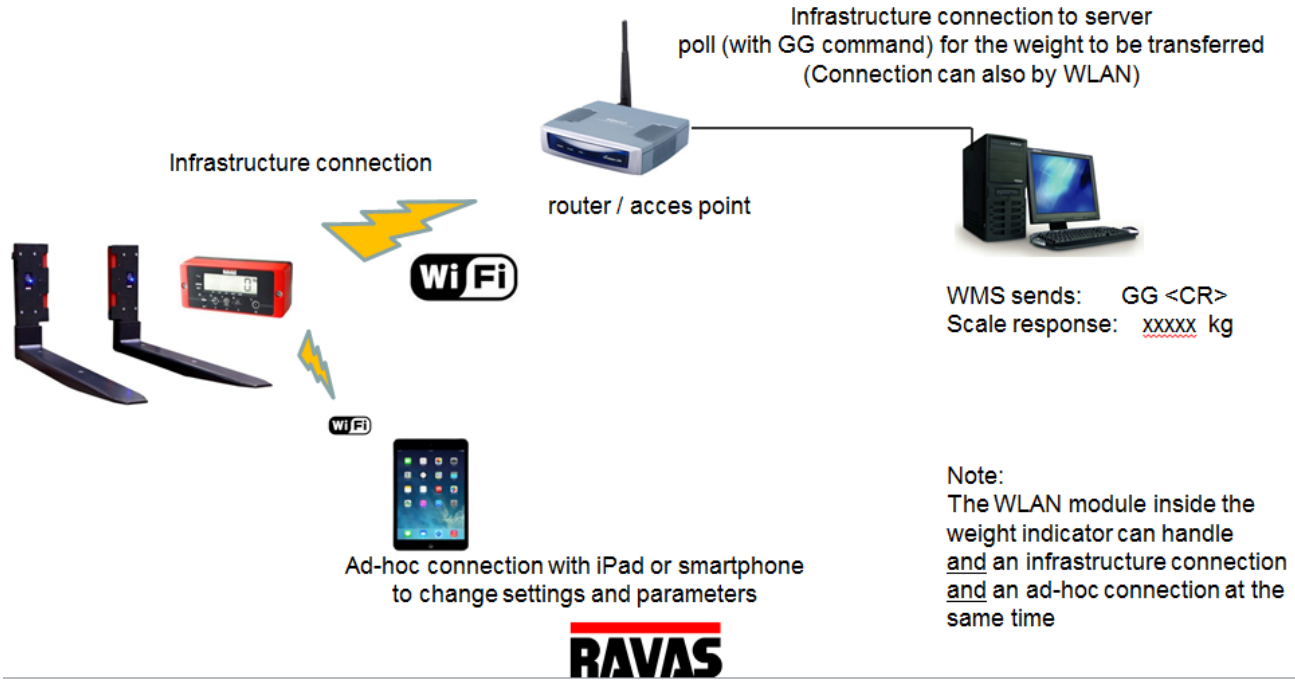
Manual

Xpico WLAN module inside RAVAS indicators

RAVAS indicators can be equipped (option) with a WLAN module – this to respond to IT systems which poll for weight information. The RAVAS indicator will get a dedicated IP address.

A customer has to provide a full WLAN coverage in the warehouse using Access Points.

The operator gives a command to the main application on the server to poll for the weight at a certain RAVAS weight indicator (using GG command) - The weight indicator responds by sending the actual display value.



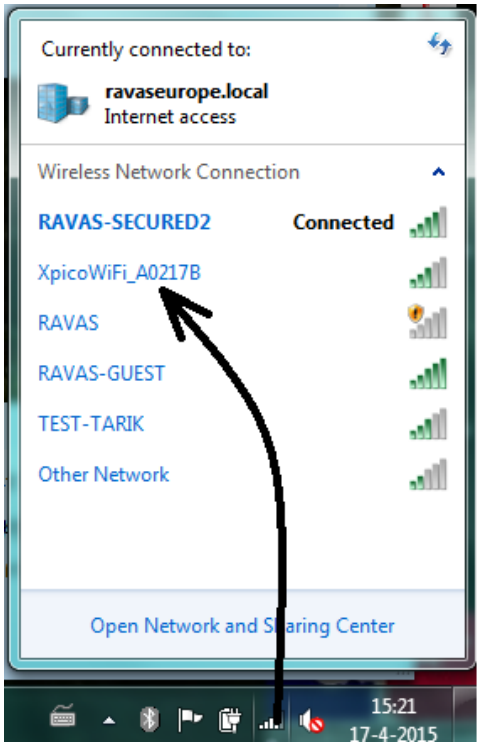
Configuring the WLAN connection with the Xpico using a laptop

