

UX410

Direct Connect

Reference Guide



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Setting up your UX 410 with Direct Connect

In this section, we go over everything you need to know to set up your UX410 with Direct Connect.

Before you get started

1. Please confirm that you received all the necessary items.

Controller 	UX410 CTLS PAYMENT TERMINAL POWER SUPPLY POWER CABLE RS232 SERIAL CABLE USB CABLE TYPE B	M159-410-100-CAC PWR159-002-01-A CBL258-006-001-A 26264-02-R Not included
Card reader 	ANALOG RF CTLS ANTENNA CABLE 10-PIN RJ45 TO RJ45 ANTENNA CABLE	CBL159-302-03-A CBL159-314-01-A
	Ux100 PINPad with display Clamps for UX100	M159-100-00-CABNC MET159-107-01-A

Development installation:

It's assumed that the developer/integrator received their UX410 development hardware, UX100 PINpad *for the first time configuration or reseating of ARS, development specifications*, a set of Moneris issued test cards, and an assigned test account consisting of their unique, MID (Merchant ID), and TID/ECR (Terminal ID number).

Please contact your assigned Moneris CIS (Client Integration Specialist) for assistance with ordering development equipment and setting up the related test account(s).

Production installation:

It's assumed that the merchant has purchased a kiosk solution, UX410 production hardware, signed a merchant agreement and has been assigned a MID (Merchant ID), and TID/ECR (Terminal ID number).

Details of these credentials are indicated below:

MID – Merchant ID number

- Moneris Canada host MID convention is typically 13 numeric digits beginning with "0030#####".
- TID – Terminal ID number
 - Moneris Canada assigned TID convention is typically 8 numeric digits beginning with "U4#####".
- PED ID
 - The PED ID number is derived from the UX410 PTID number. PED ID numbers begin with "U4#####".
- If the UX410 PTID number is used, then the derived PED ID convention is prefix "U4" followed by the last 6 digits of the PTID number. For example, if the UX410 PTID is "99345678", then this derived PED ID example would be "U4345678".



Hardware setup

Follow these instructions to set up your terminal hardware. The UX410 requires an IP connection in order to process transactions to Moneris. For additional UX410 hardware installation details, please refer to the Verifone document listed below:

- [DOC159_039_EN_A_UX_410_Installation_Guide.pdf](#)

1 Mounting the Antenna and Controller Units

- Remove the clear protective film from the back of the unit
- Align the unit's stud bolts with the stud holes of the installation panel.
- Slot the bolts through the installation panel and on through to the EVA clamp
- Secure the unit with M4 washers and nuts. Tighten the nuts using the recommended tightening torque of 5.0 kgf cm (0.49 Nm or 4.3 lbf in)
- Remove the clear protective screen from the front of the unit
- Avoid placing metallic objects at the front and around the card reader.

