920i[®], 820i[®] and 720i[®] WLAN Option Installation

The WLAN (Wireless Local Area Network) Option (Kit 206271) can be installed inside the 920i, 820i and 720i indicators into any available option slot. The WLAN Option can be factory installed upon request when ordering or can be purchased separately and installed on site. The WLAN Option can be used for real-time data transmission between the indicator and other devices and software over a WLAN. Configuration of the WLAN Option is required before it can be used on a WLAN.



Manuals and additional resources are available from the Rice Lake Weighing Systems website at <u>www.ricelake.com</u> Warranty information can be found on the website at <u>www.ricelake.com/warranties</u>

The WLAN Option features a Lantronix[®] xPico 200 Series WiFi module. Visit <u>www.lantronix.com</u> to view the xPico 200 Series User Guide for detailed instructions on the WiFi module.

1 : Parts Breakdown

The WLAN Option comes in a kit containing the necessary items used for installation of the card.

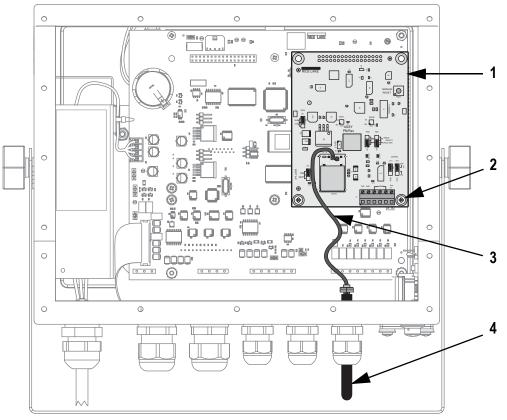


Figure 1. WLAN Option Parts Breakdown (Inside 920i Enclosure)

Item No.	Part No.	Description		
1	205754	Card, Dual Wireless/RS232 xPico Device Server & RS232 Serial Interface	1	
2	14822	Screw, 4-40 NC x 1/4 Phillips Pan Head with Internal Tooth Lock Washer	2	
3	112228	Cable, RF UFL to RSMA, 6 Inch, WiFi	1	
4	98357	Antenna, 2.4 GHz 802.11B/G Lantronix Wireless Device Server Antenna	1	

Table 1. WLAN Option Parts List



2: WLAN Option Installation

The indicator automatically recognizes all installed option cards when the unit is powered on. No hardware-specific configuration is required to identify an installed option card to the system. The WLAN Option appears as a dual serial card, however, only the first serial port can be connected to the WiFi module.

For Example: If option is installed into Option Slot 1, it appears as serial ports 5 and 6, however, only port 5 is available for use with the WiFi module. The second port, port 6 in this example, can be configured for use as an RS232 port through the J3 connector (see Available Serial Connection on page 5).



Electric Shock Hazard – Option card is not hot swappable.

The 920i, 820i and 720i do not have a on/off switch. Always disconnect power before opening an enclosure. A grounding wrist strap must be worn to protect components from electrostatic discharge (ESD) when working

CAUTION inside an enclosure.

Use this procedure to install the WLAN Option card and antenna.

- 1. Disconnect power to the indicator and open enclosure according to the indicator's manual.
- 2. Carefully align the J1 connector, on the reserve side of the WLAN Option, with an available option slot connector.
- 3. Press down on the option card board until it is seated into the option slot connector.
- 4. Use the two screws provided in the option kit to secure the other end of the option card to the threaded standoffs.
- 5. Slide the antenna through the largest available cord grip.

Note The antenna joint should be exposed and positioned to follow the travel of the indicator's tilt direction. It is recommended to expose as much of the antenna as possible to help with signal strength.

- 6. Connect the RP-SMA side of the antenna cable to the antenna.
- 7. Connect the u-FI end of the antenna cable to the Antenna 1 connection on the WiFi module (Figure 2).

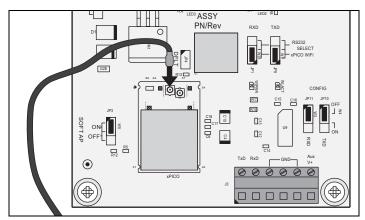


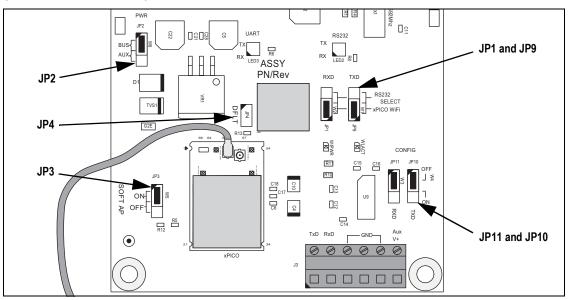
Figure 2. Antenna Connection Location

Note The Antenna 1 connection is located on the centerline of the WiFi module.