Important note:
You will see the name of the Xpico SSID in your list of WLAN signals
There are two models of Xpico

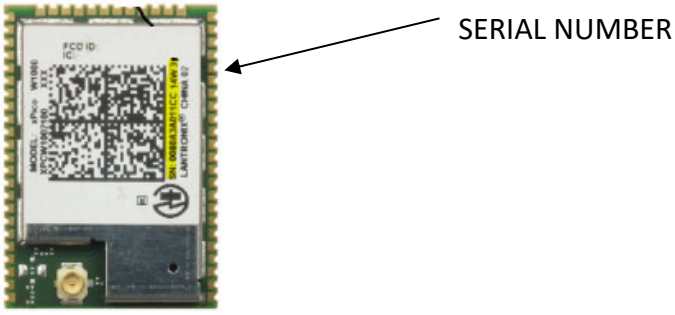
- XpicoWiFi_xxxxxxx
- Xpico240_xxxxxxx

Please make sure you also use the correct manual !!

Step 1: select the WLAN connection manager.



Step 2: connect to the XpicoWiFi_A0217B (last six digits depend on the address of the Xpico installed). By default the SoftAP mode is enabled with a default SSID of XpicoWiFi_xxxxxx. Where xxxxxx are the last six characters of the unique xPico Wi-Fi serial number. This number is available on the module label. For example if the serial number on label were 0080A398010E then the SSID would be XpicoWiFi_98010E.



Step 3: Using the Wi-Fi Connection Manager of your connecting device the above SSID should be presented as an available connection choice. Select the SSID and follow the device connection manager instructions to continue to connect.

The default security for xPico Wi-Fi SoftAP is WPA2 and the passphrase is XPICOWIFI. These defaults can be changed through the configuration web manager after the initial connection has been established.

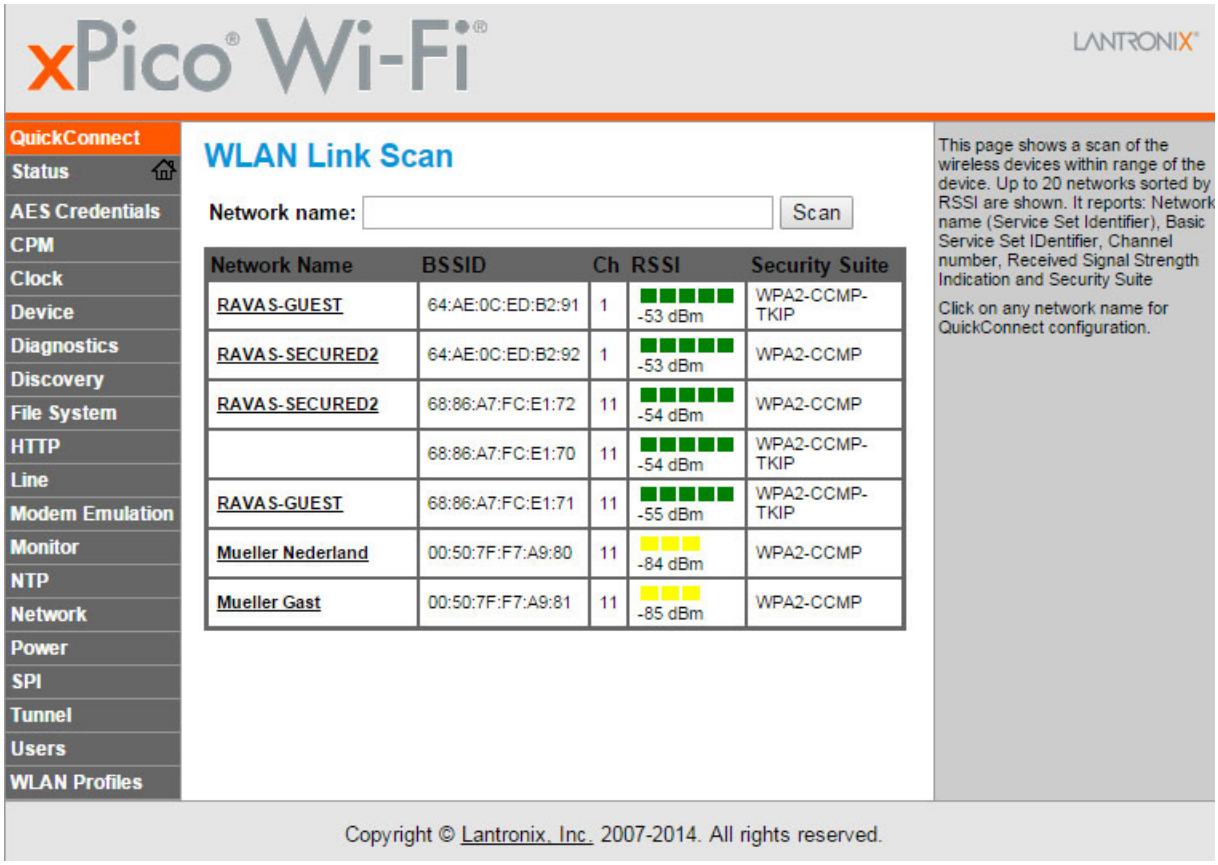
When prompted enter the passphrase to complete the Wi-Fi connection authentication process. With a Wi-Fi client set to the above parameters, your device can connect directly to the xPico Wi-Fi Soft AP. In the WLAN manager you will see the connection being established.

