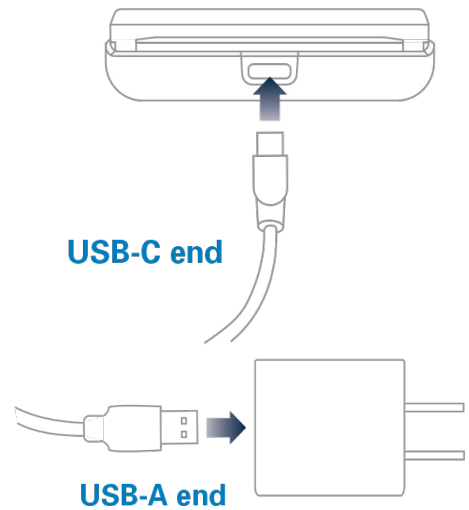
- e285 device
- USB cable
- 12V power adapter
- Quick setup guide

# Setting up your e285 device

## Power on your device

**Note:** Fully charge the device (preferably overnight) before beginning setup.

1. Insert the USB-C end of your USB cable into your device.
2. Insert the USB-A end of your USB cable into the power adapter.
3. Plug the power adapter into a power socket.
4. Verify that the device turns on. If it does not, hold the Enter button for at least four seconds to turn it on.



## Connect to the network

**Note:** The e285 device is a wireless device and must be connected to the network via wi-fi. It must be connected to the same network as the computer it will be communicating with.

1. From the Genius idle screen, press and hold **1**, **5**, and **9** for five seconds.
2. From the Verifone screen, select **Control Panel**, then **Sys Mode**.
3. Select **Supervisor**, enter password **1-1-6-6-8-3-2**, then press the green **Enter** button.
4. From the menu, select **Administration**, then **Communications**.
5. Tap **Wifi** and select **Wifi Scan**.
  - a. If the device prompts to turn on wi-fi, select **Yes**.
6. A list of networks detected by the device will appear. Select the network the associated computers are using.
7. From the **Communications Screen**, select **Wifi Configuration**.
8. The top field, labeled **PSK**, is for the password. Using the keypad, enter your desired password.
  - a. **Note:** You'll need to hit keys multiple times to cycle through the letters. To add numbers or capitalized letters, hit the **#** in the bottom corner. For symbols, you may need to use the **\*** key in the bottom left corner or the **0** (zero) key. The symbols are split between both buttons.
9. Press the green button to save the password, then hit the red button once to go back to the wi-fi section.
10. Select the top option, **WiFi Interface IPv4**.
11. Change the AutoStart option to **On**.
12. Tap the red plug icon shown under **Status**. Watch to verify it turns green.
13. Hit the red button to go back to the **Main** screen. Using the touch screen, scroll to the bottom and select **Exit**. Then select the **Reboot** option to ensure the settings are put into place.

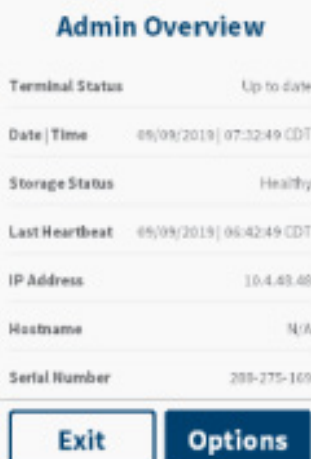
## Access the menu

From the Genius standby screen:

1. Press the **0** (zero) button three times (0-0-0), then press the green **Enter** button.
2. Key in the password **9-4-1-6-5-5-7** on the keypad and press **Enter**.

This will bring up the Genius Admin Menu on the device. It will display the following information.

- Terminal Status: This shows whether the Genius device is scheduled for a download or in need of an update. This status will either display OK or Update Needed.
- Date/Time: The current date and time
- Last Heartbeat: Date and time of the previous Heartbeat. Heartbeats are performed every hour to test the device's connection to the internet and to the Genius servers.
- IP Address: The IP address on the device, whether static or dynamic
- Hostname: This is an identification assigned by the Genius platform.  
**Note:** Hostnames always begin with "cedevice::" followed by six characters. (example: cedevice::xxxxxx)
- Serial Number: The device's serial number
- OS Version: The currently loaded Verifone OS
- Application: The version of the Genius software



Admin Overview	
Terminal Status	Up to date
Date   Time	05/09/2019   07:32:49 CDT
Storage Status	Healthy
Last Heartbeat	05/09/2019   06:42:49 CDT
IP Address	10.4.43.48
Hostname	N/A
Serial Number	289-275-109

Exit Options

## Perform a network test

If all the fields are filled in, perform a network test to ensure the connection is complete.