8. Tighten the cord grip around the antenna and torque the cord grip nut (inside enclosure) to 33 in-lb (3.7 N-m) and torque the cord grip dome nut (around cable) to 22 in-lb (2.5 N-m).



3: Option Jumpers



Refer to Figure 3 and Table 2 for the jumper locations and descriptions for the WLAN Option board.

Figure 3. Jumper Locations on the WLAN Option Board

Jumper	Description
JP1 and JP9	RXD/TXD Select Jumpers (RS232/xPICO WiFi) – These jumpers select if RS232 is available through the second port of the option board. For most applications both the JP1 and JP9 jumpers should be in the xPICO WIFI position. NOTE: The second port is NOT actually connected to the WiFi module in the xPICO WIFI position, it is simply not used.
	When the jumpers are in the RS232 position, the second port on the board is routed to the TXD/RXD connection on the J3 connector to be used as a serial port. See Available Serial Connection on page 5 for more information.
	NOTE: The jumpers must always be set in the same position. If JP1 and JP9 are in the RS232 position, then JP10 and JP11 jumpers must be in the OFF position. The JP1 and JP9 must NEVER be in the RS232 position at the same time JP10 and JP11 are in the ON position.
JP2	Power Jumper (BUS/AUX) – Defines where option board gets power from. If installed in an indicator option slot, the jumper must be in the BUS position to pull power from the indicator. In the rare situation where the board is mounted externally (not on the "Bus"), then the jumper needs to be in the AUX position with 6-12 VDC applied to the AUX V+ and GND Pins of the J3 connector.
JP3	Soft AP Jumper (ON/OFF) – This jumper can be used to Enable or Disable the Soft AP (Access Point) feature of the WiFi Module. See Soft AP (Access Point) on page 4 for more details on the function of the Soft AP. NOTE: This is an advanced feature and the jumper is not enabled by default. Contact Rice Lake if there is a need to disable the Soft AP.
JP4	Default Jumper – This jumper connects to the Default pin of the WiFi module. This jumper can reset the module to factory OEM defaults if the user cannot do so through the Web Manager. This jumper must remain OFF for normal operation. See WiFi Module Default Procedure on page 4 to reset the module to factory defaults.
JP10 and JP11	 RXD/TXD Config Jumpers (ON/OFF) – These jumpers are used to select the connection to the WiFi module. For normal operation: Set both JP10 and JP11 to the OFF position. This connects the WiFi module to the first port on the card. For alternative operation: Set both JP10 and JP11 to the ON position. This connects the WiFi module to the J3 RS232 port. This can be used to route another serial port to the WiFi connection to allow serial data communications to a port other than the two available though the bus. This connection scheme can also be used to configure the WiFi module, but this is a more advanced feature not discussed in this document. Refer to the xPico 200 Series User Guide at www.lantronix.com for more information. NOTE: The jumpers must always be set in the same position. If JP1 and JP9 are in the RS232 position, then JP10 and JP11 jumpers must be in the OFF position. The JP1 and JP9 must NEVER be in the RS232 position at the same time JP10 and JP11 are in the ON position.

Table 2. Jumper Descriptions



4 : Reset Button

The Reset Button performs a reset and reboots the WiFi module.

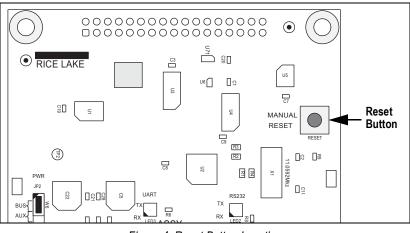


Figure 4. Reset Button Location

5 : WiFi Module Default Procedure

The JP4 DFLT jumper can be used to reset the configuration of the WiFi module to factory OEM defaults.