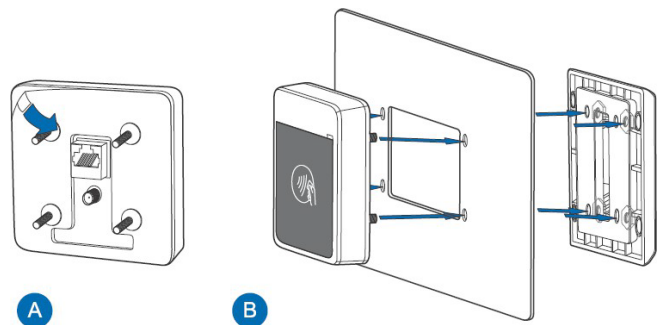
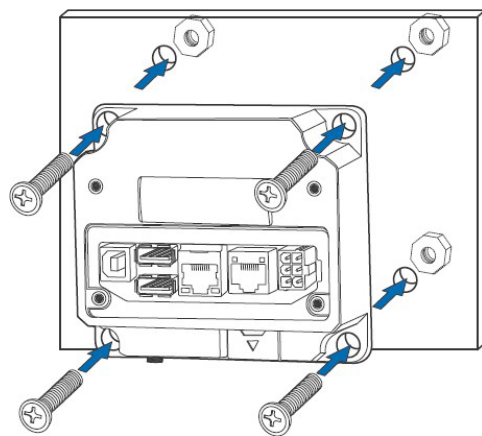
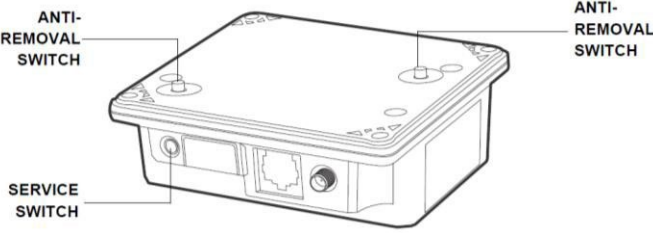
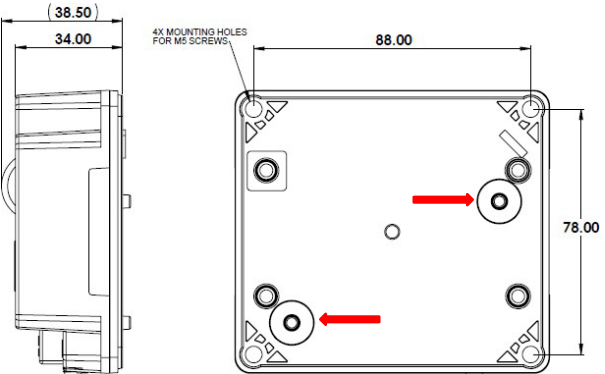


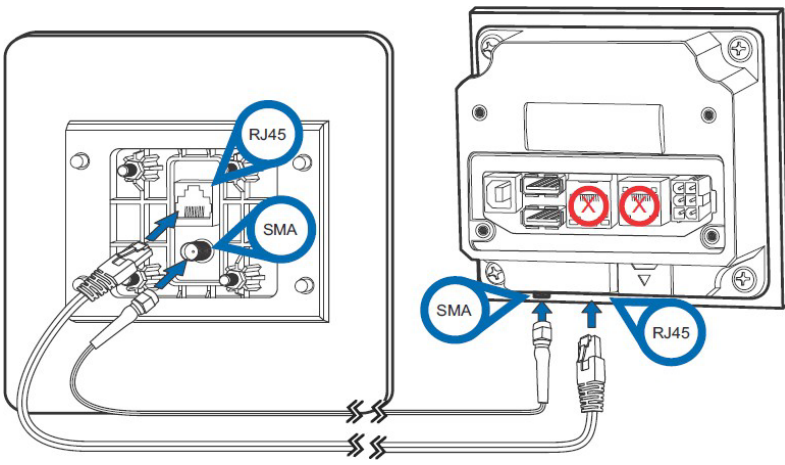
Figure 5 Mounting the UX 410 Antenna Unit

- Align the Controller Unit mounting holes to the installation panel holes.
- Insert four bolts and tighten the nuts using a recommended tightening torque of 5.0 kgf cm (0.49 Nm or 4.3 lbf in)



i. There are three switches on the UX410: Two Anti-Removal Switches (ARS) on the installation panel side and one Service Switch on the underside of the Controller unit.	 ANTI-REMOVAL SWITCH SERVICE SWITCH ANTI-REMOVAL SWITCH
j. The following diagram highlights the position of the Anti-Removal Switches (ARS) in reference to the mounting holes.	 (38.50) 34.00 4X MOUNTING HOLES FOR M5 SCREWS 88.00 78.00

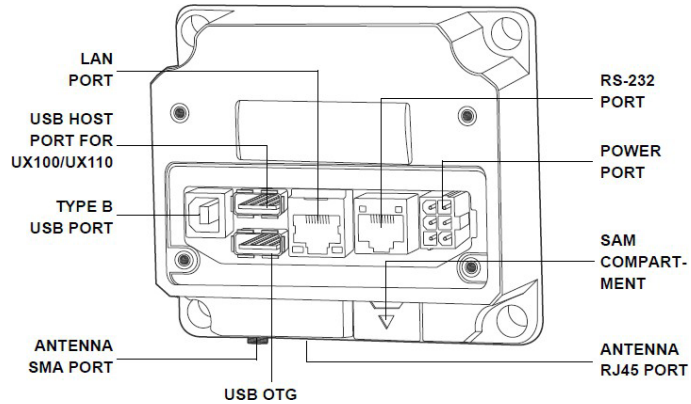
2 Connecting the Antenna Unit to the Controller Unit

