



CSG Forte Device Handler: Windows DLL Integration Guide

Revised 4/14/2021

Revision History

Version	Date	Changes
1	8/19/2016	Initial
1.1	11/14/2018	Format changes for version 1 Device Handler release
1.2	1/4/2019	Branding and copyright updates.
1.3	2/1/2021	<ul style="list-style-type: none"> • Branding Updates • Copyright Updated • Changed references from VX520 to "Verifone Terminals."
1.4	4/14/2021	<ul style="list-style-type: none"> • Updated the link for the Verifone driver.

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Table of Contents

Overview	4
Introduction.....	4
Requirements.....	4
Setup.....	5
Setting Up the Terminal.....	5
Configuring the Drivers and Using the Sample Application.....	5
Integration.....	9
Overview	9
Initialization.....	9
Subscribe to and Process Events	9
Send Parameters to the Terminal.....	10
Troubleshooting	11
Errors.....	11

Overview

Introduction

Verifone terminal enable partners using Forte's Advanced Gateway Interface (AGI) API to process EMV transactions for credit cards and non-pin-based debit cards. For partners using native, Windows-based POS applications, Forte recommends integrating your Verifone terminal using the Device Handler dynamic link library (DLL). The Device Handler DLL includes the drivers required to connect to your Windows OS and a testing application preloaded with the AGI API parameters required for transaction calls.

Requirements

To begin the Device Handler DLL integration, ensure you have the following:

- A terminal with the Forte load configured in Listening Mode
 - A mini-USB to USB cable
 - Extracted files from the [FPDH – Desktop](#) folder
 - Forte's [Advanced Gateway Interface \(AGI\) API Specification](#)
-

Setup

Setting Up the Terminal

To set up the terminal, complete the following steps:

1. Connect an Ethernet cable to the **ETH** port on the back of the terminal.
 2. Connect the mini-USB end of the mini-USB to USB cable to the bottom of the terminal and the USB end to the computer.
 3. Connect the power cable to the terminal.
 4. After the terminal powers up and prompts the user, choose **Forte** (the **F4** button). If the terminal is configured correctly, the terminal will display "Initializing. . .Please Wait" and then goes to a blank screen with your organization's name or other required text. This indicates that the terminal is in Listening Mode. If the terminal displays another message (e.g., "Credit Card," "Sale," etc), call Technical Support at 866-290-5400, option 5 for help configuring your terminal correctly.
-

Configuring the Drivers and Using the Sample Application

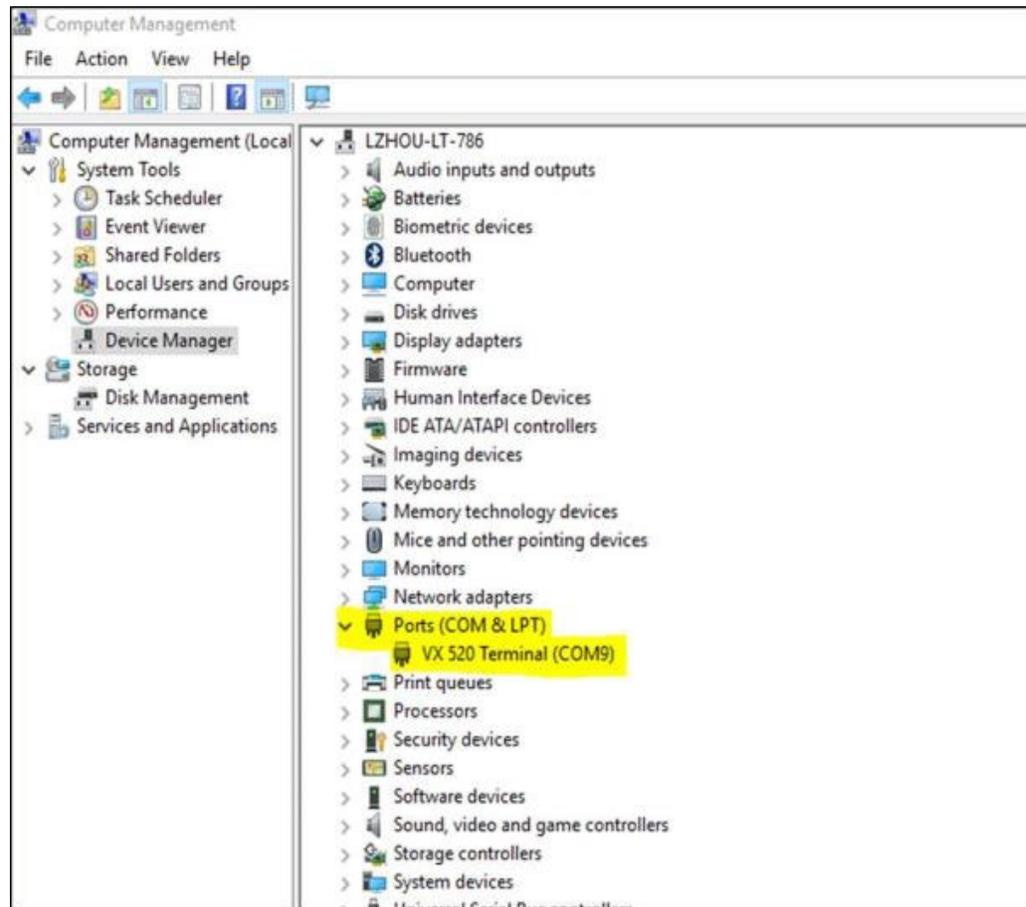
To install Device Handler drivers, complete the following steps:

1. Download the Verifone driver from Forte's DevDocs here: <https://www.forte.net/devdocs/samplecode/UNIFIEDUSBDRV-05.00.05.02-B3.zip>.
 2. After downloading and extracting the driver, right click on the **silent.bat** file and select **Run as Administrator**. If prompted, provide administrator credentials. This will install the Verifone USB driver.
 3. After running the installation, some systems may require a reboot to recognize the terminal's hardware. If required, your system will prompt you. **NOTE:** After the drivers are installed and the device is connected, the terminal will show in the Device Manager under Ports (COM and LPT), typically on COM 9.
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Continued

Setup (Continued)

Configuring
the Drivers
and Using the
Sample
Application
(Continued)



Continued

Setup (Continued)

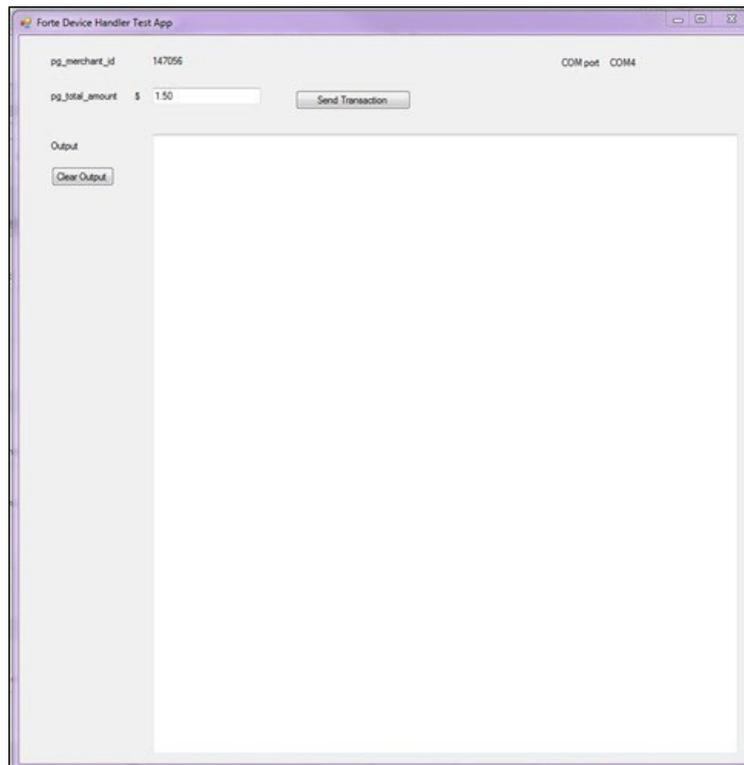
4. Open the **Handler** folder and select the *TestHandler.exe.config* file.
5. Using a text editor for the *TestHandler.exe.config* file, edit the `<appSettings>` to include the correct **MerchantID** and **COM Port** values.

NOTE: The Device Manager displays the **COM Port** value (see the highlighted text in the figure above).

```
<?xml version="1.0" encoding="utf-8" ?>  
<configuration>  
  <appSettings>  
    <add key="MerchantID" value="147056" />  
    <add key="ComPort" value="COM9" />  
  </appSettings>  
</configuration>
```

6. From the **TestApp** folder, execute the *TestHandler.exe* file. The Forte Device Handler Test App displays.

Configuring
the Drivers
and Using the
Sample
Application
(Continued)



