Qubi 3C

The Secure Multi-Mode Workspace Management Solution

Configuration & Installation Guide (US Version)

MADE IN BRITAIN

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Version History

Document version	*Date*	
1.0	1st Aug 2022	Initial Draft
1.1	28th Feb 2023	Final Updates to Draft version
1.2	21st Mar 2023	Final Appendix H (FCC Compliance) Changes

Acknowledgements

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Contents

Introduction

This guide covers configuration of the Qubi 3C Workspace Management System including the Connect adaptor for WiFi or Ethernet networks. This includes;

1) Installation and configuration of the ResourceXpress Qubi 3 PC Setup application for configuration of the Qubi 3C device.

2) Configuration of the Connect adaptor to provide Enterprise (802.1x) Wi-Fi and LAN (POE 802.3af) connectivity.

This guide reflects use of the 202x.x server series for both on-premise and cloud based sites. If server is a prior version i.e. 4.9x please contact the Helpdesk for a previous version of this guide.

Pre-requisites

- ResourceXpress on-premise or SaaS hosted server (minimum version 2022.2) with either a Workspace or Huddlespace resource license for each Qubi 3C device.
- 802.3af POE ethernet port or WPA2 PSK or Enterprise WiFi service.
- If using WiFi local USB2 5V outlet.
- Windows 10 or above PC for installation of Qubi 3 PC Setup application

Note : The input voltage to the equipment should be within the ratings of ES1 for 62368-1 and SELV for 60950-1. The power rating of the input voltage should be within PS1 ratings for 62368-1 and LPS for 60950-1.

Package Contents

- Qubi 3C workspace management device (RFID v1, v2, v3 or v4 versions – see RFID specification table below)
- Mounting plate and 2 fixing screws
- Hex screwdriver for fixing screws (1 per shipment)
- Optional adhesive pad for glass mounting (available on request)
- Qubi 3 Connect adaptor (factory paired to Qubi 3C)
- 1 metre black micro USB cable for 5V power connection to Connect adaptor (if not using POE ethernet power)
- 1.8 metre white micro USB cable for inter-connecting Qubi 3C and Connect adaptor (see later restrictions on co-location of devices).
- Optional USB serial cable for configuration of Connect adaptor (part number cable-connect-usbserial1). Minimum 1 per site recommended.

Qubi 3C

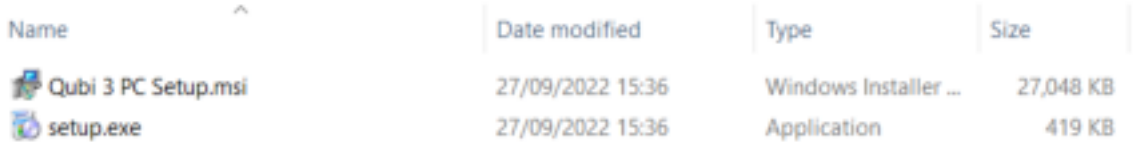
Qubi 3 Connect adaptor

Qubi 3C RFID Versions	RFID Specification	Qubi 3C Device Label
V1	Basic HF e.g. Mifare	
V2	LF e.g HID Prox	
V3	Advanced HF e.g. Mifare, HID iClass, SEOS etc	
V4	Dual V2 and V3 LF/HF mode	

Setup 1 - Installing PC Setup Application

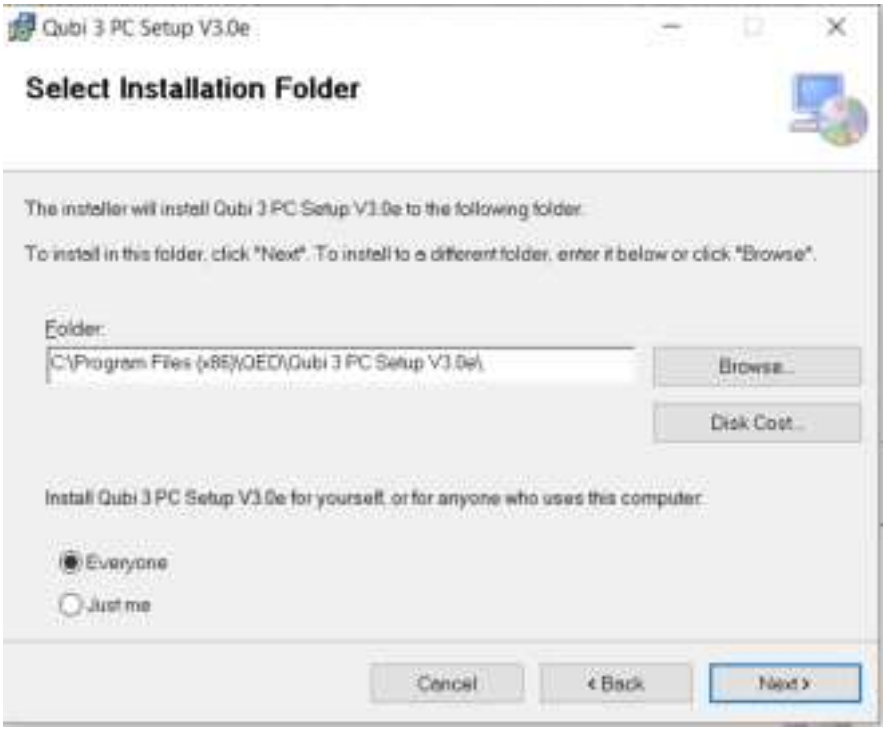
Download the latest version of the Qubi 3 PC Config application kit from the supplied link. Screen shots refer to installing version v3.0e but later versions are similar.

Once you have downloaded the Zip file extract the 2 files and run Setup.exe

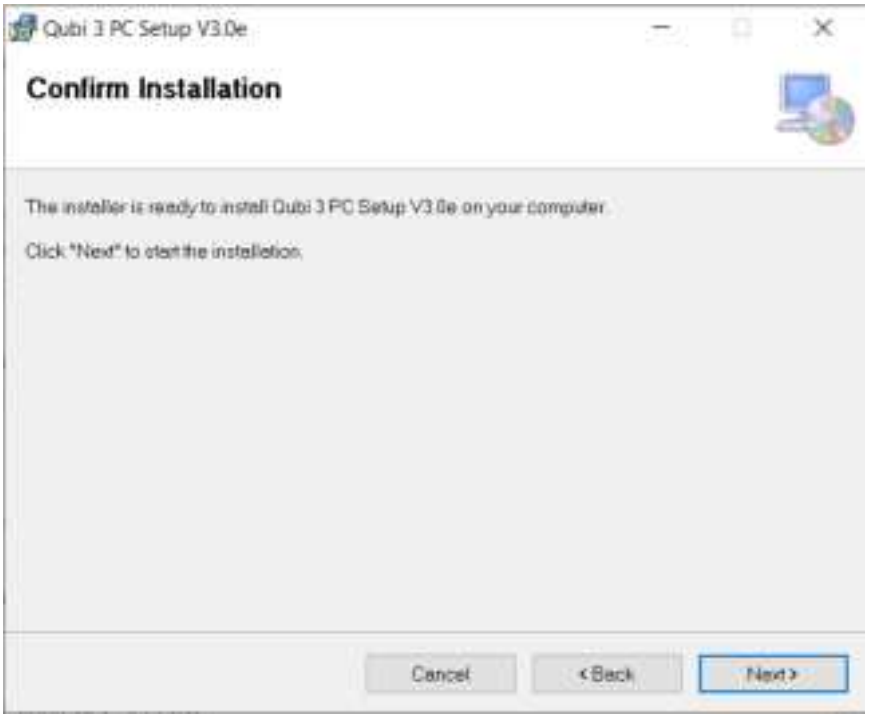


Click Next to start the install

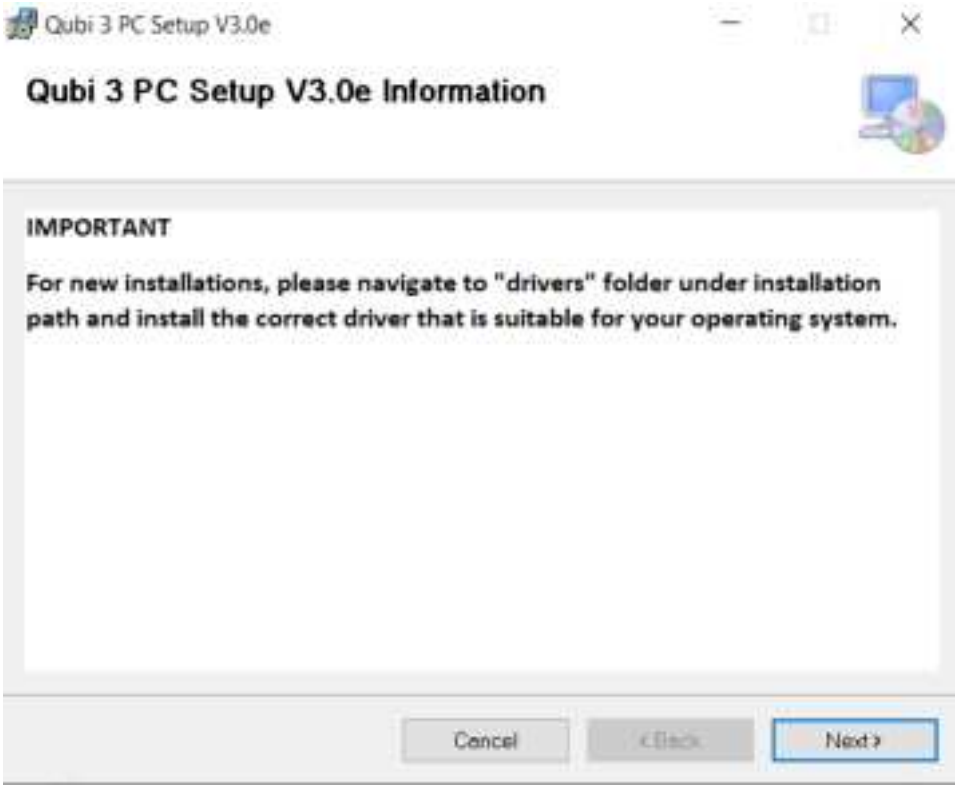
Click Next to accept defaults for installation folder etc