a. Connect one end of the RJ45 plug to the rear of the Antenna and the other end to the Controller Unit b. Connect one end of the SMA connector to the ports of the Antenna and the the other end to the Controller Unit.	 RJ45 SMA SMA RJ45
---	--

3

Connecting Cables

The UX410 Controller unit panel holds several interface ports for power and communication.



Cable list:

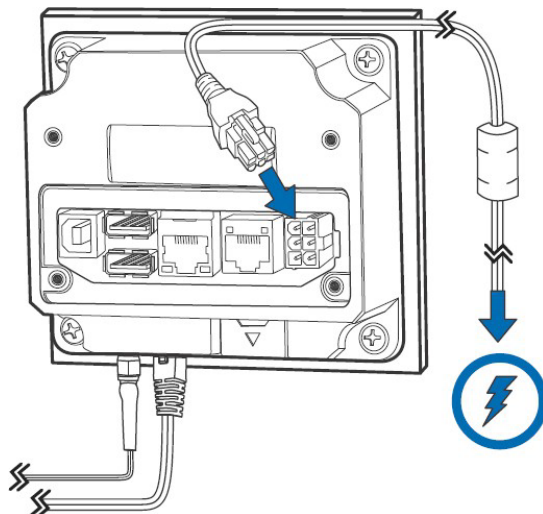
- USB Device (Type B) [client]
- 2x Powered USB (Type A) Ports
- 1 x Full Speed, High Powered USB (Type A), Port 1 [Host]
- 1 x Powered USB (Type A), Port 2 [OTG]
- Powerport 12 V DC to 24 V DC
- LAN with 2 LEDs
- COM1 (RS-232)
- SMA/Antenna (RJ45)
- SAM Card compartment – (Not supported)

4

Connect the power supply

Connect the power cable to the power port on the UX410 Controller Unit and the other end to your power source.

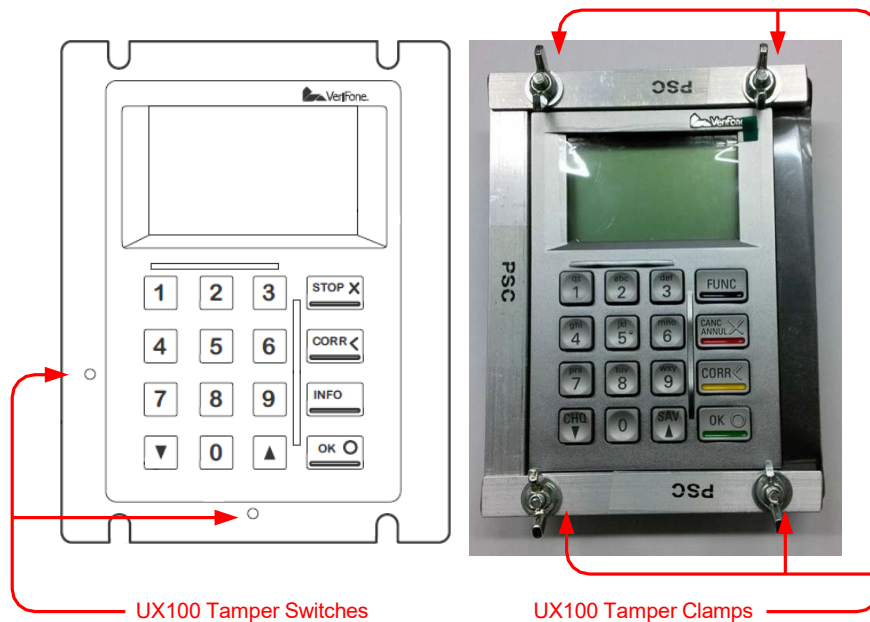
Note: Power cable supplied will only have 4 PINs which only fits 1 way. The highlight square illustrates how to plug it in.