Step 4: Open a standard browser (E.g. Internet Explorer®, Firefox®, Chrome™, Safari® etc.) and in the address field of the browser enter the following URL; xpicowifi.lantronix.com or alternatively use 192.168.0.1 as the IP Address.

When prompted enter the username of admin and password PASSWORD to access the Configuration and Management Web pages as shown below.

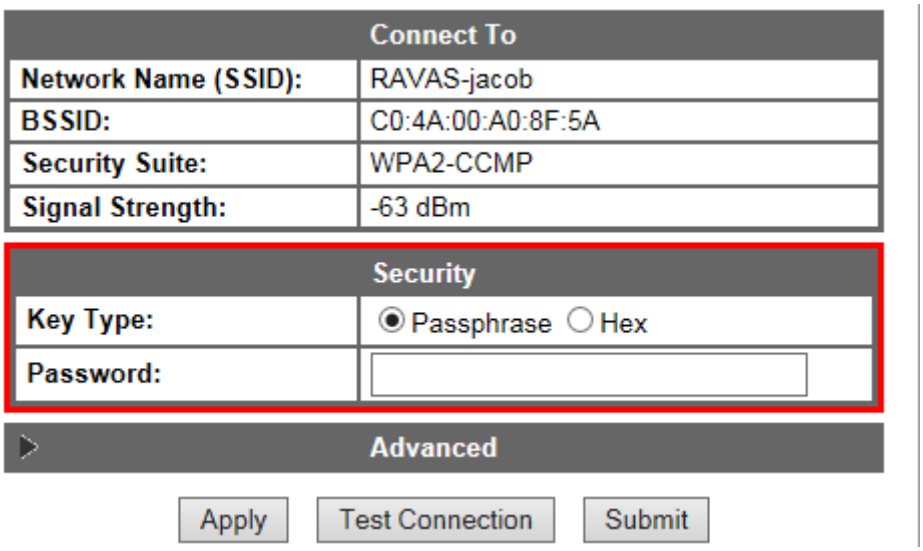
QuickConnect (WLAN 0 - infrastructure)

QuickConnect offers the ability to configure the WLAN Client interface on xPico WiFi to establish connection to an active Access Point. QuickConnect learns most of the connection properties from the available Access Points and prompts the user only for the security parameters and saves the settings under a corresponding new/existing WLAN profile for future autonomous operation of the WLAN Client interface.



Upon selection of the QuickConnect option, the xPico Wi-Fi scans and displays up to 20 wireless devices in order of strongest signal strength at the top. Click on a network name to view the connection to that desired Access Point.

When the selected Access Point profile displays, enter the password and **click Submit** to directly connect to the Access Point and to add the profile and configuration details to the WLAN profiles.

