

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

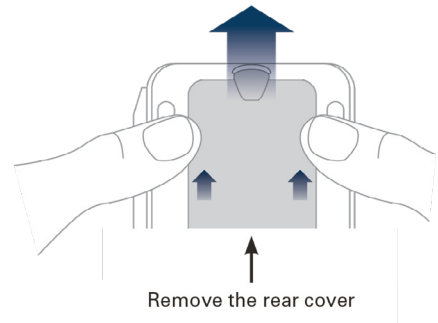
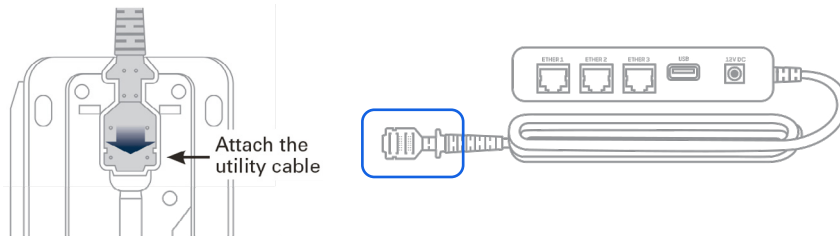
You should have received the following:

- P400
- Power adapter
- Utility cable
- Ethernet cable
- Quick setup guide

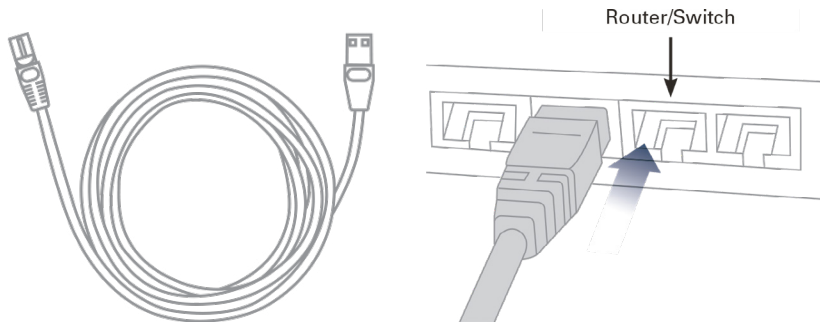
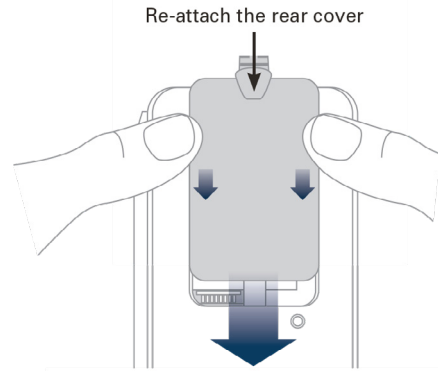
Setting up your P400 device

Power on your device

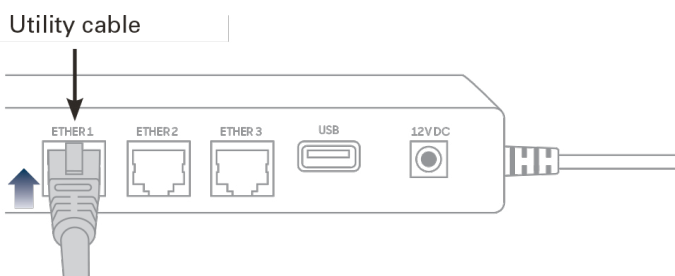
1. Turn the device upside down and place it on a flat, stable surface.
2. Remove the rear cover by sliding it up and lifting it off.
3. Attach the utility cable to the device.
 - **Note:** Be sure to push the connector straight down so you do not bend the pins.



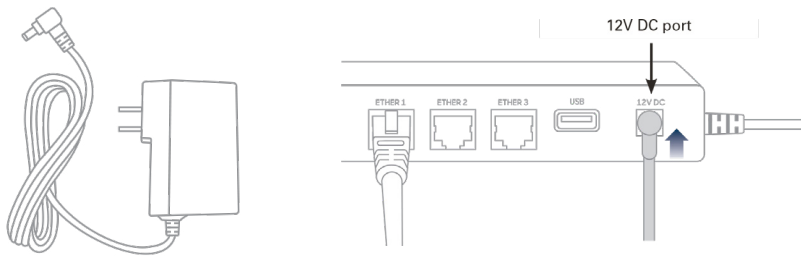
4. Slide the reader cover back onto the device until you hear a click.
5. Insert one end of the network (ethernet) cable into an available port on your router or switch.