Setting up the UX410 Device

- 1.1. You will require a UX100 PINpad for the first time configuration or reseating of the ARS (Anti-Removal Switches). The UX100 will need to be secured with ARS (Anti-Removal Switch) brackets to close/clamp the Tamper Switches, as illustrated below. Please contact Moneris to order these brackets (Part number: 159-107-01-A)

Securing the UX100

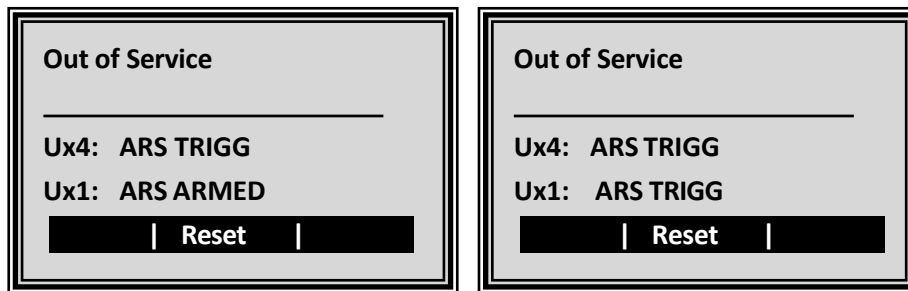


- Upon start up, a blank screen will show on the UX100 display. Press the black Service Switch button located on the underside of the UX410 controller.

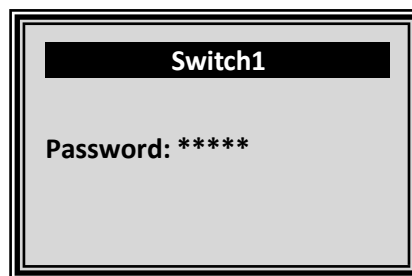


UX410 Service Switch button

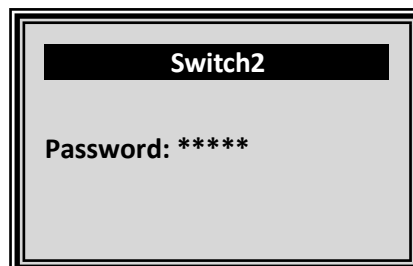
- If a tamper is evident, one of the following screens displays on the UX100.



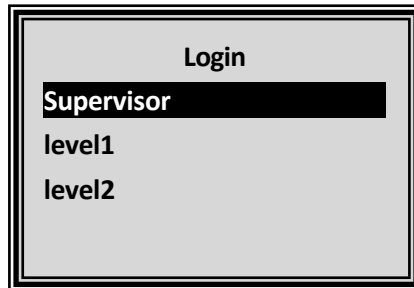
- Press the “OK” key and enter the default “Switch1” password “111111” (seven ones).



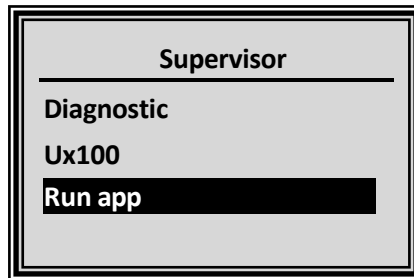
- Enter the default “Switch2” password “222222” (seven twos). A “Reset Succeeded!” message should briefly appear.



- The Ux100 will display the following “Login” screen. Select “Supervisor”, and enter the default Supervisor password “11111” (five ones).



- Select “Run app” by either pressing the “7” key or scrolling to the option, and “Yes” to start the application,



- The device will boot up, beep and display a blank screen.



- Disconnect the UX100 PINpad as it's not required from this point on.

Communications setup

The UX410 with Direct Connect must be configured to only communicate with the specific Moneris host indicated.

Note: Production hardware should only be used on the Production host and Development hardware should only be used on the Development host.

Moneris Host URL assignments

- The Moneris Solutions URL and IP address assignment for Canada host connectivity are in the proceeding tables.