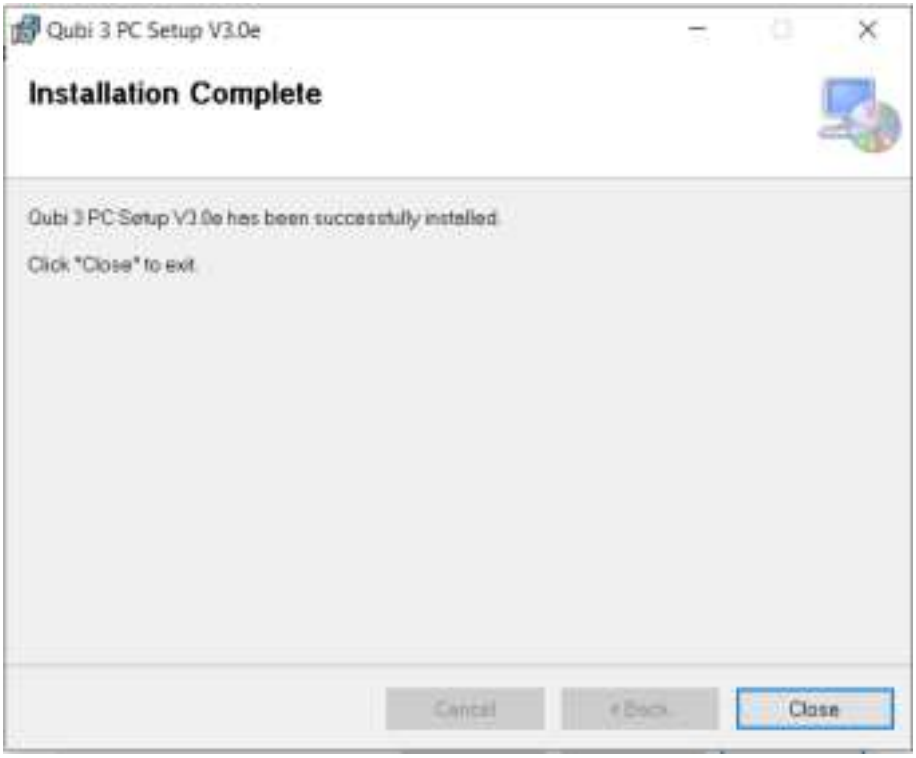
Click Next to begin installation of application.



Installation is a 2 step process so the next screen is a reminder that after the application installation completes it's necessary to install the USB Virtual Com Port drivers manually (unless this is a version update and drivers have been previously installed).



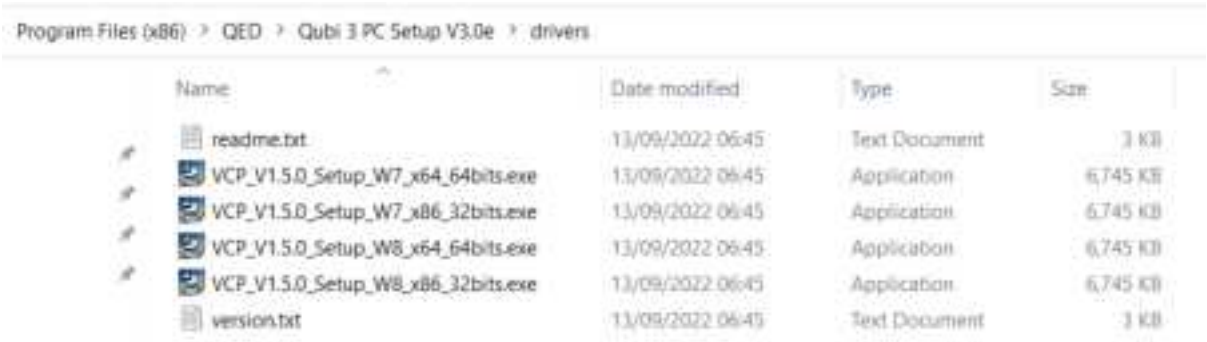
Successful installation of the application.



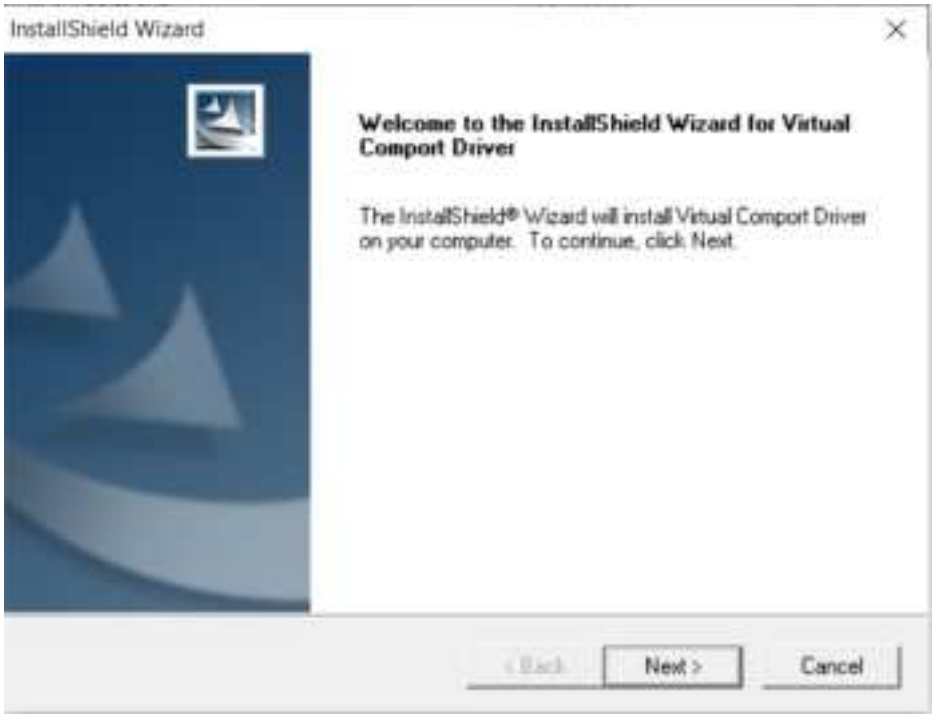
To install the USB Virtual Com Port drivers navigate to the drivers directory under application installation folder as shown below and install the required drivers as required from the table below;

Windows 10 - use Microsoft preinstalled driver - Do not use package installer	
Windows 11	VCP_V1.5.0_Setup_W8_x64_64bits.exe

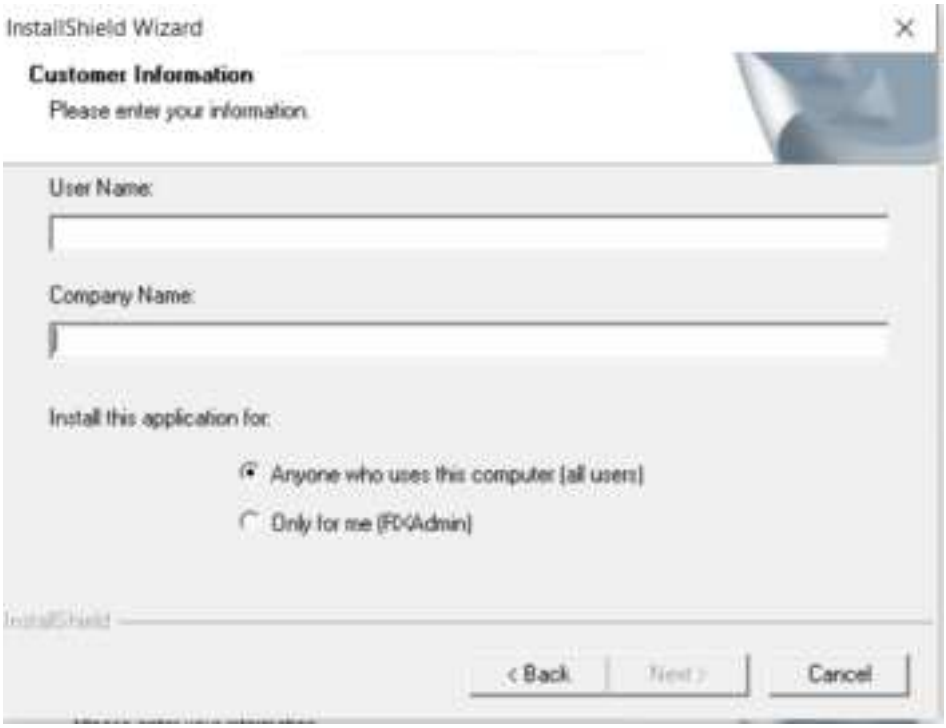
More info about supported OS can be found in version.txt located in installed folder \QED\Qubi 3 PC Setup V3.0e\drivers.



Click next to start installation.



Enter User Name and Company Name then Next to continue with driver installation.



Click next to accept default installation folder.

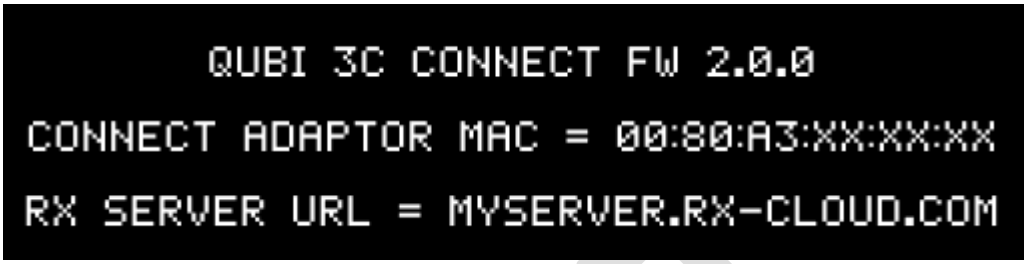
Click Next to continue

Successful driver installation.

Setup 2 - Qubi 3C Configuration

Using supplied micro USB cable connect Qubi 3C device to PC.

Ensure device powers up with a similar screen as shown below. Firmware version should be 2.0.0 or later



Launch the previously installed Qubi 3 PC Setup application on the PC.