1. In the bottom right corner of the device screen, press the **Options** button and then **Network**.
2. The resulting screen will show the network settings. Select the **Options** button again. This will also be in the bottom right corner.
3. In the bottom right corner, select the **Connection Test** option. Verify that all tests are passed.
4. If all tests are passed, tap the **Done** button followed by the **Back** button until an **Exit** button appears.
5. Exit the menu to go back to the Genius screen.



Network	
MAC Address	00:A0:C9:14:C8:29
IP Mode	DHCP
IP Address	10.4.50.25
Netmask	255.255.254.0
Gateway	10.4.50.1
DNS 1	10.200.201.80
DNS 2	0.0.0.0

Back Options

## How to configure a static IP address on the device

1. From the Genius idle screen, press and hold **1, 5,** and **9** for five seconds.
2. Select Supervisor, enter password **1-1-6-6-8-3-2**, then press the green **Enter** button.
3. From the menu, select **Administration**, then **Communications**.
4. Select **Wifi** and **WiFi Interface IPv4**.
5. Change mode to **Static**.
  - **Note:** See the following chart for the changeable fields in the network section.
6. Using the keypad, type in the desired static IP address.
  - IP addresses must be 12 digits in length. For IP addresses with fewer digits, add zeros to complete it (example: 10.2.3.104 becomes 010.002.003.104).
7. Hit the red button to exit once you are done. Select **Yes** to save the settings.
8. Hit the red button until you return to the main screen. Then select **Exit** followed by **Reboot**.

## Explanation of network fields

Network	Details
<b>IP Mode</b>	The method of IP communication assigned to the device. This will either be DHCP or Static.
<b>IP Address</b>	The IP address assigned to the device.
<b>Netmask</b>	A Netmask is a network configuration that identifies hosts.
<b>Gateway</b>	Gateway is a network configuration provided from the merchant's network.
<b>DNS 1</b>	The merchant's DNS
<b>DNS 2</b>	The merchant's DNS

## Connection test networks

Server	Response
<b>Transport</b>	A transaction server required for connection to process. The connection test must pass for transactions of any kind to function with Genius.
<b>Genius</b>	A transaction server required for connection to process. The connection test must pass for transactions of any kind to function with Genius.

## Troubleshooting a failed connection test

The connection test can fail for multiple reasons, including:

- The merchant's network restrictions
- Lack of internet connection
- Engage hardware issues
- Distance from router

To allow the device to communicate fully through the merchant's network, please add the following URL, ports and IP ranges into the router/network firewall.

### URL:

[https://\\*.merchantware.net/](https://*.merchantware.net/)

### Or if that cannot be added, try:

<https://genius.merchantware.net/> - Transaction Server

<https://transport.merchantware.net/> - Transaction Server

<https://PS1.merchantware.net/> - Transaction Server

<https://paycube.merchantware.net/> - Download Server

<https://S01.merchantware.net/> - Download Server

### Ports:

443: SSL

7622: SFTP

## IP Ranges:

Chicago: 209.133.97.0/24

Boston: 209.119.131.0/24

**Note:** It is recommended that every merchant using Genius sets up a static IP address if possible. Ensure that the IP falls within these ranges:

10.0.0.0 - 10.255.255.255

172.16.0.0 - 172.31.255.255

192.168.0.0 - 192.168.255.255

## Chicago IPs

209.133.97.100 ps1.merchantware.net

209.133.97.107 genius.merchantware.net

209.133.97.108 transport.merchantware.net

209.133.97.60 s01.merchantware.net

209.133.97.110 logupload.merchantware.net

## Boston IPs

209.119.131.100 psl.merchantware.net

209.119.131.107 genius.merchantware.net

209.119.131.108 transport.merchantware.net

209.119.131.110 logupload.merchantware.net

209.119.131.60 s01.merchantware.net

## Prompting an update/Troubleshooting a missing hostname

Due to some device settings, you may find the device will not update properly or allow the hostname to appear. Please follow these steps to verify the settings are correct:

1. From the Genius idle screen, press and hold **1**, **5**, and **9** for five seconds.
2. Select Supervisor, enter password **1-1-6-6-8-3-2**, then press the green **Enter** button.
3. From the menu, select **Administration**, then **Date/Time**.
4. Correct the date to the current date and time.
  - **Note:** Be sure to update to the local time.
5. Change the time zone from CDT/CST to UTC +0000
  - **Note:** This option should be near the bottom, and you will need to scroll down using the bar on the right to find it.

6. To confirm the change, go back to the previous menu and reenter the **Date/Time** screen and verify it shows the correct date and time zone.
7. Once these steps are complete, please reboot the terminal. This can be done by hitting the back option until you get back to the **Supervisor** screen. There will be an option to **Reboot** the device.
8. Once you return to the idle screen, wait a few minutes for the device to update and restart automatically.
9. Return to the main menu using the instructions from the **Access the menu** section of this guide. The device should now display hostname and IP correctly.