Production host credentials:

System Description	URL	IP Addresses (Site 1)	IP Addresses (Site 2)
Production Public	ipg1.moneris.com	23.249.192.33	23.249.200.33

Development host credentials:

System Description	URL	IP Addresses (Site 1)	IP Addresses (Site 2)
Test Public	ipgt1.moneris.com	23.249.192.49	23.249.200.49

Software setup

Defining the Test Account Parameters

The “Direct Connect Setup” tool can be used to configure the UX account parameters. This tool interfaces to the UX410 over the serial connection. Alternatively, the separate PCIAP utility could also be used to interface to the UX410, either over the serial interface or an established IP connection.

- Launch the Direct Connect Setup utility, confirm the COM port setting, and enter the specific UX Direct Connect account parameters in the intended fields, as per the following example.

Direct Connect Setup v1.03

MID: 0030128902427

ECR: U4685741

PED: U4685741

URL: ipgt1.moneris.com:443

Merchant Info

Name

Address1

Address2

☐ Progress Tokens

☐ Reset EMV cfg

COM: COM12

SAF limit: 0.00

START

Get Settings

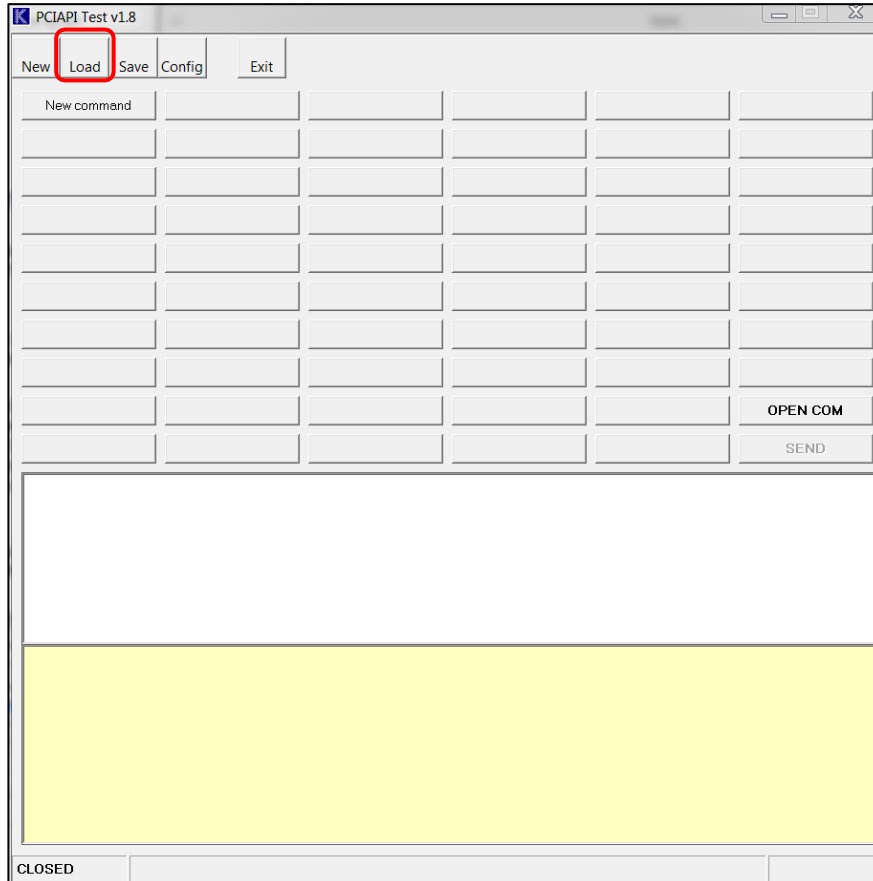
Loading MID..OK!
Loading ECR..OK!
Loading PED..OK!
Loading SAF..OK!
Loading URL..OK!
Progress tokens OFF..OK!
OK!

- Note that the entries must follow the precise field format and only contain valid characters with no added spaces.
- The host URL format is especially important and must always follow the convention in the above screen capture, where the full URL is always preceded with “:443”, as the port number.