Using Windows 8 compatibility mode is recommended if there are issues in launching the app in Windows 11.

Select the correct Com Port for the device (use Com Port Refresh button if necessary).

If no COM ports are available ensure that the previous USB driver install process on page 7 has been completed.

Network Connection

Use Qubi 3 Connect ? - Ensure this setting is selected (factory setting)

Active MAC Address – Factory set to match Connect adaptor Ethernet port (eth0). If planning to use WiFi update with wlan0 MAC address from label on rear of Connect adaptor.

ResourceXpress Server

RX Server URL – Enter the FQDN for the ResourceXpress server e.g. server.rx-cloud.com or the server IP address e.g. 10.1.0.45

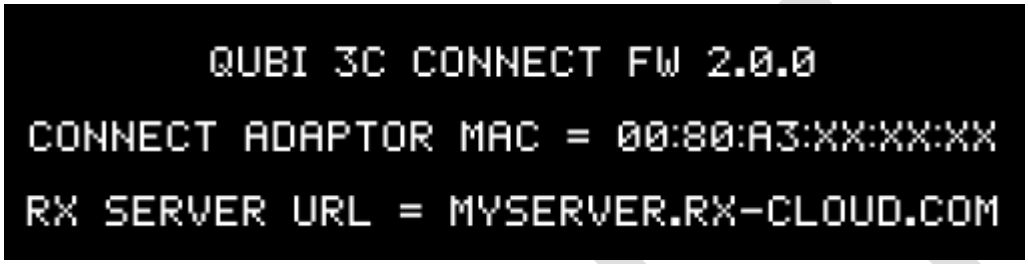
DO NOT PREFIX SERVER WITH HTTP OR HTTPS

RFID

This is a factory setting and should match the RFID version label on the rear of the Qubi 3C and should not be changed unless under guidance from the QED helpdesk.

When all settings are complete use Push Config To Qubi button to update Qubi which will reboot.

Ensure boot screen reflects any changes made for MAC address or RX Server URL.



Next step is to configure the Connect adaptor to use either an Ethernet (factory default) or a WiFi connection.

Setup 3 - Connect Adapter Configuration

The adaptor is based on the tried and trusted xPico IOT technology from Lantronix to provide secure Ethernet or WiFi connectivity to corporate networks.

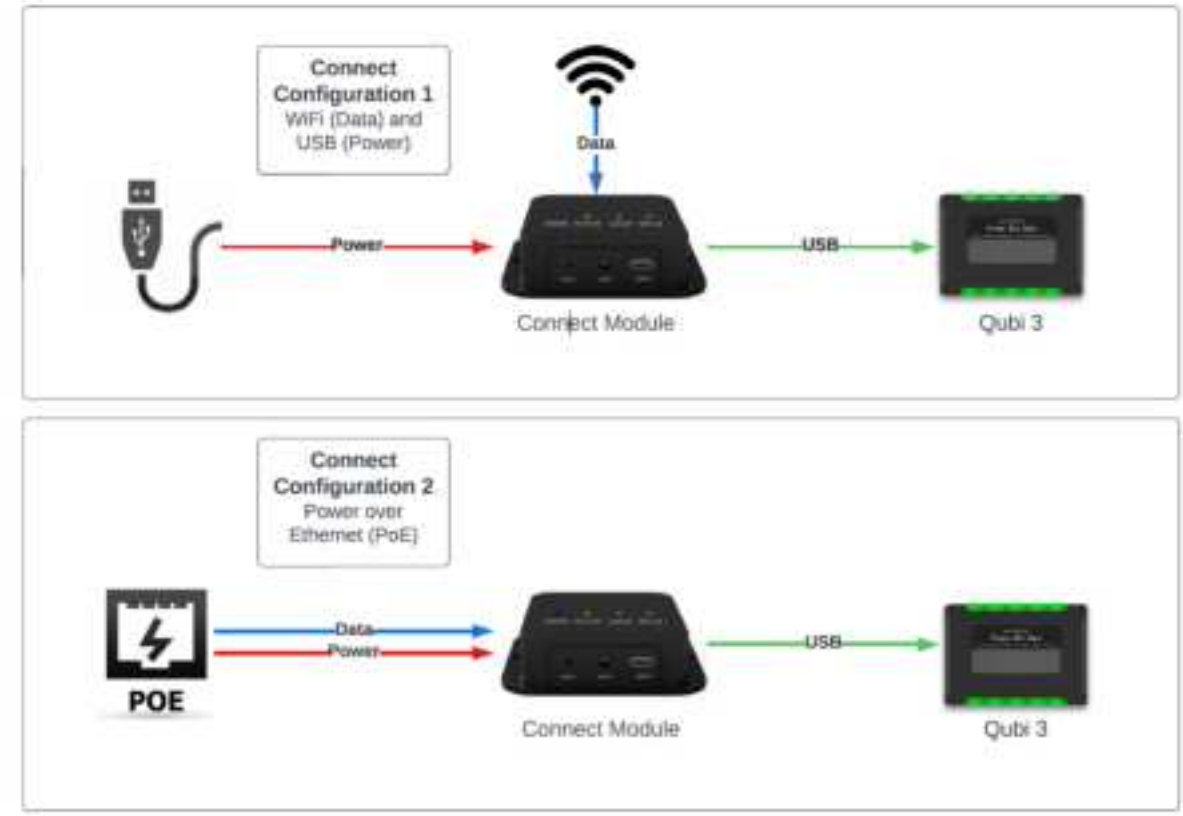
The basic configuration for operation with Qubi 3C is pre-configured in the factory and the only on-site configuration required is to choose either Wi-Fi or Ethernet (factory default), configuring the RX server URL (to match Qubi 3C setting), configuring a WiFi connection and setting up the credentials for 802.1x authentication e.g. EAP-TLS.

	power select	5V in	reset
Ethernet RJ45 10/100 Port (POE 802.3af)	2-way power select link; Left = POE 802.3af power (factory default) Right = 5v in (USB power)	Micro USB port for 5V power in (power select link right)	Click to reset device

default	serial	qubi 3
Click and press for 6 seconds to recover device to factory settings. See Appendix F for procedure.	Serial jack port for use with serial to USB configuration cable	USB port for cable to Qubi 3C

Depending on whether using a WiFi or Ethernet network, either provide power to Connect adaptor via **5V in** port (1m black cable) or POE 802.3af power to Ethernet port using a network cable (not supplied).

Pass through power and data to Qubi 3 is via 1.8m white USB cable from Connect **qubi 3** port to micro USB on rear of Qubi 3C device.

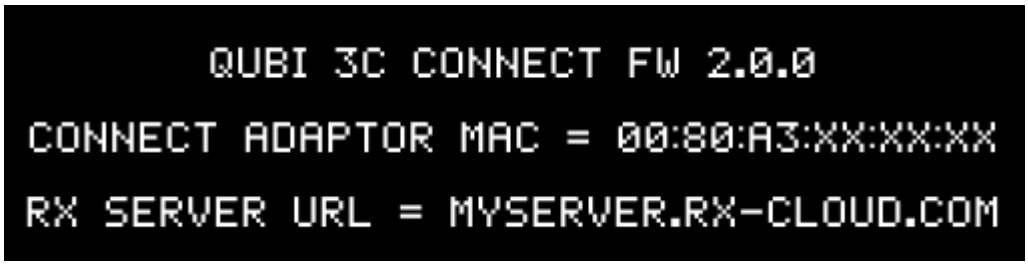


Note: If using ethernet without POE it's possible to provide power via USB (5v in port)

Ensure Qubi 3C and Connect adaptor are powered up and check LED status as per table below.

Connect Adaptor LED's			
Power	**System**	**WiFi Active**	**LAN Active**
Steady Blue LED indicates device power on	Steady Amber indicates xPico normal status	Steady Green if Wi-Fi profile has made a successful connection.	Steady Green if ethernet port has made a successful network link (RJ45 activity and link led's also on).

Qubi 3C should display boot screen as example below and cycling Blue LED's.



There are several methods to configure the Connect adaptor either locally (per device) or central batch management options.

Web Manager – The adaptors can be supplied with a local WiFi access point (ap0) and HTTP server enabled to allow configuration using the in-built web manager client (factory default is ap0 disabled). Alternatively the HTTP server can also be accessed via the ethernet port rather than using the WiFi access point.

Command Line Interpreter (CLI) – Using the optional USB to serial configuration cable and a serial emulator application such as Teraterm configuration settings updated either individually using a Command Line menu or a quicker method is to upload pre-prepared XML configuration scripts.

Lantronix Provisioning Manager (LPM) – This is an on-premise xPico device management tool available from Lantronix which provides a batch configuration and management capability. It provides the capability for uploading new firmware images, pushing out XML configuration scripts and to reboot Connect adaptors.

Lantronix ConsoleFlow – Cloud based xPico device management tool available from Lantronix with provides similar capabilities to LPM. Details on request.

Web Manager Configuration Method

This uses a built HTTP server to provide a menu driven configuration utility that can be accessed via a Wi-Fi access point (ap0) or via the ethernet network (eth0). The factory default is to disable both the HTTP server and the ap0 access point but on request these two options can be enabled before shipment.

To use the ap0 service browse the Wi-Fi networks and one or more Connect adaptors will list their SSID's here i.e. xPico240_XXXXXX where XXXXXX is device serial number.

Click on Connect and passkey is **password**

Once connected browse to 192.168.0.1 and enter login credentials;

Username = admin

Password = password

Alternatively to access the device over the ethernet network (assuming the device IP address is known) enter IP address in browser.

If issues are experienced with loading Web Manager pages see Appendix G on Known Issues and Limitations below.

Web Manager will display the following configuration menu and current status page.