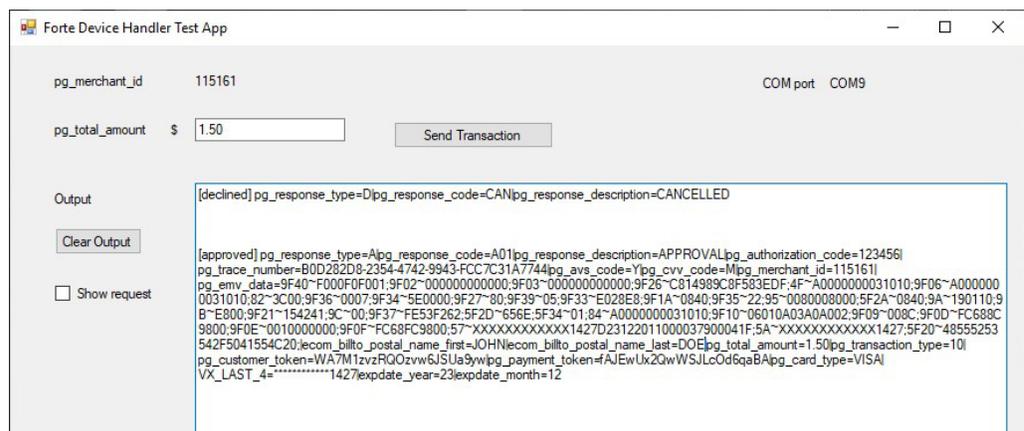
Continued

Setup (Continued)

7. Push the **Send Transaction** button. The terminal displays payment options and the user must choose **Credit Card** (the F2 button).
8. For chip cards, the user inserts (i.e., dips) the credit card and waits for a beeping sound and a "Remove Card" prompt to display on the terminal before removing the card. For non-chip cards, the user swipes the card. **NOTE:** Users can only swipe chipped cards if the terminal displays an error with the chip reader.

Configuring the Drivers and Using the Sample Application (Continued)

The following message shows a declined and an approved transaction that could display in the **Output** field of the Forte Device Handler Test App.



Integration

Overview

The following sections display the minimum code the Forte Device Handler Test App uses to consume the Device Handler DLL.

Initialization

```
ForteDeviceHandler.Handler handler = new Handler();
```

Subscribe to and Process Events

```
handler.DataReceivedEvent += HandleDataReceivedEvent;  
  
.....  
  
private void HandleDataReceivedEvent(object sender,  
DataReceivedEventArgs e)  
{  
    //process the data received  
    SetOutputText("[ " + e.Type.ToString() + " ] " +  
e.Message);  
    switch (e.Type)  
    {  
        case DataReceivedEventType.approved:  
            //handle approved event  
            break;  
        case DataReceivedEventType.declined:  
            //handle declined event  
            break;  
        case DataReceivedEventType.error:  
            //handle error event  
            break;  
        case DataReceivedEventType.timeout:  
            //handle timeout event  
            break;  
    }  
}
```

Continued

Integration (continued)

The `pg_total_amount` is the only required parameter. For a complete list of input parameters, see the [AGI Guide](#).

**Send
Parameters to
the Terminal**

```
private void SendButton_Click(object sender, EventArgs e)
{
    ForteDeviceHandler.Transaction tran = new Transaction() {
        pg_total_amount = amount.Text
        //pg_consumer_id = "consumer_id1",
        //ecom_consumerorderid = "consumerorderid",
        //ecom_walletid = "walletid",
        //pg_billto_postal_name_company = "Forte",
        //ecom_billto_postal_street_line1 = "street 1",
        //ecom_billto_postal_street_line2 = "street 2",
        //ecom_billto_postal_city = "Allen",
        //ecom_billto_postal_stateprov = "TX",
        //ecom_billto_postal_postalcode = "75013",
        //ecom_billto_telecom_phone_number = "2144172222",
        //ecom_billto_online_email = test@test.com
        /* add more parameters here*/
    };
    handler.CreateTransaction(tran);
}
```

Troubleshooting

In the event of an error, the error message will display in the **Output** field of the Test App as a transaction response:

```
[error]Cannot initialize serial port
```

The following table displays the different potential errors the Device Handler DLL can throw:

Errors

Error	Description
"Port is not configured"	In the <i>TestHandler.exe.config</i> file, the ComPort setting is not configured.
"Merchant id is not configured"	In the <i>TestHandler.exe.config</i> file, the MerchantID setting is not configured.
"pg_total_amount is required"	The pg_total_amount parameter is a required field.
"pg_response_type=D pg_response_code=Err pg_response_description=ERROR"	The MerchantID value in the <i>TestHandler.exe.config</i> file does not match the MerchantID value in the terminal.

NOTE: See the [AGI Guide](#) for a list of transaction processing errors you may get in your response.