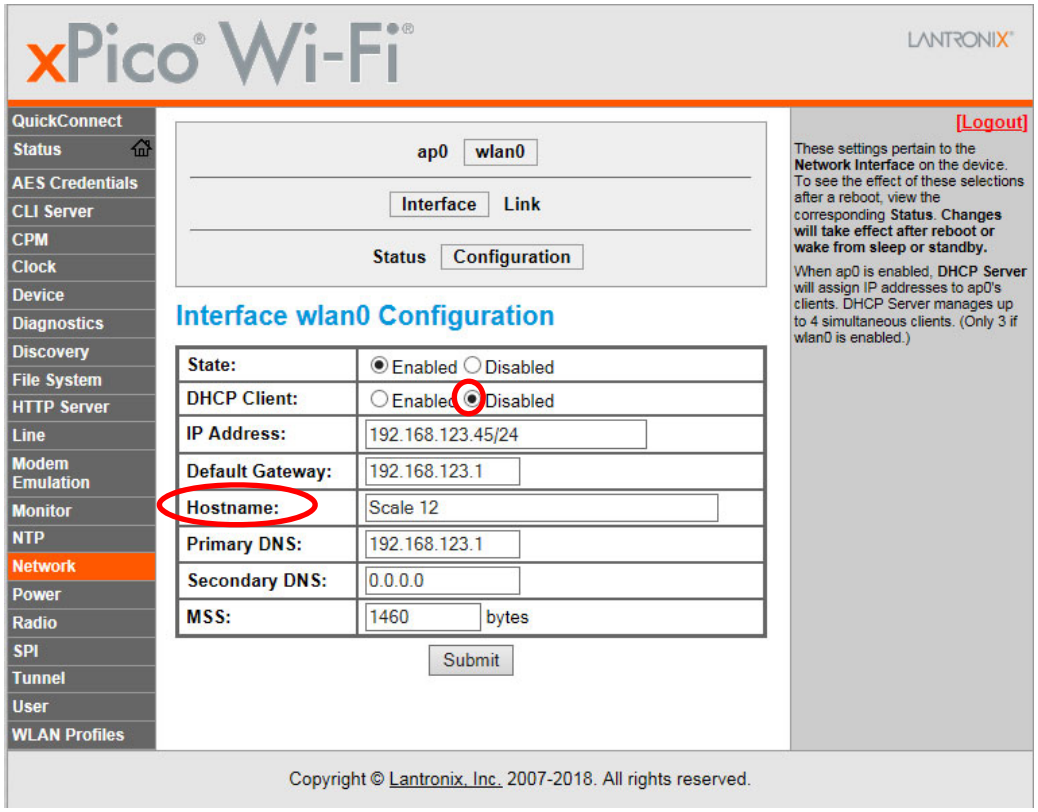


Once added, the Quick Connect profile is connected and is accessible and configurable through WLAN Profiles.

Configure a Hostname:
It can be very useful to have a hostname so you can identify the Xpico module in the customer network.
To do this:
Network / Wlan0 / interface / Configuration >> Hostname

It is advised to set the DHCP to enabled.

For use of a static IP address follow next steps:
To enter a static IP address, go to **Network / Wlan0 / interface / Configuration**
Enter the necessary information. Make sure that **"DHCP Client"** is set to **"Disabled"**



Connection problems:
If you have problems with communicating to the port. You could try to set a timeout of the port. It will disconnect the port automatically after the entered time.

To do this:
Tunnel / Tunnel1 / interface / Disconnect
you can set the timeout time in ms

Settings RIS/RDM/ONLINE protocol !!

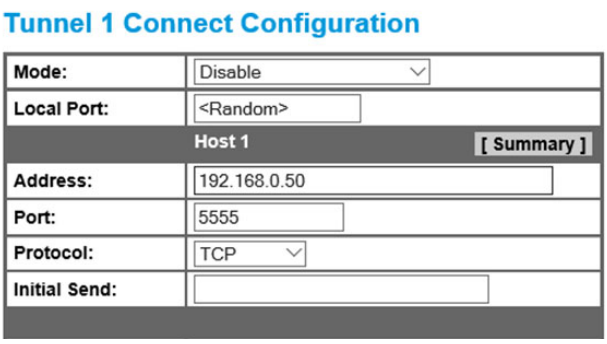
The settings for RIS/RDM or Online are basic settings which are set by default.
Port 10001 is the standard port we use, but is changeable when necessary.

Settings RDC protocol only !!

Weight information is sent by the indicator using the PRINT key and using Wi-Fi.

The Xpico inside the RAVAS 3200 or 5200 indicator has to send the data to the RDC server.
Therefore the Xpico needs to know the static IP address of the RDC server.

To do this, go to:
Tunnel / Tunnel 1 / Connect / Host 1 >> click on **[edit]**



Address: > enter the static IP address of the server here. This can be found via the RDC application running on the server. Go to the menu [?/About].
Port: > enter 5555

Click on Save / confirm to store this entries permanently

Technical data Xpico

> Wireless LAN Interface
- IEEE 802.11 b/g and IEEE 802.11n (single stream) WLAN interface (2.4 GHz only)
- IEEE 802.11 d/h/i/j/k/w/r
- u.FL connector for external antenna

> Serial Interface
- Two Serial CMOS Ports (3.3V, 5V tolerant)
- 300 to 921.6 Kbps
- Flow control XON/XOFF, RTS/CTS (SPort 1 only)
- Lantronix tunneling application