The following menu sections are only relevant to using the Connect device with Qubi 3C and ResourceXpress. Other sections should be edited with caution and if in doubt contact ResourceXpress for advice at helpdesk@qedas.com

Line - Used to disable CLI on serial port (other settings here are factory configured)

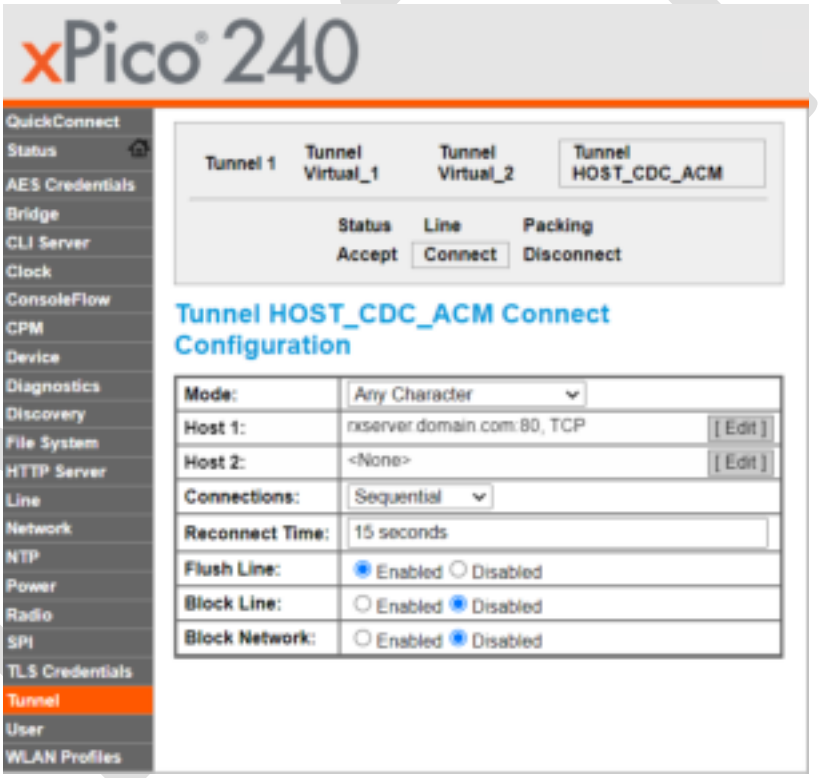
QuickConnect – Creation of Wi-Fi profile.

Network - Configuration for SoftAP (ap0), Wi-Fi (wlan0) and Ethernet (eth0) networks.

Radio - Configuration of Wi-Fi services.

Tunnel - configures USB tunnel (HOST_CDC_ACM) connection to RX server, port, protocol and credentials.

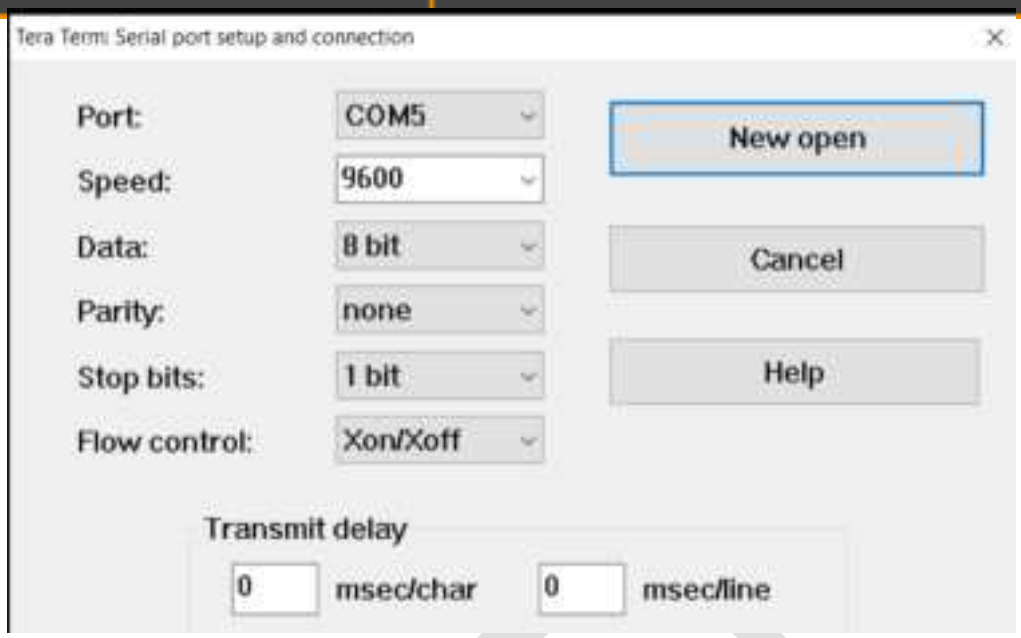
TLS Credentials - Creation of TLS credentials for SSL and 802.1x connections (recommendation is to use CLI and load these as XML files via laptop, serial cable and serial emulator (Teraterm or Realterm) – see CLI Configuration section.



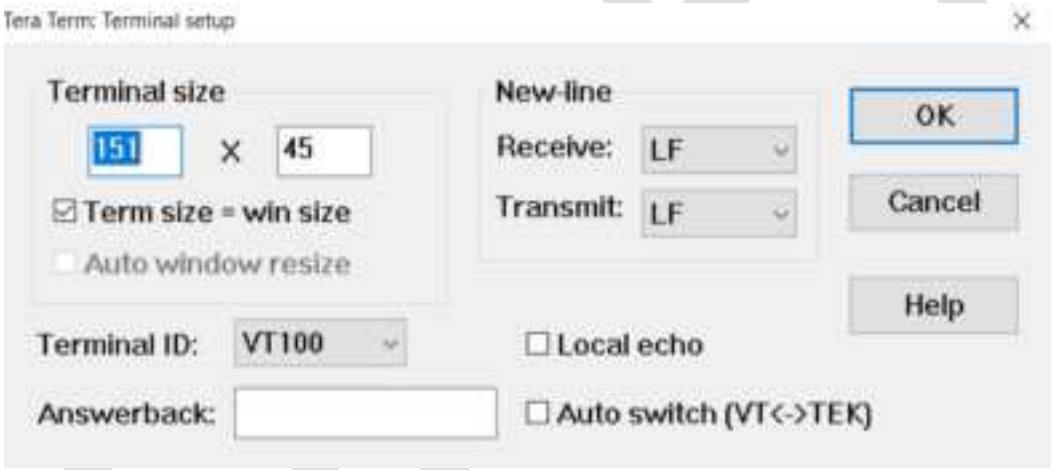
Command Line Interpreter (CLI) Configuration Method

This is a per device configuration option that requires the optional USB to serial configuration cable (part number cable-connect-usbserial1) and a laptop with a serial emulator such as Teraterm or Realterm. Example below is for Teraterm.

Set baud rate on serial terminal application to 9600, 8, none, 1 and XON/XOFF flow control as show below.



Also set both New-Line Receive and Transmit to LF (formats XML certificate file export correctly)



Press return and screen should show a **>** prompt.

Enter **?** for list of all options.

Enter **config** then **?** to list all configuration options. See image below

```
>?
config                                  documentation
file system                             help
status                                  tlog
wlan scan [network-name]                xml
exit

>config

config>?
exit                                    wlan apply
wlan connect [network-name]             wlan scan [network-name]
write                                   Access Point
Clock                                   CPM
Ethernet                                HTTP Server
Interface <instance>                    Line <instance>
Power                                   Radio
SPI                                     User <instance>
WLAN Profile <instance>                 AES Credential <instance>
Bridge                                  CLI Server
ConsoleFlow                             Discovery <instance>
NTP                                     TLS Credential <instance>
Tunnel <instance>                       USB Host
Custom <instance>

config>
```

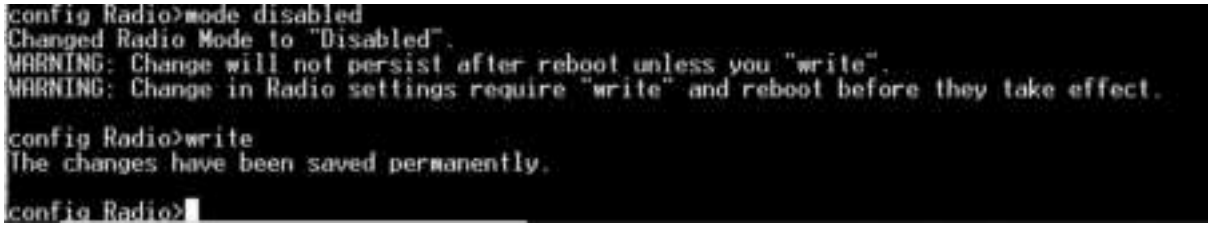
These are similar to menu options using web manager and the precise syntax or range of values can be displayed using the command followed by a * e.g. config>radio>mode*

```
config Radio>exit

config>radio

config Radio>?
show                                    write
exit                                    Mode <value>
Band <value>                            Keep Alive <value>
Max Volley Delay <value>                TX Power Maximum <value>
Log <value>                             Event Log <value>
Roaming                                 Scanning

config Radio>mode <value>

  Mode may be "Disabled", "Enabled", "Triggered" or "Initial Delay".

  "Disabled" holds the Radio in low power.

  "Enabled" allows the Radio to operate.

  "Triggered" waits for CPM Role "Radio Trigger" to become active. Then the
Radio stays up indefinitely.

  NOTE: If Radio is disabled or not yet triggered, this inhibits both ap0 and
wlan0 from operating.
```

Command to disable Radio is;

Config>radio>**mode disabled**

Config>radio>**write**



Exit to return to previous level

For full details on the xPico CLI see these links;

https://docs.lantronix.com/products/xpico-200/ug/4.2/config-setup/#command-line-interface-cli

https://docs.lantronix.com/products/xpico-200/ug/4.2/cli-ref/#cli-reference

The recommendation is to use the CLI for the following cases;