- Click the START button and confirm the successful load status shown on the right side of the utility screen.
- Please refer to the “Direct Connect – Functional Specifications” documentation, for complete details on “Progress Tokens” usage capabilities.
- Note that these configuration parameters can also be retrieved and set, by executing PpPosGetConfig & PpPosSetConfig commands respectively. Please refer to “Direct Connect Functional Specifications” documentation for further details.

PCIAPI Utility – Logon and Test Transaction Steps

- Launch the PCIAPI utility, click on the “Load” button, and point to the default script file “UX410_DC.TST”. The PCI API screen should appear as follows.



- PCIAPI tool can be configured for either serial or IP connectivity. Ensure that the intended Serial or IP (LAN) cable is connected as per **Hardware Setup section 3**.
- For LAN connectivity, retrieve the UX410 destination IP address through the SYSMODE menu. Press the UX410 service button, select “Supervisor” > “11111” > “Administration” > “Network” > “IP Status”, and take note of the IP address. Note that the default port is “1180”. Press the UX100 “CANCEL” key twice, then scroll to & execute “Run App” to launch the Direct Connect application.

Alternatively, setup PCIAPI with Serial and send the **0D:00_02T01** command, this will retrieve the IP address of the device and gateway.

- Below are sample Serial and IP configurations. For IP connection, enter the retrieved address in the “Remote IP” field.

The image displays two side-by-side screenshots of a 'Configuration' dialog box, illustrating different connection settings.

Left Screenshot (Serial Configuration):

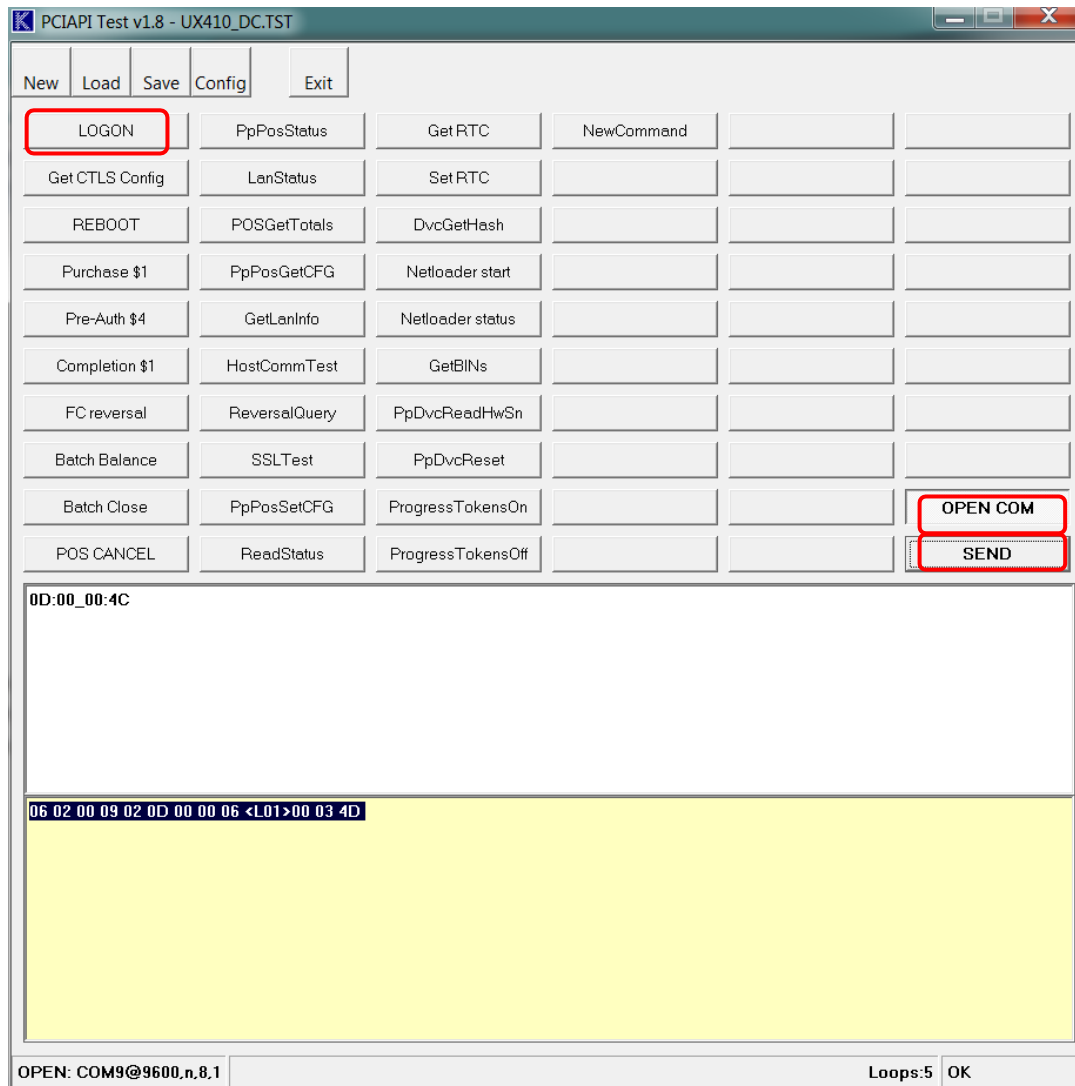
- COM:** Radio buttons for 'Ser' (selected) and 'IP'.
- Ser:**
 - COM10 (selected in dropdown)
 - 9600 (baud rate)
 - None (parity)
 - 8 (data bits)
 - 1 (stop bits)
 - No handshake (handshake type)
- Checkboxes:**
 - ☒ Data ASCII
 - ☐ All ASCII
 - ☐ Loop Cmd
 - ☐ Multi Cmd