6. Insert the other end of the network cable into the Eth 1 port.
 - **Note:** The utility cable can support multiple devices, including computers or phones, and works as a router/splitter.



7. Insert the provided 12V power adapter into the power adapter on the utility cable and plug it into a power socket.



8. The P400 will power on after two to three minutes. Upon powering up, the device will check for system updates. If the PIN pad does perform an update, it may take 3-5 minutes to complete. The device is then ready to be configured with a POS.



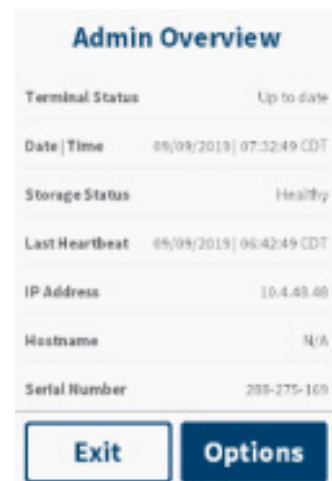
Access the menu

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



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 **Ethernet** and then **eth0**.
5. Change Mode to **Static** from DHCP.
 - **Note:** See the following chart for the changeable fields in the network section.
6. Using the keypad, type in the desired static IP address.
 - a. 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**.

Connection Test	
✓	genius.merchantware.net Connected (192.55.23.22)
✓	transport.merchantware.net Connected (192.55.23.25)
Visit help.globalpaymentsintegrated.com for support	

Test again **Done**

Explanation of network fields

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

Connection test networks

Server	Response
Transport	A transaction server required for connection to process. The connection test must pass for transactions of any kind to function with Genius.
Genius	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
- Incorrect hardware configuration (the cords were plugged in incorrectly)
- Lack of internet connection
- Hardware issues with the cables
- Engage hardware issues

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/

Or if that cannot be added, try:

<https://genius.merchantware.net>

<https://transport.merchantware.net>

<https://logupload.merchantware.net>

<https://ps1.merchantware.net>

<https://wss.paygateway.com>

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

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 P400 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:

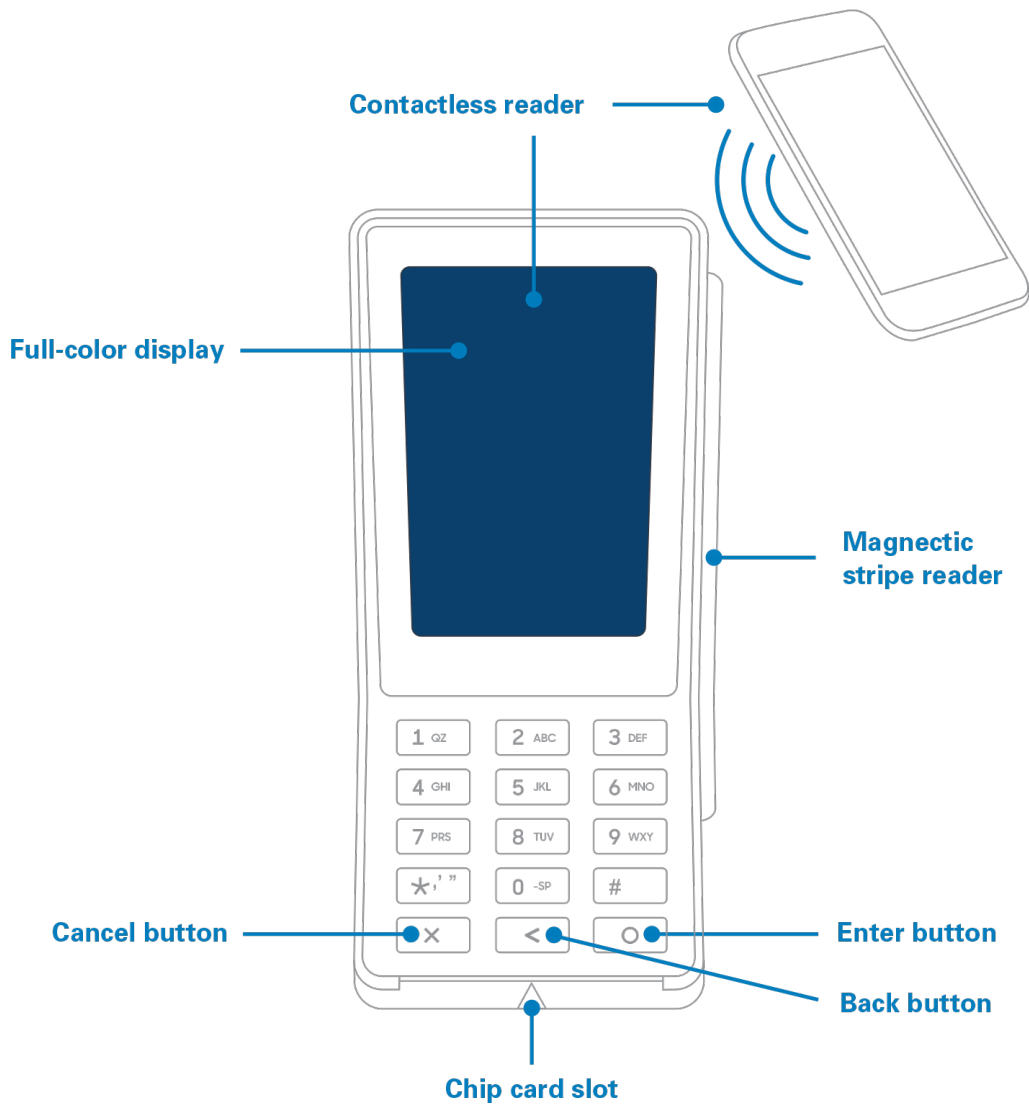
```
{
  "Status": "Online",
  "CurrentScreen": "00",
  "ResponseMessage": "",
  "SerialNumber": "xxx-xxx-xxx",
  "ApplicationVersion": "6.0.0.0",
  "OSVersion": "release 30812500",
  "AdditionalParameters": {
    "PaymentDataCaptured": "false",
    "RemoveEMVCard": "false"
  }
}
```

OR

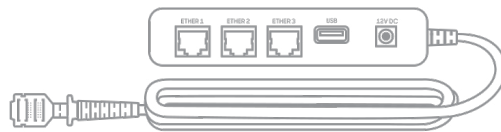
```
<?xml version="1.0" encoding="UTF-8"?>
<StatusResult>
  <Status>Online</Status>
  <CurrentScreen>00</CurrentScreen>
  <ResponseMessage/>
  <SerialNumber>xxx-xxx-xxx</SerialNumber>
  <ApplicationVersion>6.0.0.0</ApplicationVersion>
  <OSVersion>release-30812500</OSVersion>
  <AdditionalParameters>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

Device specifications

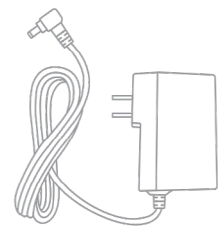
Specifications	Details
Functions and features	EMV smart card/chip card reader Multi-track magnetic stripe reader NFC card reader Secure PIN pad Touch signature screen Over-the-air firmware update Over-the-air cryptographic key-loading Numeric keypad
Dimensions	167 mm L x 80 mm W x 44 mm H 6.5" L X 3.1" W x 1.7" H
Operating system	Linux-based OS
Connectivity	Ethernet
Power	5-12 V DC, 4.8-5.2 W power consumption Power over USB 5 V 500 mA
Peripheral ports	Single connector supports RS-232, USB device, USB host, and ethernet
Options/accessories	Privacy shield, mounting adapter, power of ethernet (POE 802.af), cables backward compatible with VX
Other standard features	2 SAM slots (optional 3) Backlit keypad uSD memory slot
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



Ethernet cable



Utility cable



12V power adapter