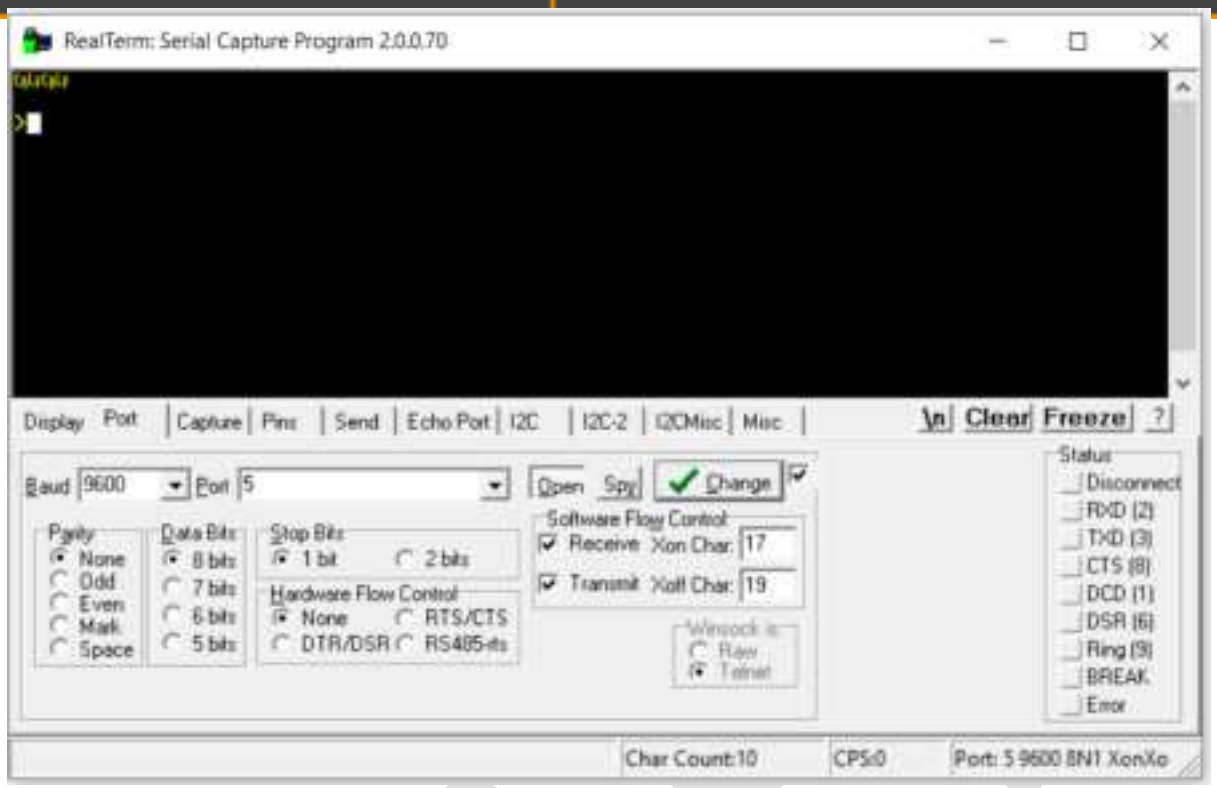
a) To paste in master XML configuration script files prepared using Web Manager to enter and check configuration options (can also be done using LPM central management utility).
b) To paste in master credential XML files prepared manually - this is always an easier method than using Web Manager but again can be done using LPM. The ResoureXpress helpdesk team can supply template files for this purpose.
c) To recover from inadvertently disabling all other configuration options e.g. after a device security hardening process and using the Boot to CLI procedure.

Once a configuration has been prepared and tested using Web Manager the CLI can be used to output a master XML file for the configured options to roll out to other devices either using the CLI or LPM method.

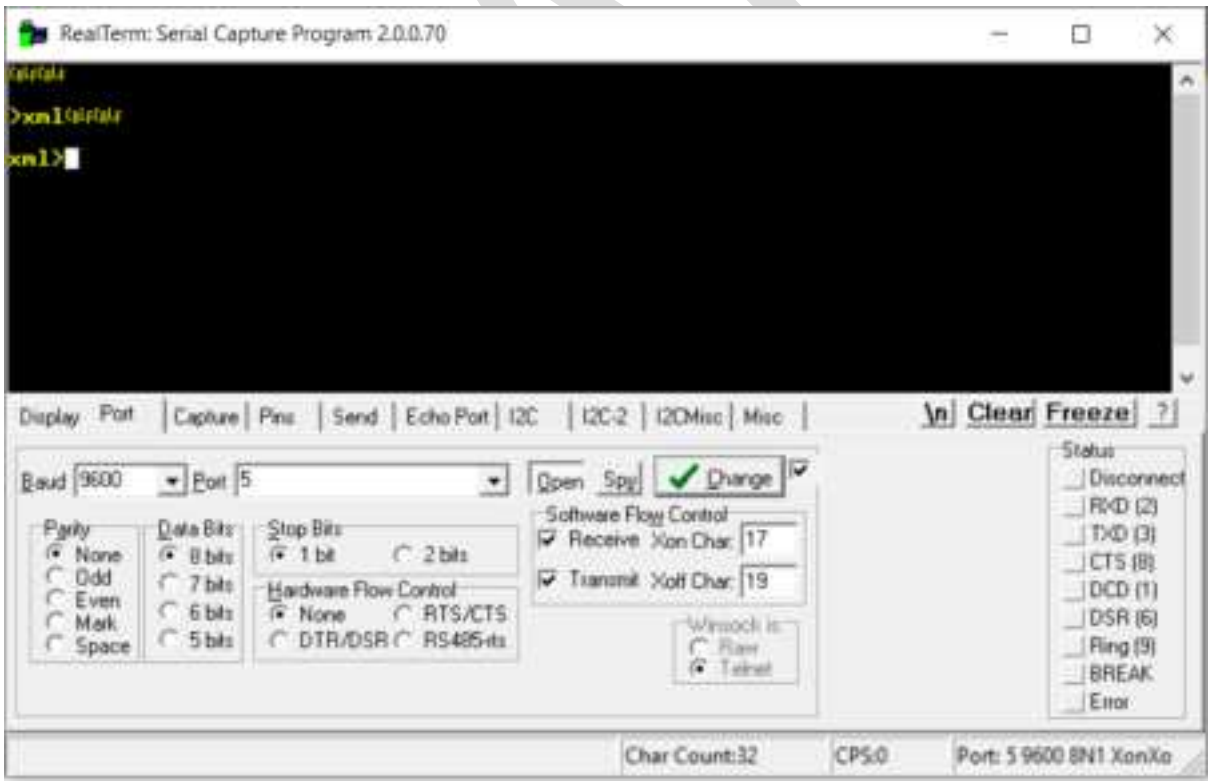
To output XML settings use **XML>XCR SETTINGS**

Depending on the size of the files the recommended tool for this is RealTerm rather than Teraterm as it can handle sending files direct to device rather than a copy-paste method. It is available as a free download from SourceForge.

Using same serial cable and settings as per TeraTerm;

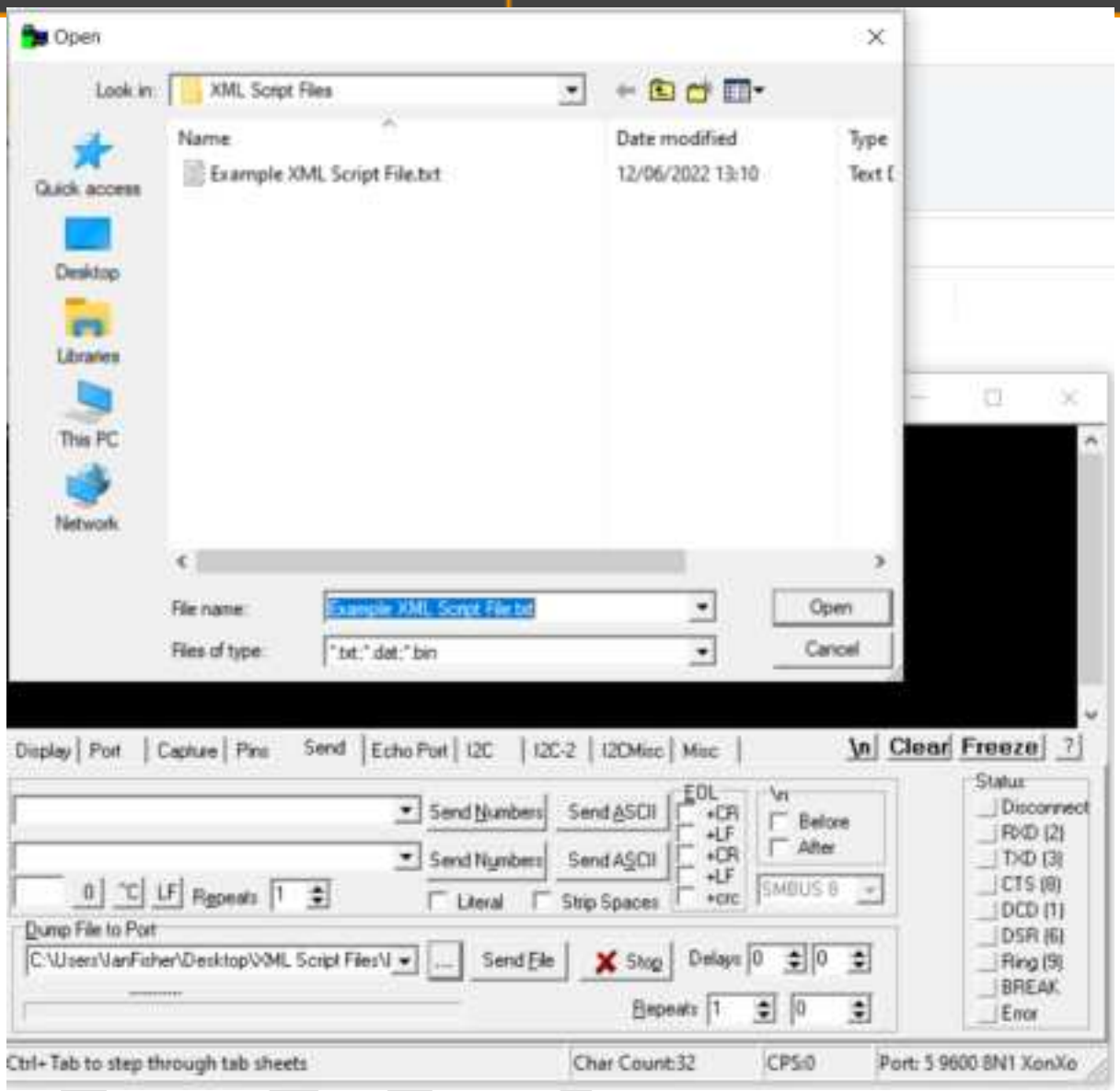


Enter **XML** at > prompt



Select **Send** tab and choose XML script file using … alongside **Dump File to Port**

Note: XML Exports do not export either passwords or private keys so these would need to be added to XML file manually.