Right Screenshot (IP Configuration):

- COM:** Radio buttons for 'Ser' and 'IP' (selected).
- IP:**
 - Remote IP: 172.23.222.41
 - Remote Port: 1180
 - Conn TO (s): 5
- Checkboxes:**
 - ☒ Data ASCII
 - ☐ All ASCII
 - ☐ Loop Cmd
 - ☐ Multi Cmd

- From the PCI-API tool, click on the “OPEN COM” button, select “LOGON” and “SEND”. The LOGON command “**0D:00_00:4C**” will appear in the top window, followed by the response in the lower window, as per the following example.
- In order to support USB connectivity, you will have to install the appropriate VeriFone – Unified Windows USB Driver on each pay point supporting a UX410.

Note: Download the VeriFone Unified Windows USB driver from this address:
<https://esqa.moneris.com/connect/en/download/drivers/index.html>.



- A typical Logon should only take 3 seconds, once completed the response “0602 00 09 02 0D 00 00 06 <L01>00 03 4D” will be provided as illustrated in the example above
- For test transactions, start by clicking the “PURCHASE_\$1” button, and tap a test card on the reader. The following example is for a successful VISA credit purchase.

0D:00_00:50 30 30 31 30 30 1C 55 43

06 02 01 01 02 0D 00 00 06 <P01>1C <0100>1C <32A>1C <02181019141310>1C <03100>1C <090010020410>1C <0601>1C
 <07027>1C <08007432>1C <05*****0717>1C <1001>1C <11H>1C <1200>1C <13MASTERCARD>1C <41M >1C <14N>1C
 <15N>1C <260>1C <16A0000000041010>1C <17MasterCard>1C <18MasterCard>1C <193660AFF1FD5527DF>1C
 <210400008001>1C <203660AFF1FD5527DF>1C <220400008001>1C <232800>1C <33N>1C <35N>00 03 62

OPEN: COM10@9600,n,8,1 Loops:3 OK

- Please refer the “Direct Connect Functional Specifications” document for complete details on executing transaction, and administrative API commands.

Adding a New Command

- To add a new command simply type the command, click the **NewCommand** button and a popup requesting to enter a name for the command will present itself, give your command a name click OK, and test the command.