- 1. With the board up and running, apply a shorting shunt to the DFLT pins for at least six seconds. See Option Jumpers on page 3 for the jumper's location.
- 2. The WiPWR LED starts to flash. See WiFi Setup on page 6 for the LED's location.
- 3. Remove the shorting shunt from the DFLT pins. The WiFi module is now defaulted.



Defaulting the WiFi module does not reset the WiFi connections, but enables a disabled Soft AP to allow access to the configuration. This jumper, along with the reset switch, can also allow the module to boot into command line mode. This is an advanced function not discussed in this document. Refer to the xPico 200 Series User Guide at <u>www.lantronix.com</u> for more information.

6 : Soft AP (Access Point)

The recommended method to configure the WLAN Option to connect to a location's network is to use the built-in Web Manager. The preferred method to access the built-in Web Manager, before the WLAN Option is on the location's network, is to use the built-in Soft AP and do the configuration needed to connect to the network (see WiFi Setup on page 6).



The card can be configured using RS232 through the J3 connector, but by default, the module is not set up to do this, and would need to be booted into the command line mode to do so. This is an advanced function not discussed in this document. Refer to the xPico 200 Series User Guide at <u>www.lantronix.com</u> for more information.

Soft AP as the WLAN Connection

In applications that don't have a local network to connect to or if the network is not in range, the Soft AP connection can also be used to talk to an indicator using the WLAN Option by connecting to IP 192.168.0.1, port 10001.



7 : Available Serial Connection

A previous version of the WLAN Option used the serial connection to configure the WiFi module to connect to a network. Even though this is still possible with this xPico-based WLAN Option, the preferred configuration method is now through the WiFi module's built-in Web Manager.

In addition to network configuration, the serial port can also be used to talk through the WiFi module, but both are advanced features not discussed in this document. Refer to the xPico 200 Series User Guide at <u>www.lantronix.com</u> for more information.

The WLAN Option appears as a dual serial card, with the first serial port being used to connected to the WiFi module. The second port can be configured for use as an RS232 port through the J3 connector.

RS232 J3 Setup Procedure

- 1. Move both of the JP1 and JP9 jumpers to the RS232 position.
- 2. Confirm that both of the JP10 and JP11 jumpers are in the OFF position.
- 3. Route cable to the J3 connector. See Figure 5 and Table 3 for wiring.
- 4. In the indicator, configure the WLAN Option's second (higher numbered) serial port as needed to communicate with the external device connected to the J3 connector.

Note For Example: If option is installed into Option Slot 1, it appears as serial ports 5 and 6. Making port 6 the second port.

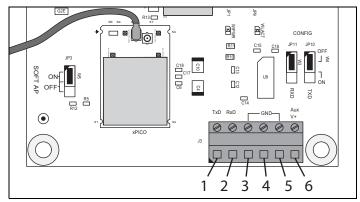


Figure 5. Serial Port Location

Connector	Pin	Function			
J3	1	TxD			
	2	RxD			
	3-5	GND			
6 Aux V+					
NOTE: Aux V+ is used to provide power to the board when JP2 is in the AUB position. It is not a power source, and typically not used.					

Table 3. Serial Port Pin Assignments

8 : Indicator Configuration

The WLAN Option appears as a dual serial card. When the WLAN Option is installed, additional serial ports will become available in the indicator configuration, depending on the slot the card is installed in.

- If in slot 1 ports 5 and 6 will be available
- If in slot 2 ports 7 and 8 will be available
- · Pattern continues if additional slots are available

The first (lower numbered) port connects to the WiFi module. In the indicator's configuration, the first port's Baud Rate, Bits, and Parity settings must match the WiFi module's settings. The WiFi module's default settings are 9600 (Baud Rate), 8 (Data Bits), and None (Parity). Other indicator settings, such as the port's Function, Echo, and Response can be changed as needed. See Serial Port Settings on page 9 to change the WiFi module's default settings using the Web Manager.



9: Wireless Configuration

Configuration of the wireless settings is done through the WLAN Option's built-in Web Manager. If already connected to a network, a web browser on that network can connect to the Web Manager by simply navigating to the WLAN Option's IP Address.

If not already connected to a network, or configuration through the network is not desired/available, then the Web Manager may be accessed through the WLAN Option's Soft AP. By default, the option's Soft AP is available any time the card is powered up.

Soft AP (Access Point) Details

- Name: RLWS_XXXXXX
- Password: PASSWORD
- Configuration Page: http://192.168.0.1

Note

Note The Soft AP only shows up as a 5 GHz network. The connecting device must be capable of using the 5 GHz band to connect to the Soft AP.