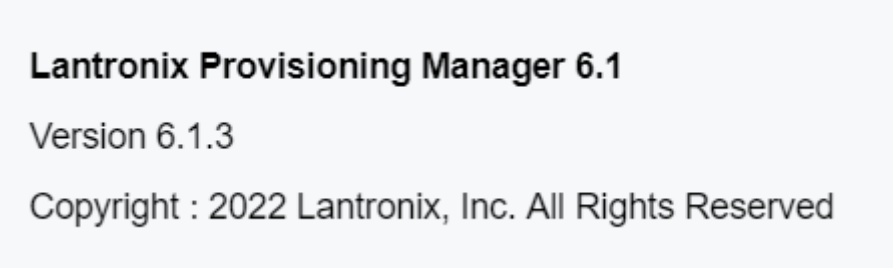
Press **Send File**

Depending on the size of the script file the device will parse the file and should complete within a few minutes with no errors.

Lantronix Provisioning Manager Configuration Method

LPM is an optional software tool for the Lantronix xPico modules that can provide a batch configuration and management capability for the Connect adaptor. It provides the capability for uploading new firmware images, pushing out XML configuration scripts and to reboot devices.

The current version supported for use with Connect adaptor is 6.1.3. For later version compatibility please check with the QED helpdesk.

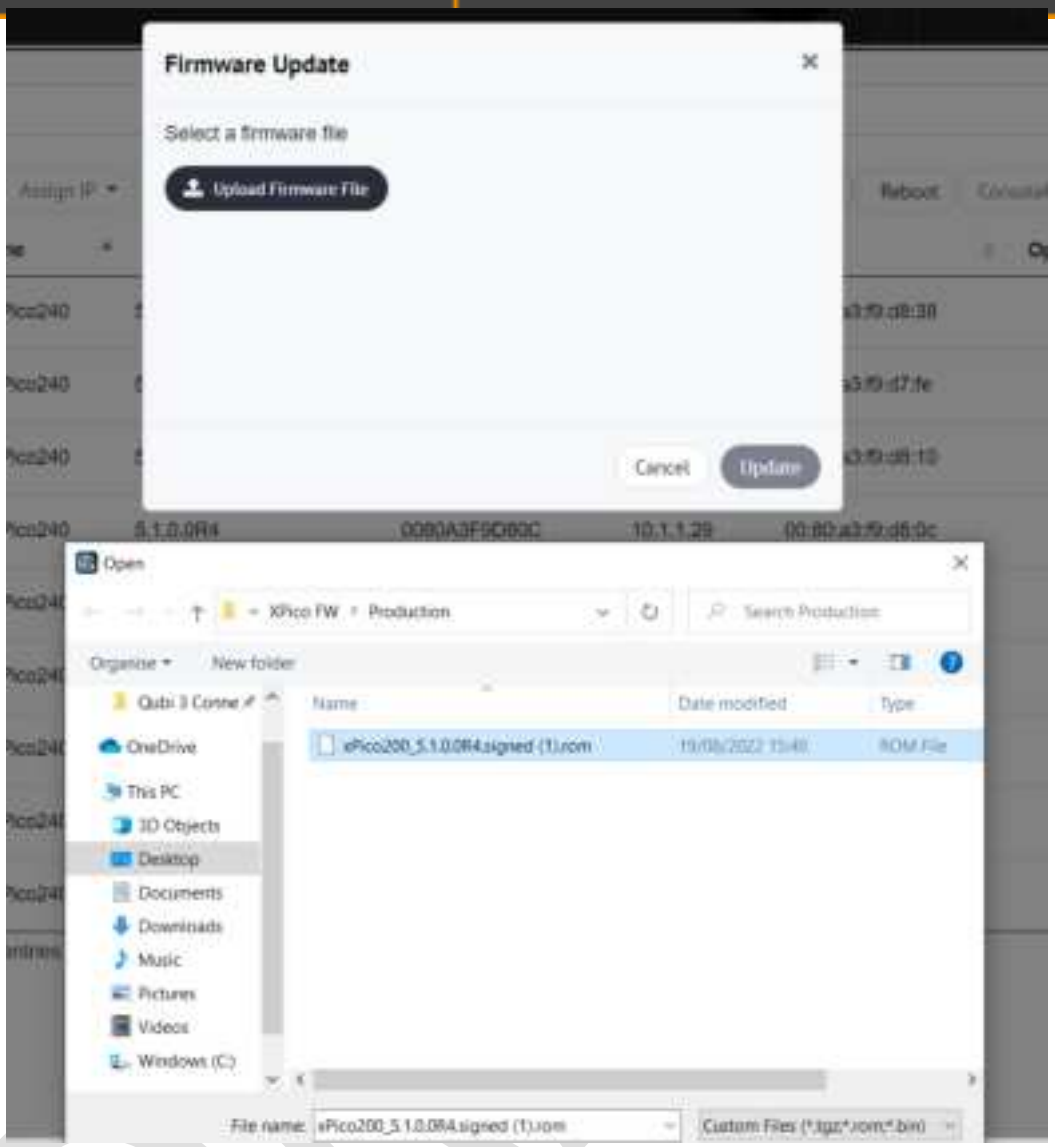


a) Updating xPic0 Firmware Image

The current xPico240 version shipped from the QED factory is 5.1.0.0R4 (Jan 26 2022 - 13:32:49) and this should not be changed without confirmation from the helpdesk that a newer version is supported.

Select one or more devices to be updated and then use the Update – Firmware menu option.

Select the firmware file to be uploaded from Windows Explorer and then use Update button.



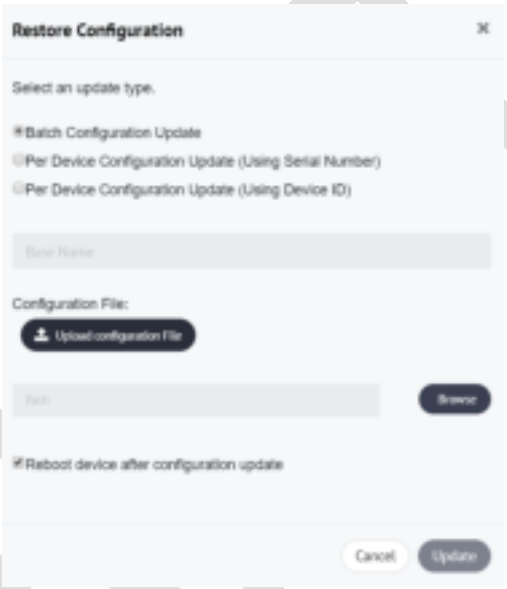
The firmware file will be queued and pushed to the device(s) followed by a reboot after which the Operation Status should show Firmware Update Successful and the Firmware Version will display the new version.

b) XML Batch Configuration

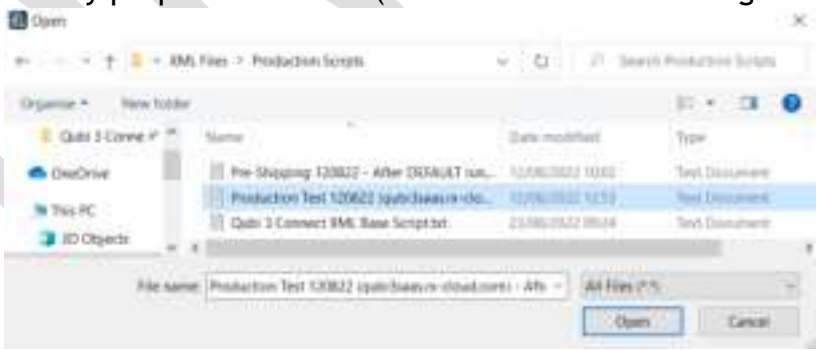
Once a master configuration has been tested the CLI XML option (see previous section) can be used to dump the XML settings (XML>XCR SETTINGS). These settings should be copied and pasted into a Notepad text file and saved to the PC. Recommendation is to check the XML file works correctly with another device using CLI method before using in batch mode with LPM.

To update one or more device first select the required devices and then use menu option Update – Configuration.

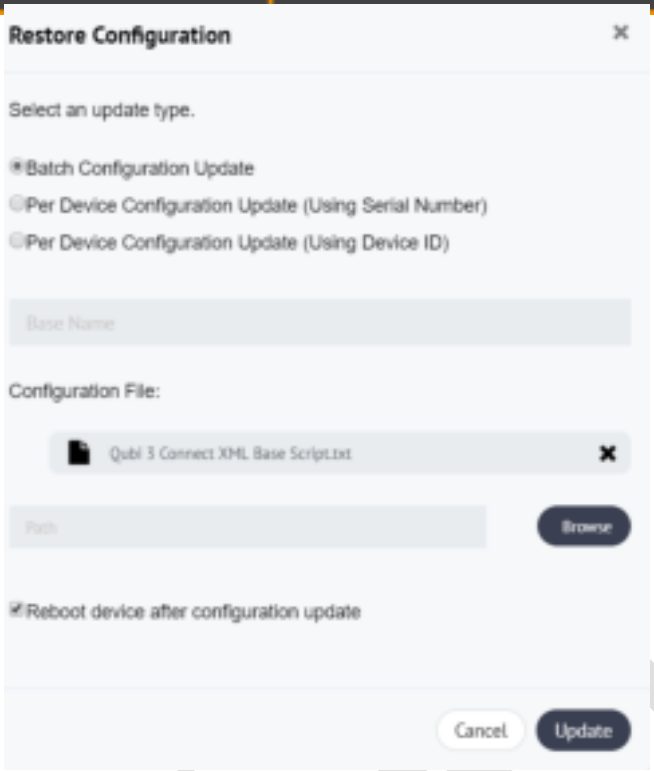
Click on Upload Configuration File



Select previously prepared XML file (if a Text Document change to All Files)



Click on Update to start process.



Configuration will be pushed to device and will reboot with new configuration once completed.