## Verifying communication from computer to e285 device

When the device and computer are on the same internet network, they should be able to communicate without issue. However, there may be some situations when the communication is not automatic.

The readiness of the device can be tested using the following URLs in any browser:

[https://\[hostname\]:8443/v2/pos?Action=Status&Format=XML](https://[hostname]:8443/v2/pos?Action=Status&Format=XML)

[https://\[IP address\]:8443/v2/pos?Action=Status&Format=XML](https://[IP address]:8443/v2/pos?Action=Status&Format=XML)

[https://\[hostname\]:8443/v2/pos?Action=Status&Format=JSON](https://[hostname]:8443/v2/pos?Action=Status&Format=JSON)

[https://\[IP address\]:8443/v2/pos?Action=Status&Format=JSON](https://[IP address]:8443/v2/pos?Action=Status&Format=JSON)

If the browser prompts a warning that the site is not secure, select the **Advanced** option and proceed to the site. If you run into this issue on at least one computer, run the same URL on each computer that will be sending transactions to the PIN pad. After the initial prompt to connect, the issue should be resolved.

Healthy responses displayed in browser:

```
{"Status":"Online","CurrentScreen":"00","ResponseMessage":"","SerialNumber":"xxx-xxx-xxx",  
"ApplicationVersion":"6.0.0.0","OSVersion":"release 30812500","AdditionalParameters":  
{"PaymentDataCaptured":"false","RemoveEMVCard":"false"}}
```

OR

```
<?xml version="1.0" encoding="UTF-8"?>  
<StatusResult><Status>Online</Status><CurrentScreen>00</CurrentScreen><ResponseMessage/><SerialNumber>xxx-xxx-xxx</SerialNumber><ApplicationVersion>6.0.0.0</ApplicationVersion><OSVersion>release-30812500</OSVersion><AdditionalParameters><PaymentDataCaptured>>false</PaymentDataCaptured><RemoveEMVCard>>false</RemoveEMVCard></AdditionalParameters></StatusResult>
```

## Device specifications

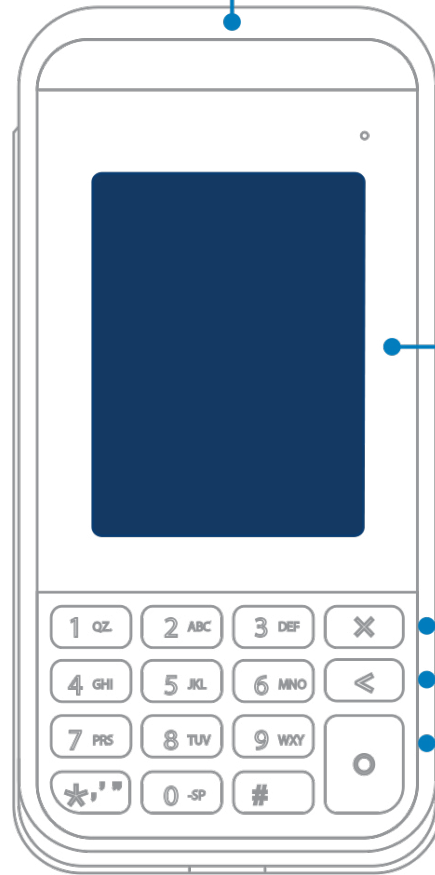
Specifications	Details
Functions and features	EMV smart card/chip card reader Multi-track magnetic stripe reader NFC card reader Secure PIN pad Touch signature screen Over-the-air firmware update Over-the-air cryptographic key-loading Numeric keypad Backlit keypad
Dimensions	138mm L × 68mm W × 18mm H; 190g weight 5.4" L X 2.6" W x 0.7" H; 0.4 lbs
Operating system	Linux-based OS
Connectivity	Wi-fi - 5 GHz + 2.4 GHz
Power	1800 mAh rechargeable, field-replaceable, USB-C charging port
Peripheral ports	Single connector supports RS-232, USB device, USB host, and ethernet
Button quantity	15
Payment types supported	Visa, Mastercard, Discover, American Express, JCB, CUP, NYCE (US), Pulse (US), Star (US), FSA, Apple pay, Google Pay, Samsung Pay



**Magnetic stripe reader**



**Contactless reader**



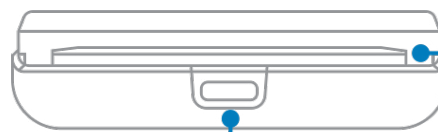
**Touch-sensitive display**



**Cancel button**

**Back button**

**Enter button**



**Chip card slot**

**USB-C port**