10 : WiFi Setup

The following procedure is for setting up the WLAN Option's WiFi network using the WLAN Option's built-in Web Manager.

1. Power on the indicator and wait for the WiPWR LED to light solid. See Figure 6 for the LED's location.

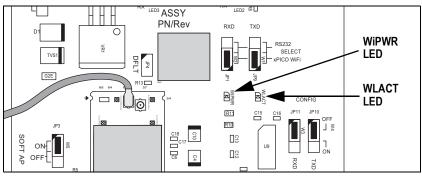


Figure 6. WiFi LED Locations

- 2. Scan for available WiFi networks using a computer or phone and connect to the Soft AP. It might take a few attempts before the Soft AP appears on the computer or phone.
 - Soft AP Name: RLWS_XXXXXX
 - Soft AP Password: PASSWORD

IMPORTANT

It is recommended to change default passwords to limit access and for security.

₽(%)	RLWS_E8C27B Connecting	
	Enter the network security key	
	Next	Cancel



The X's in the name represent the last 6 digits of the WiFi MAC address. The serial number on the WiFi module's label is almost the same, other than the last digit being one number/character less than the WiFi MAC address.

For example, if the module's serial number is "0080A3E8C27A", then the SSID would be "RLWS_E8C27B". The MAC address is a Hexadecimal value, so the letter A follows the number 9, and this continues to F before incrementing the next most significant digit and returning to 0.



3. Once connected to the Soft AP, use a web browser and enter **192.168.0.1** as the URL address and press Enter.

Note Once connected to a network, a web browser on that network can connect to the Web Manager by simply navigating to the WLAN Option's IP Address (available on the Status page of the Web Manager).

- 4. Enter the default login credentials for the Web Manager.
 - Username: admin
 - Password: PASSWORD

IMPORTANT

It is recommended to change default passwords to limit access and for security.

Sign in	
http://192.16	8.0.1
Your connect	ion to this site is not private
Username	admin
Password	
	Sign in Cancel

- 5. Press Sign in. The Web Manager loads in the browser and the Status page appears.
- 6. Click QuickConnect at the top of the left nav.

	LAKE g systems			xPico 200 Series Configuration
QuickConnect	Product Information		admin	[Logout]
Status 🚮	Product Type:	xPico240		
Device	Firmware Version:	4.4.0.0R8		
File System	Serial Number:	0080A3E8C27A		
Line	Uptime:	17 minutes 26 seconds		
Network	Permanent Config:	Saved		

7. A list of wireless networks appear. Click the network name intended to connect the WLAN Option's WiFi network to.

If the necessary network does not show up, just click the Scan button again. It may take a few tries to show the network. If the network is hidden, enter the network name in the box provided.

QuickConnect WLAN Link Scan						admin [Logout] This page shows a scan of the wireless devices within range of the	
Device	Network name:				Scan	device.	
File System	Refresh scan re	sults every 60 second	ds			It reports:	
Line	Network Name	BSSID	Ch	RSSI	Security Suite	 Network name (Service Se Identifier)(SSID) 	
Network	ABC Wifi 5G	3C:7C:3F:63:F2:84	36		WPA2-CCMP	 Basic Service Set Identifier (BSSID) 	
Radio				-34		Channel Received Signal Strength	
Tunnel	ABC Wifi	3C:7C:3F:63:F2:81	4	-36	WPA2-CCMP	Indication (RSSI)	
User WLAN Profiles	ABC Wifi 5G	3C:7C:3F:63:EC:34	36	-64	WPA2-CCMP	Security Suite The icon indicates the active profile.	
						Click on a network name for QuickConnect configuration.	



The Web Manager provides notes and information related to the current page in the far right column. Descriptions for options and settings are also provide when hovering over the item in question.

8. The wireless network information page appears. Enter the network password (if applicable).

Note Contact location's IT administrator to obtain network credentials as needed based on the security that is in place.