Note: LPM requires the xPico Discovery feature to be enabled on the device which can be enabled for ap0, eth0 and wlan0. We recommend only enabling either eth0 or wlan0 as otherwise the device reports with two different IP's to LPM and if both are selected for actions such as firmware or XML updates it will fail.

This feature can be accessed using the web manager menu or via CLI as follows;

```
<configgroup name = "Discovery" instance = "ap0">
    <configitem name = "Query Port">
      <value name = "State">Disabled</value>
    </configitem>
  </configgroup>
  <configgroup name = "Discovery" instance = "eth0">
    <configitem name = "Query Port">
      <value name = "State">Disabled</value>
    </configitem>
  </configgroup>
  <configgroup name = "Discovery" instance = "wlan0">
    <configitem name = "Query Port">
      <value name = "State">Enabled</value>
    </configitem>
  </configgroup>
```

For more information - https://docs.lantronix.com/products/lpm/6.x/

Setup 4 - Registration on Server

After configuration is complete power reset both devices (or a remote reset via LPM) and if the Qubi 3C has not been registered to a workspace profile Blue LED's will continue to cycle and the device will display an 'Unregistered device' message.

This indicates a successful network connection and response from the configured ResourceXpress server but the configured MAC address is unknown.

It will then be necessary to register the device on the server using the servers' admin panel with one of the following two methods. Both methods assume that Qubi type resource profiles are already available on the server.

All screenshots refer to the 2021.x onward ResourceXpress on-premise and cloud server versions (for previous 4.x server versions see the relevant guides available from QED helpdesk).

Method 1 – Editing Server Resource Profile to manually add MAC address.
Find the workspace resource profile to be assigned from the Resource Profiles list on the server.

Enter MAC address from Qubi 3C display into the MAC address field in the Qubi Settings tab (format xx-xx-xx-xx-xx-xx) and scroll down to the save button.

Method 2 – Using Unregistered Devices option in Reporting Module.

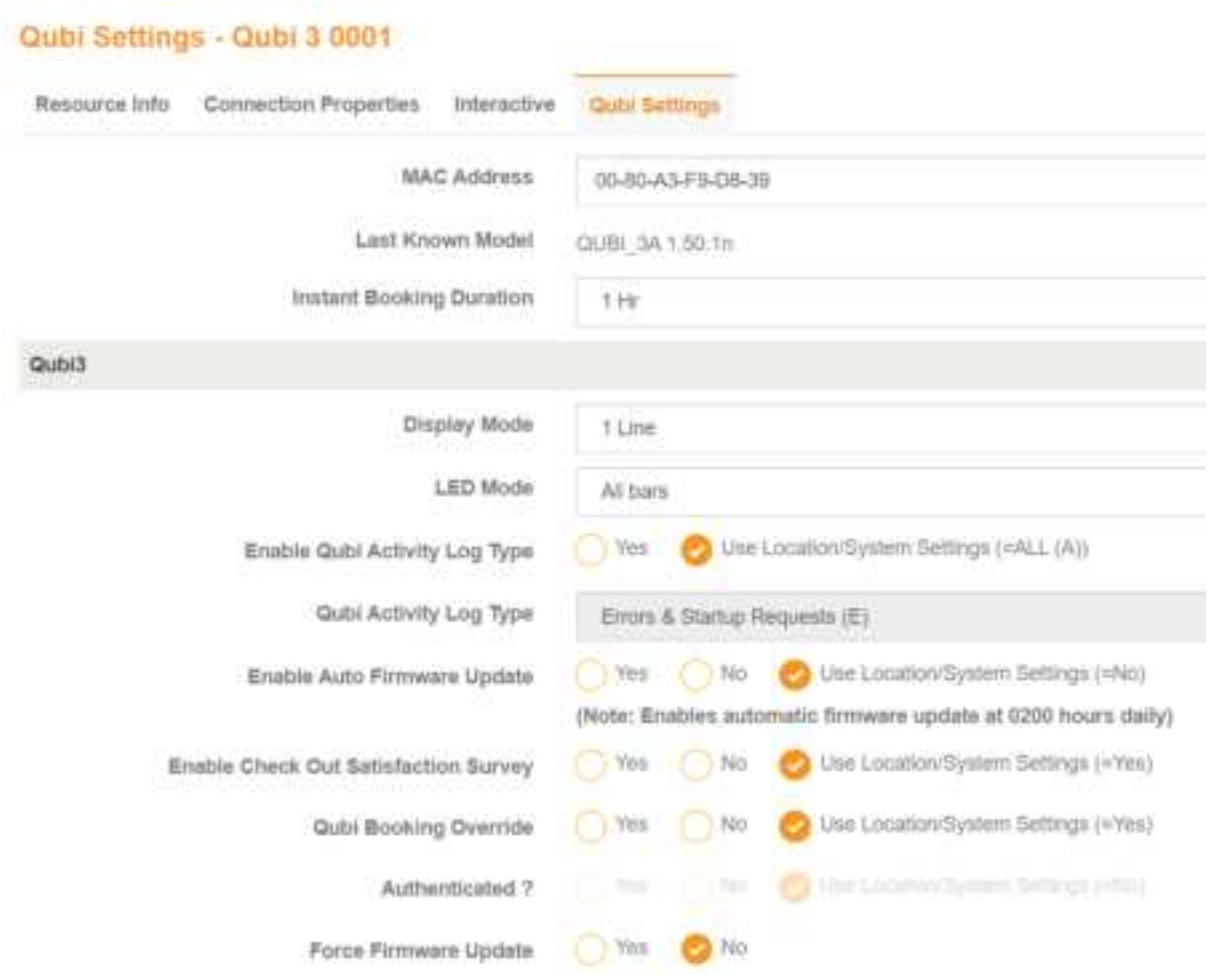
Find the correct device by MAC address and click on the register button, select the correct profile from the list and click on Select to register it. Repeat for other devices as required.

For both methods the device will now connect to this profile using it's MAC address and within 60 seconds update the LED's to Green, Red or Amber according to the current status of the workspace.

To de-assign a device from a profile simply delete the MAC address in the profile and Save. The profile will now be available to be re-assigned.

Note: Multi-event display mode requires a Huddlespace type licence.

Appendix A – Resource Profile (Qubi Settings)



MAC Address
See device registration section above.

Last Known Model
Qubi 3 passes this information to the server on every boot up.

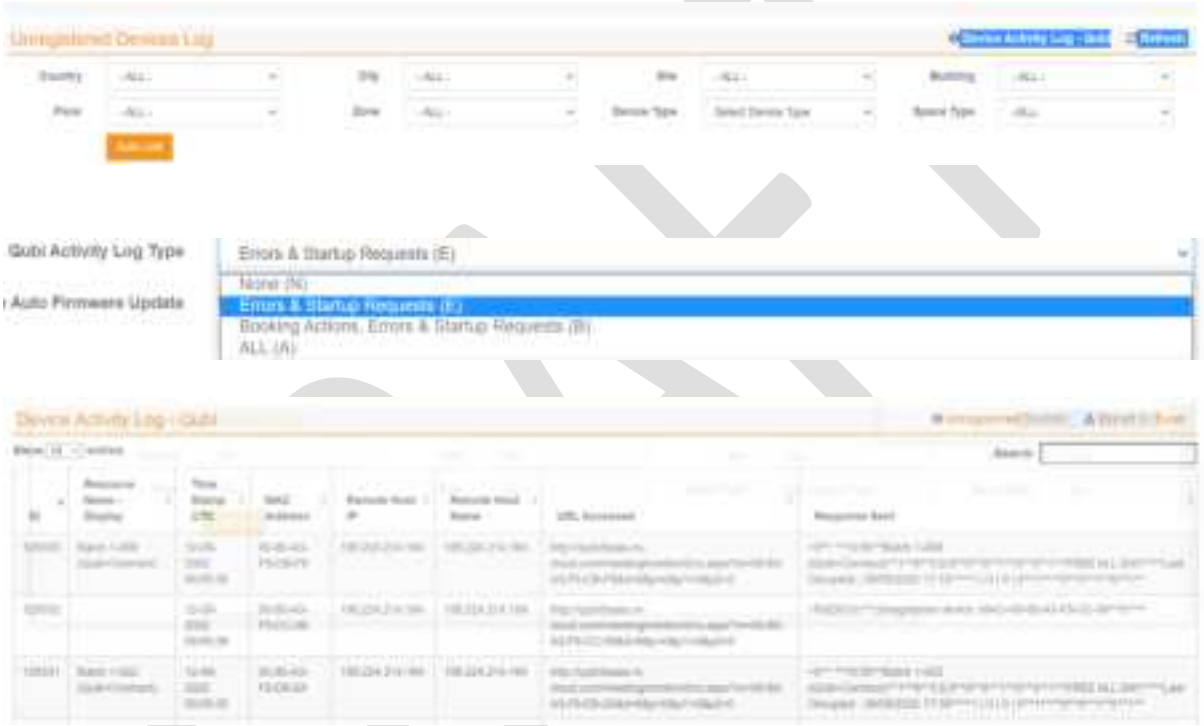
Instant Booking Duration
This is the instant booking duration if no booking period has been selected using the Qubi 3 touch keys (Default is 1 hour).
The list of available booking options is as per the list in System Settings - Space Settings – Booking Options.

Display Mode
Configures display mode of Qubi 3 to show either 1 line of booking information e.g. space booker name for a desk or 2 lines with Now and Next session information more applicable to multi-attendee use e.g. Huddlespace or Meeting Room.

2 line display mode requires a Huddlespace licence.

LED Mode
Enables different combinations of LED bars to be selected to suit location and use of device.

Enable Qubi Activity Log (*)
There is a Qubi Device Activity log in the Reporting Module – Unregistered Devices – Device Activity Log which can be used to track Qubi 3 connections to the server. This includes start-up requests (device boots), Errors, Booking Actions and Errors.



In normal operation it is recommended to use System Setting = Errors and Startup Requests (E) only but for diagnosing booking, card code or connection issues each profile can be set to the required diagnostic level.

It isn't recommended to use System Setting = ALL (A) as this causes log file to quickly fill and may impact server performance.