Batch Balance	SSLTest	PpDvcReadHwSn
Batch Close	pPosSetCFG	PpDvcReset
Pos_CANCEL	PpReadStatus	NewCommand

0D:00_04T02L00_FF

New name

Enter new name for the selected item

OK Cancel

Get Merchant ID

Batch Balance	SSLTest	PpDvcReadHwSn
Batch Close	pPosSetCFG	PpDvcReset
Pos_CANCEL	PpReadStatus	Get Merchant ID

0D:00_04T02L00_FF

06 02 00 14 02 0D 00 04 06 00 0D <0030128902427>03 26

Troubleshooting PCI-API Connectivity Issues

- The PpPosStatus API command can be used to help identify possible problems with local LAN, Host, or SSL connectivity. Please refer the “Direct Connect Functional Specifications” document for details.



Using Your Terminal

In this section, we go over everything you need to use your UX410.

Card types - Disclaimer

The Moneris UX410 is certified to support the card types listed below, however there are specific rules that must be followed when deploying a Contactless only pay point.

Not all card types allow for a Contactless only pay point to be installed without a CHIP & PIN option available onsite. The table below indicates if CTLS only is allowed and/or if CHIP & PIN required onsite must be available according to card brand rules.

Card Brands supported with CTLS only

Card type	CHIP & PIN required onsite	CTLS only	Receipt required
Visa®	Yes*	Yes	No
Interac®	No	Yes	Yes**
Mastercard®	No	Yes	No
American Express®	Yes	Yes	No
JCB®	Yes	Yes	No
Discover®	Yes	Yes	No
UnionPay®	Yes	Yes	No

* Visa requires CHIP & PIN onsite for MCC: 5814 Quick Service Food, 5541 Service stations (Car wash/air pumps), All MCC's with high international volume.

** Interac transaction over \$20 merchant must offer a printed or electronic receipt

Note: It's recommended that merchants have a fall back solution with CHIP & PIN onsite and offer a receipt option upon request.

Supported Merchant Category codes (MCC's)

Contactless acceptance has become a popular payment method due to ease of use and speed of transaction. Contactless only pay points do not have a fallback option which may cause the customer to be inconvenienced. For this reason, certain card types require fall back and/or limit the deployment of Contactless only pay points to specific MCC's. **We recommend that you have a CHIP & PIN pay point onsite in each application, since there are numerous scenarios where any card may require PIN validation.**

Below is a list of supported MCC's for Contactless only pay points:

Supported MCC's

- MCC 4784: Tolls and Bridge Fees
- MCC 5814: Fast Food Restaurants (food/drink vending machines, quick service food/drink drive-thru)
- MCC 5541: Service Stations (for 1. car washes and 2. air pumps)
- MCC 7211: Laundries – Family and Commercial
- MCC 7523: Parking Lots, Parking Meters, and Garages
- MCC 7542: Car Washes
- MCC 8398: Charitable and Social Organizations

Contactless card

- In this guide, the term “contactless card” includes:
 - a card with contactless functionality; supported card brands include: Visa®, Mastercard®, American Express®, JCB®, Discover®, UnionPay® and Interac®
 - a mobile device, such as a smartphone, tablet or smartwatch
 - other contactless-enabled items such as a key fob or a mobile tag
- The card is tapped on the contactless reader.
- All contactless card formats and any related software are the responsibility of the cardholder (e.g., downloading a digital app from their financial institution).
- Cardholders with a mobile device (e.g., smartphone) are responsible for loading their card information into their digital wallet.



Merchant/Integrator Support

At Moneris, help is always here for you.

If you need assistance with your unattended payment processing solution.

Steps to follow when troubleshooting an unattended solution.

- Merchants should contact the integrator / kiosk provider to troubleshoot their solution and ensure all components are working correctly. Most components and configuration settings are controlled by the integrator / kiosk provider.
- If the integrators has completed their troubleshooting procedures and determine the unattended payment device requires service or replacement, please follow the process outlined by the integrator / kiosk provider.
- If the integrator has completed their troubleshooting and transactional related issues continue, merchants should contact Moneris Customer Care toll-free at 1-866-319-7450 to validate payment credentials.
- For integration support as it relates to the API functional specifications and tools, developers should contact the Moneris' Emerging Payments Development Support team at **EPDS@moneris.com**, and please be sure to copy your Moneris Client Integration Specialist.



BE PAYMENT READY

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