QuickConnect Status	WLAN Profile "Al	BC_Wifi_5G"	admin [Logout] Use the Apply button to try out settings on the WLAN without saving
Device		Connect To	them to Flash. If the settings do not work, when you reboot the device, it
File System	Network Name (SSID):	ABC_Wifi_5G	will still have the original settings.
Line	BSSID:	3C:7C:3F:63:F2:84	Use the Submit button to update the WLAN settings and save them to
Network	Security Suite:	WPA2-CCMP	Flash.
Radio	Signal Strength:	-34	
Tunnel User		Security	
WLAN Profiles	WPAx IEEE 80211r:	O Enabled 💿 Disabled	
	Кеу Туре:	● Passphrase ○ Hex	
	Password:		
	>	Advanced	
		Apply Submit	

9. Click **Submit** to apply and save the settings. A message displays at the top of the page to show if the new network's Profile saved successfully. It does not necessarily mean it is connected to the network.

Note The Apply button only applies the settings for the current session, but does NOT save them.

10. To verify that the WLAN Option is connected to the location's network, click Status near the top of the left nav.

QuickConnect Status Status Device File System Line Network Radio 	WLAN Profile "ABC_Wifi" Changed WLAN Profile New_Profile Instance to "ABC_Wifi". Changed WLAN Profile New_Profile Basic Network Name to "ABC_Wifi". Changed WLAN Profile New_Profile Security Suite to "WPA2". Changed WLAN Profile New_Profile Security WPAx Passphrase to " <configureds". The changes have been saved permanently.</configureds". 	admin [Logout] Use the Apply button to try out settings on the WLAN without saving them to Flash. If the settings do not work, when you reboot the device, it will still have the original settings. Use the Submit button to update the WLAN settings and save them to Flash.
---	--	--

11. The Status page shows all of the network connections on the device under Network Settings.

Network Settings			
Tunnel Interface ap0			
MAC Address:	02:80:A3:E8:C2:7B		
LAN Profiles State:	Up		
SSID:	xPico240_E8C27A		
Security Suite:	WPA2		
IP Address:	192.168.0.1/24		
Interface eth0	face eth0		
MAC Address:	00:80:A3:E8:C2:7A		
State:	Down		
Interface wlan0	Interface wlan0		
MAC Address:	00:80:A3:E8:C2:7B		
Connection State:	Connected		
Active WLAN Profile:	ABC_Wifi		
Hostname:			
IP Address:	192.168.50.24/24		
Default Gateway:	192.168.50.1		

 <u>If Connected</u>: Interface wlan0 is listed with Connection State showing Connected and the *IP Address* populated. The WLACT LED on the card also lights when connected to a network (Figure 6 on page 6).



The "/24" at the end of the IP Address indicates the number of bits set for the network subnet mask and is not part of the IP Address itself. There are 32 bits in a subnet mask and "/24" indicates the subnet mask is 255.255.255.0.

• If Not Connected: Click WLAN Profiles at the bottom of the left nav to change the network settings and try again.

12. Connecting to the WiFi module's server with a remote client is now possible.

By default, the WiFi module is configured as an RS232 to WLAN tunnel for serial communication.

In the indicator's configuration, the port's Baud Rate, Bits, and Parity settings must match the WiFi module's settings. The WiFi module's default settings are 9600 (Baud Rate), 8 (Data Bits), and None (Parity). Other indicator settings, such as the port's Function, Echo, and Response can be changed as needed.

See Serial Port Settings to change the WiFi module's default settings using the Web Manager.

 Using a Terminal Emulation program, such as Putty, as a remote client connection to the WiFi module's server over Telnet is possible using the IP Address that was noted in Step 11 on page 8 and the Local Port number, which by default is 10001.

Basic options for your PuTTY session			
Specify the destination you want to connect to			
Host Name (or IP address)	Port		
192.168.1.24 10001			
Connection type:			
○ Ra <u>w</u>			

Figure 7. Putty Example



If the card's IP address changed and there is no longer access to the card through the location's wireless network, connect to the Soft AP and use the Web Manager to learn the new IP Address.

If the Web Manager cannot be reached through the location's wireless network or the Soft AP, the card needs to be defaulted. See WiFi Module Default Procedure on page 4.

Note For more information on all the features of this card, visit <u>www.lantronix.com</u> to view the xPico 200 Series User Guide.

11 : Serial Port Settings

The following procedure is for changing the WiFi module's settings to match the product's serial port settings using the Web Manager. The WiFi module's settings of Baud Rate, Data Bits, and Parity must match the product's serial port settings.

Note

For example, the port's baud rate for the iQUBE² is set at 115200 by default, so the WiFi module setting for baud rate must be changed to match when using the WLAN Option in a 920i with an iQUBE².