Enable Auto Firmware Update (*)
Provides per profile setting for overnight (0200) firmware update. Useful for scheduled testing of new firmware on one or more individual devices before enabling overnight firmware update for all devices at 0200.

Force Firmware Update
Force a Firmware Update at next connection (i.e. within 60 seconds). Useful for immediate testing of new firmware on one or more individual devices before enabling

overnight firmware update for all devices at 0200.

Enable Check-Out Satisfaction Survey (*)
This is only applicable to Huddlespace line 2 mode and during check-out prompts the user to rate their overall satisfaction with the workspace which is a useful way to track issues.

Qubi Booking Override
Used to override booking action in Location or System Settings for this workspace. A typical use would be to force authenticated booking at the Qubi itself but not allow booking in other parts of the system e.g. from Kiosk or Maps.

Force Reboot
At next live connection (within 60 seconds) force device to reboot. Only works if Qubi server connection is working!

(*) These settings are available as a System, Location or Profile setting.

Appendix B - System Settings Affecting Qubi 3 Operation

See ResourceXpress System Administration Guide;

https://resourcexpress.atlassian.net/wiki/spaces/RSG/pages/68026369/System+Config+Admin+Guide

Appendix C – Configuration and Demo Modes

To access the configuration and demo mode menu power up the Qubi and touch the left arrow key (<) until the screen displays the first menu option:

VIEW CURRENT CONFIGURATION – Steps through current configuration parameters stored on device.

Using the left and right arrow keys to navigate to the other options.

DEMO MODE – demonstrates use of the device in Room or Desk mode using an RFID card without requiring connection to a server.

FACTORY RESET – Resets the device to factory default i.e. awaiting configuration.

Appendix D – Configuration Guidance for WPA2 Enterprise Wi-Fi and 802.1x Networks

To be added

Appendix E - Device Hardening

The Connect adaptor is normally shipped unhardened for ease of initial configuration but can of course be shipped hardened if required.

Recommendations to consider are;

1) Use Ethernet port connectivity only
2) Disable Radio - disables softAP (ap0) and Wi-Fi (wlan0)
3) Disable HTTP server to fully restrict access to Web Manager via Ethernet
4) Use 802.1x authentication
5) If not using Lantronix Provisioning Manager (LPM) disable Discovery feature on ap0, wlan0 and eth0.
6) Disable CLI on serial port

Note: It is possible to disable all 3 methods of device configuration as there is a special boot to temporary CLI mode use RESET and DEFAULT buttons. This mode reverts CLI to inactive after next boot. Please contact QED helpdesk for more details (helpdesk@qedas.com)

Appendix F - Device Recovery After Factory (Default)

The Qubi 3 Connect adaptor can be reset to a default factory state by pressing and holding the DEFAULT button for 6 seconds until the Amber SYSTEM LED goes off.

This process does require the device to be connected to the Ethernet network as the Wi-Fi (wlan0) details are lost once it is reset.

If a full production XML script is not available it will be necessary to load the following base XML script using CLI (see appendix I) or LPM (see appendix J) to restore the basic settings necessary for operation.

The base XML script has to be run twice as there will be errors on first pass (see CLI XML import example below) but note the device should be reset between passes using reset button or a power cycle. A reset is not necessary for LPM as the device is rebooted at the end of the XML push.

There should be no errors on the second pass.

Example using CLI and Teraterm

```
>
Command Line started.

>xml

xml>Importing XML
Unknown group "Line", instance "HOST_CDC_ACM".
Unknown group "Tunnel Accept", instance "HOST_CDC_ACM".
Unknown group "Tunnel Connect", instance "HOST_CDC_ACM".
XML import completed.

xml>
Command Line started.

>xml

xml>Importing XML
XML import completed.

xml>
Command Line started.
```

Local settings can then be added for network connectivity and the ResourceXpress server (dummy server in script is rxserver.domain.com) as required using Web Manager or CLI.

Once the final settings are configured it is necessary to reset (or power cycle) the device with Qubi 3 connected to ensure the USB connection is established.

Don't forget to ensure Qubi 3 has the same ResourceXpress server configured using the Qubi 3 PC Setup application.

Base XML Script

```
<?xml version="1.0" standalone="yes"?>
<!-- Automatically generated XML -->
<!DOCTYPE configrecord [
  <!ELEMENT configrecord (configgroup+)>
  <!ELEMENT configgroup (configitem+)>
  <!ELEMENT configitem (value+)>
  <!ELEMENT value (#PCDATA)>
  <!ATTLIST configrecord version CDATA #IMPLIED>
  <!ATTLIST configgroup name CDATA #IMPLIED>
  <!ATTLIST configgroup instance CDATA #IMPLIED>
  <!ATTLIST configitem name CDATA #IMPLIED>
  <!ATTLIST configitem instance CDATA #IMPLIED>
  <!ATTLIST value name CDATA #IMPLIED>
]>
<configrecord version = "0.1.0.1">
  <configgroup name = "CPM">
    <configitem name = "Role" instance = "Ethernet Link">
      <value name = "CP">12</value>
      <value name = "State">Enabled</value>
    </configitem>
    <configitem name = "Role" instance = "SPI.CS">
      <value name = "CP">8</value>
    </configitem>
    <configitem name = "Role" instance = "SPI.MISO">
      <value name = "CP">3</value>
    </configitem>
    <configitem name = "Role" instance = "SPI.MOSI">
      <value name = "CP">4</value>
    </configitem>
    <configitem name = "Role" instance = "SPI.SCK">
      <value name = "CP">7</value>
    </configitem>
    <configitem name = "Role" instance = "USB Host Overcurrent">
      <value name = "CP">1</value>
      <value name = "State">Enabled</value>
    </configitem>
    <configitem name = "Role" instance = "WLAN Active">
      <value name = "CP">11</value>
      <value name = "State">Enabled</value>
    </configitem>
  </configgroup>
  <configgroup name = "Interface" instance = "ap0">
    <configitem name = "IP Address">
      <value>192.168.0.1/24</value>
    </configitem>
  </configgroup>
  <configgroup name = "Line" instance = "1">
    <configitem name = "Name">
      <value>RS232 Port</value>
    </configitem>
    <configitem name = "Protocol">
      <value>Command Line</value>
    </configitem>
    <configitem name = "Flow Control">
      <value>Software</value>
```

```
    </configitem>
  </configgroup>
  <configgroup name = "Line" instance = "HOST_CDC_ACM">
    <configitem name = "Name">
      <value>Qubi </value>
    </configitem>
    <configitem name = "Protocol">
      <value>Tunnel</value>
    </configitem>
    <configitem name = "Flow Control">
      <value>Hardware</value>
    </configitem>
  </configgroup>
  <configgroup name = "User" instance = "admin">
    <configitem name = "Password">
      <value>&lt;Configured&gt;</value>
    </configitem>
    <configitem name = "Privilege">
      <value>Admin</value>
    </configitem>
  </configgroup>
  <configgroup name = "Tunnel Accept" instance = "HOST_CDC_ACM">
    <configitem name = "Local Port">
      <value>200</value>
    </configitem>
    <configitem name = "Flush Line">
      <value>Enabled</value>
    </configitem>
  </configgroup>
  <configgroup name = "Tunnel Connect" instance = "HOST_CDC_ACM">
    <configitem name = "Mode">
      <value>Any Character</value>
    </configitem>
    <configitem name = "Host" instance = "1">
      <value name = "Address">rxserver.domain.com</value>
      <value name = "Port">80</value>
    </configitem>
    <configitem name = "Flush Line">
      <value>Enabled</value>
    </configitem>
  </configgroup>
  <configgroup name = "USB Host">
    <configitem name = "State">
      <value>Enabled</value>
    </configitem>
  </configgroup>
</configrecord>
```

Appendix G – Known Limitations and Issues

1. After either a Qubi 3 firmware update or if only the Qubi 3 is disconnected/rebooted the Connect adaptor must be reset or power cycled to re-establish the USB connection. In the case of Qubi firmware updates the recommended method for multiple devices is to use the LPM tool after an overnight firmware download to Qubi.

2. Also after a Qubi 3 firmware upgrade there is a known issue that on reconnection to the Resourcexpress server the new firmware version is not correctly logged in the Qubi profile. This can be fixed with a second reboot of the Qubi from Force Reboot in the Qubi profile(s). This will be fixed in a future server release.

3. It has been observed that some AV tools such as Sophos can cause issues rendering the Web Manager web pages i.e. no stylesheet. The workaround for this is to explicitly list the IP addresses being used e.g. 192.168.0.1 or the device eth0/wlan0 ports as exceptions in the AV tool in use.

4. French language not currently available with this product.

5. If a Connect adaptor is fully factory reset (i.e. pressing Default button for 6 seconds) and then the base XML script is pushed by LPM the Qubi LED's can change to an indeterminate state and do not recover once a good server connection is made. This can be simply resolved by power cycling the Qubi 3 Connect and thus the Qubi 3 itself or by using the Qubi 3 touch keys to change the device state (i.e. to a booked state).

6. Current Qubi 3 firmware upgrade via Connect adaptor to ResourceXpress server does not check if server version differs from current Qubi 3 version so will carry out a firmware replace even if versions match. This will be fixed in a later versions of Resourcexpress server and Qubi software.

Appendix H – FCC Compliance Information

Qubi 3C - FCC ID's 2AB38QUBI3CA and 2AB38QUBI3CB

Qubi3 Connect - Contains FCC ID: R68XPICO200 (see SDOC below)

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2) The transmitter module may not be co-located with any other transmitter or antenna.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

Suppliers Declaration of Conformity

Name and Model: Qubi3 Connect

Modular Component: Lantronix xPico 240 (FCC ID R68XPICO200)

Party Issuing Supplier's Declaration of Conformity

QED Advanced Systems Limited

22 Bridgwater Court

Oldmixon Crescent

Weston-s-Mare

Somerset BS24 9AY

U.K.

Telephone : +44 1934 836960

www.resourcexpress.com

Responsible Party - U.S. Contact Information

ResourceXpress Inc.

Unit i

709 Silver Palm Avenue

Melbourne

Florida 32901

Telephone : +1 201 256 1601

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.