> Host Interface
- Dual Serial Port, SPI, USB 2.0* (device)
- 8 GPIO

> Network Protocols
- TCP/IP, UDP/IP, DHCP, ARP, ICMP, DHCP, Auto-IP, DNS, SNMPv1

> Networking Capabilities
- Soft Access Point with DHCP Server
- Lantronix SmartRoam™ Technology* continually tracks Wi-Fi signal strength within range, along with pre-authentication and caching resulting in smooth and automatic transition to access points without delay.
- QuickConnect: Dynamic Profiles facilitate easy and rapid connections to access points

> Management and Control
- Web Server - Landing Page
- CLI (Serial Monitor Port)
- XML import and Export (XCR)
- Field upgradable firmware (OTA)

> Security
- IEEE 802.11i Support – WPA-Personal, WPA2-Personal
- 256-bit AES Encryption*

> Architecture
- ARM Cortex M3 class processor with on-chip Flash and SRAM
- 1MB Flash and 128 KB SRAM
- 1MB SPI Flash storage

> Power
- Input Voltage: 3.3VDC
- Low power consumption of approximately 6µA standby

> Physical Interface
- 40-pin Board-to-Board SMT Connector

> Environmental
- Operating Temperature: –40° to +85° C
  - For operation over +70° C a thermal pad is required
- Storage Temperature : –40° to +85° C
- Relative Humidity: 0% to 90% non-condensing

- **Certifications:** FCC, IC, EU, Japan, UL, CE, AU/NZ

Addresses and Port Numbers

Hardware Address

The hardware address is also referred to as the physical address or MAC address, and can be found on the product label of the device. Sample hardware address:

- `00-80-A3-FF-FF-FF`
- `00:80:A3:FF:FF:FF`

IP Address

Every device connected to an IP network must have a unique IPv4 address. This address references the specific unit.

Port Numbers

Available IP address port numbers enabled and accessible on the xPico Wi-Fi unit include the following:

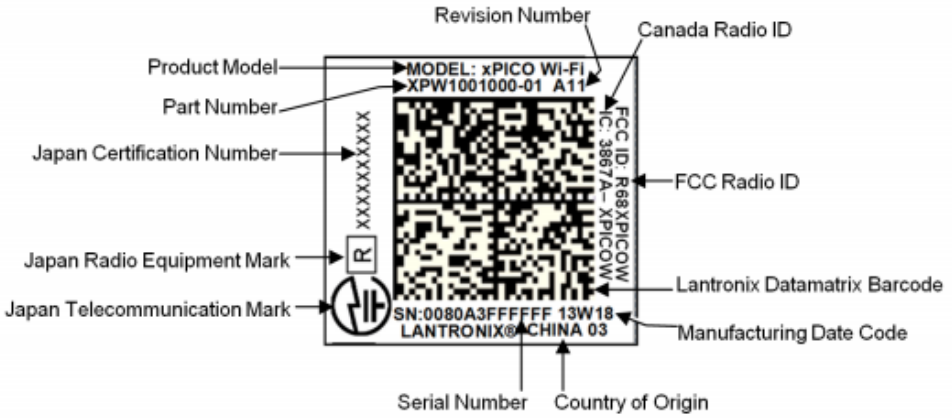
- TCP Port 80: HTTP Server (Web Manager configuration)
- TCP Port 10001: Tunnel (Line 1)
- TCP Port 10002: Tunnel (Line 2)

Product Information Label

The product information label on the unit contains the following information about the specific unit:

- Lantronix Datamatrix Code
- Product Revision
- Part Number
- Serial Number Hardware Address (MAC Address)
- Manufacturing Date Code

Figure 2-1 xPico Wi-Fi Product Label



Configuration methods

For the unit to operate correctly on a network, it must have a unique IP address on the network. There are three basic methods for logging into the device server to assign an IP address and configure the unit:

* Device Installer: Assign an IP address and view the current xPico configuration using a Graphical User Interface (GUI) on a PC attached to a network. (See 3 Using Device Installer.)

* Web-Manager: Through a web interface, configure the xPico and its settings using the xPico's Web-Manager. (See 4 Configuration Using Web Manager

* Serial & Telnet Ports: There are two approaches to accessing Serial Mode. Make a Telnet connection to the network port (9999) or connect a terminal (or a PC running a terminal emulation program) to the unit's serial port. (See 5 Configuration via Telnet or Serial Port (Setup Mode))

Reference Documentation

For more information on the use and operation of the xPico Wi-Fi Device Server please refer to the latest product documents which are available on the Product Website.
https://www.lantronix.com and key in the Site Search box 'Xpico'