- 1. Refer to Steps 1-5 in WiFi Setup on page 6 to sign in to the Web Manager.
- 2. Click Line in the left nav.

	LAKE g systems			co 200 Series Configuration
QuickConnect			admin	[Logout
Status 🔐	Product Information			
Device	Product Type:	xPico240		
	Firmware Version:	4.4.0.0R8		
File System	Serial Number:	0080A3E8C27A		
Line	Uptime:	17 minutes 26 seconds		
Network	Permanent Config:	Saved		

3. Click **Configuration** towards the top of the **Line 1 Status** page.

QuickConnect Status	Line 1	Line SPP_1	Line SPP_2	Line SPP_3	Admin [Logout] This displays the current status and various statistics for the Serial Line.
Device	Line Virtual_1	Line Virtual_2	Line gSPI_1	Line gSPI_2	various statistics for the Serial Line.
File System	Line gSPI_3	Line gSPI_4			
Line			22 T		
Network		Status Cor	figuration		
Radio					
Tunnel	ine 1 Status				



4. Use drop-down options to change Line 1 Configuration settings as needed to match the product's serial port settings.

Line	Status Configuration			
adio		nfiguration		
	ne i co	onfiguration		
er 👘	10	Configuration	Status	
N Profiles	ame:			
In	nterface:	R\$232 ¥		
S	tate:	Enabled Disabled	Enabled	
P	rotocol:	Tunnel 🗸	Tunnel	
в	aud Rate:	115200 V bits per second	9600 bits per second	
	arity:	None 🗸	None	
D	ata Bits:	8 🗸	8	
S	top Bits:	1 •	1	
	low ontrol:	None 🗸	None	

5. Click **Submit** at the bottom of the page to apply and save the settings. A message displays at the top of the page to confirm the changes have been saved permanently.

12: Server Configuration

The WiFi module is configured to be a server by default, with the ability to accept the connection of a client to it.

- A Server is waiting to Accept a connection from a Client.
- A Client is looking to Connect to a remote Server (host).

Note Even though a device can be set up for both, typically it is only set up as one or the other.

The following procedure shows where the WiFi module's server settings are found using the Web Manager.

Note

Making changes to the Tunnel 1 Accept Configuration settings may impact the WiFi module's connection to the location's network, established in WiFi Setup on page 6.

- 1. Refer to Steps 1-5 in WiFi Setup on page 6 to sign in to the Web Manager.
- 2. Click Tunnel in the left nav.

QuickConnect			admin	[Logout
Status 6	Product Information			17. 17. 18. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19
	Product Type:	xPico240		
Device	Firmware Version:	4.4.0.0R8		
File System	Serial Number:	0080A3E8C27A		
Line	Uptime:	17 minutes 26 seconds		
Network	Permanent Config:	Saved		
Radio	Network Settings			
Tunnel	Interface ap0			
User	MAC Address:	02-80-43-E8-C2-7B		

3. Click *Accept* towards the top of the *Tunnel 1 Status* page.

QuickConnect Status 🔐	Tunnel 1	Tunnel SPP_1	Tunnel SPP 2	Tunnel SPP 3	admin [Logout] This displays all the Tunnel Status both as an Aggregate and broken down by active Accept and Connect
Device	Tunnel	Tunnel	Tunnel	Tunnel	tunnels.
File System	Virtual 1	Virtual 2	gSPI 1	gSPI 2	
Line	Tunnel gSPI 3	Tunnel gSPI 4	-	-	
Network		········			
Radio		Status Line	Packing		
Funnel		Accept Connect	Disconnect		
Jser					
WLAN Profiles	Tunnel 1 Stat	lue			

4. Change the *Mode* and *Local Port* settings if needed.

Tunnel	Accep	t Connect Disconnect
User WLAN Profiles	funnel 1 Accept	Configuration
	Mode:	Always
	Local Port:	10001
	Multiple Connections:	○ Enabled
	Protocol:	TCP V
	Flush Line:	O Enabled O Disabled
	Block Line:	O Enabled Disabled
	Block Network:	O Enabled Disabled
	Password:	

5. Click **Submit** at the bottom of the page to apply and save the settings. A message displays at the top of the page to confirm the changes have been saved permanently.

13 : Client Configuration

The WiFi module is configured to be a server by default, with the ability to accept the connection of a client to it.

- A Server is waiting to Accept a connection from a Client.
- A Client is looking to Connect to a remote Server (host).

The following procedure is for configuring the WiFi module as a client, using the Web Manager, to be able to connect the WiFi module to an available server connection.

- 1. Refer to Steps 1-5 in WiFi Setup on page 6 to sign in to the Web Manager.
- 2. Click Tunnel in the left nav.

	LAKE g systems		х	Pico 200 Series Configuration
QuickConnect	Product Information		admin	[Logout]
and the second s	Product Type:	xPico240		
Device	Firmware Version:	4.4.0.0R8		
File System	Serial Number:	0080A3E8C27A		
Line	Uptime:	17 minutes 26 seconds		
Network	Permanent Config:	Saved		
Radio	Network Settings			
Tunnel	Interface ap0			
User	MAC Address:	02-80-43-E8-C2-7B		

3. Click *Connect* towards the top of the *Tunnel 1 Status* page.

QuickConnect					admin [Logout]
Status 🔐	Tunnel 1	Tunnel SPP_1	Tunnel SPP 2	Tunnel SPP 3	This displays all the Tunnel Status both as an Aggregate and broken down by active Accept and Connect
Device	Tunnel	Tunnel	1. 1. 1. 1. 1. T. 1.	Tunnel	tunnels.
File System	Virtual 1	Virtual 2	Tunnel gSPI 1	gSPI 2	
Line	Tunnel gSPI 3	Tunnel gSPI 4	9511_1	g511_2	
Network		runner ger i_ i			
Radio		Status Line	Packing		
Tunnel		Accept Connec	t disconnec	t	
User		•			
WLAN Profiles	Tunnel 1 Stat	115			



4. Use the drop-down to change the *Mode* setting, and then click [Edit] to display available *Host 1* settings.

Note

The Web Manager provides notes and information related to the current page in the far right column. Descriptions for options and settings are also provide when hovering over the item in question.

Tunnel User		Accept Connect Disconnect	Mode may be "Disable", "Always", "Any Character", "Start Character" or "Modem Control Asserted"
WLAN Profiles	Tunnel 1 Co	onnect Configuration	A Connect Tunnel can be started in a number of ways, according to its Mode:
	Mode:	Disable 🗸	"Disabled": never started.
	Host 1:	<none> [Edit]</none>	"Always": always started.
	Connections:	Sequential 🗸	"Any Character": started when any character is read on the Serial Line.
	Reconnect Time:	15 seconds	"Start Character": started when the Start Character is read on the Serial Line.

5. Set the *Address* and *Port* as needed to connect to the intended available server connection.

unnel Iser		Accept Connec	ct Disconnect	t
	nnel 1 C	onnect Config	juration	
M	ode:	Any Character	~	
		Host 1		[Summary]
	ddress:	XXX.XXX.XXX.XX	X	
	ort:	XXXX		
Pr	otocol:	TCP 🗸		
Ini	itial Send:			
Lo	ocal Port:	<random></random>		

6. Click **Submit** at the bottom of the page to apply and save the settings. A message displays at the top of the page to confirm the changes have been saved permanently.

Note

While the WiFi module's server is still available, it is necessary to adjust the server and client mode settings to allow both to function in unison. Even though a device can be set up for both, typically it is only set up as one or the other. Refer to the xPico 200 Series User Guide at <u>www.lantronix.com</u> for more information.

14 : Timeout Configuration

The WiFi module has an optional Disconnect feature that can be configured to break a connection after a set amount of time. This feature applies to both server and client connections.

The following procedure shows where the WiFi module's timeout setting is found using the Web Manager.

- 1. Refer to Steps 1-5 in WiFi Setup on page 6 to sign in to the Web Manager.
- 2. Click *Tunnel* in the left nav.

	LAKE NG SYSTEMS		xPi	co 200 Se Configuro
QuickConnect	Product Information		admin	<u>[L</u>
	Product Type:	xPico240		
Device	Firmware Version:	4.4.0.0R8		
File System	Serial Number:	0080A3E8C27A		
Line	Uptime:	17 minutes 26 seconds		
Network	Permanent Config:	Saved		
Radio	Network Settings			
Tunnel	Interface ap0			
User	MAC Address:	02:80-43-E8-C2:7B		



3. Click *Disconnect* towards the top of the *Tunnel 1 Status* page.

QuickConnect Status	Tunnel 1	Tunnel SPP_1	Tunnel SPP 2	Tunnel SPP 3	admin [Logout] This displays all the Tunnel Status both as an Aggregate and broken down by active Accept and Connect
Device	Tunnel	Tunnel	Tunnel	Tunnel	tunnels.
File System	Virtual_1	Virtual_2	gSPI_1	gSPI_2	
Line	Tunnel gSPI 3	Tunnel gSPI 4			
Network					-
Radio		Status Line	Packing		
Tunnel		Accept Connect	t Disconnect	◄	
User		-			
WLAN Profiles	Tunnel 1 Sta	tus			

4. Enter the desired value in milliseconds for the *Timeout* setting. A value entry of 0 disables the Disconnect feature.

Tunnel User	Α	ccept Connect	Disconnect
WLAN Profiles	Tunnel 1 Disc	onnect Con	figuration
	Stop Character:	<none></none>	
	Modem Control:	O Enabled 🔍	Disabled
	Timeout:	<disabled></disabled>	milliseconds
	Flush Line:	O Enabled 💿	Disabled

5. Click **Submit** at the bottom of the page to apply and save the settings. A message displays at the top of the page to confirm the changes have been saved permanently.

15 : WiFi Module Specifications

The WLAN Option features a Lantronix[®] xPico 200 Series WiFi module. Visit <u>www.lantronix.com</u> to view the latest list of technical specifications on the WiFi module.

Wireless Specifications

- IEEE 802.11 a/b/g up to 54 Mbps; 802.11 n (1×1) up to 150 Mbps
- 20 and 40 MHz channel width with optional SGI
- Dual Band 2.4 GHz and 5 GHz, Channels 1-13, UNII-1, 2a, 2e and 3
- Supports IEEE 802.11 d/h/i
- 802.11r fast roaming

Data Communication

- TruPort® Serial Technology— TCP and UDP Server Mode, TCP and UDP Client Mode, Multi-host Connect; TLS Client and Server
- TruPort® Socket— Multi-host Client and Server Modes, HTTP(S), Sockets, TLS
- · Authenticated SMTP Support— Send email directly from device

Security and Authentication

- TruPort® Security Software
 - · Secure Boot, Secure Firmware-Over-the-Air (FOTA) Updates
 - Secure Key Storage, Encrypted Configuration
 - Secure Connections with SSL/TLS, HTTPS
 - · Software Controlled Network Service Ports Enable/Disable
 - Role Based Access Control
- AES/CCMP and TKIP encryption, WPA/WPA2 Personal
- WPA2 Enterprise (EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST)
- SSLv3/TLS 1.2 with PKI and X.509 Certificates (up to 4096-bit Keys)
- · AES Algorithm, 256-bit, 192-bit, 128-bit



WiFi Module Specifications Continued

Management Interfaces

- Lantronix ConsoleFlow[™] Cloud Software Platform, REST, MQTT
- Lantronix Discovery Protocol (77FE)
- Serial Port, Internal Web Server (HTTP/HTTPS)
- XML Configuration and XML Status (CLI, API)
- Secure Firmware Upgrade via HTTPS, ConsoleFlow™

Protocol Support

- DHCP Client, Server (Soft AP), HTTP Server/Client
- IPv4, TCP/IP, UDP/IP, ARP, ICMP, Auto-IP, DNS
- SNMP v1/v2
- IPv6

Wireless Features

- · Concurrent Soft AP + STA (Client), Client, Soft AP
- Up to 5 simultaneous client connections to Soft AP interface
- Up to 4 in Concurrent Mode
- Connect to multiple WLAN networks, WLAN QuickConnect

Certifications & Compliance

- Type Approvals: USA (FCC Part 15), Canada (IC RSS), EU (RED), Japan (MIC), China (SRRC), AU/NZS
- Safety: IEC 62368 EN 62368, EN 62311, UL 60950
- · RoHS, REACH
- FCC ID: R68XPICO200
- CMIIT ID: 2017AJ6663(M)



© Rice Lake Weighing Systems Specifications subject to change without notice. Rice Lake Weighing Systems is an ISO 9001 registered company.

230 W. Coleman St. • Rice Lake, WI 54868 • USA U.S. 800-472-6703 • Canada/Mexico 800-321-6703 • International 715-234-9171 • Europe +31 (0)26 472 1319