The Mestek Communications Bridge is an OEM product called a ProtoCessor manufactured by FieldServer. The bridge comes pre-configured to correctly map the native Modbus registers to the appropriate protocol (BACnet, LonWorks, etc.). Every control network requires that each device have a unique address (IP, MAC, BACnet Node ID, etc.). The network is usually designed by a Controls contractor and thus, we have no way of knowing the device addressing scheme being used. For this reason, it may be necessary to program the device in the field. The steps required are outlined below.

This document assumes that you have a standalone (not connected to a network) computer (Desktop or Laptop) with an Ethernet network card. You will also need an Ethernet cable, and the FieldServer Toolbox application. The FieldServer Toolbox application can be downloaded from the Literature Library on the appropriate Mestek product website, (ATH, RBI, Sterling, etc.), or directly from the ProtoCessor web site (www.protocessor.com).

The ProtoCessor is shipped with a default IP address 192.168.1.24. The subnet mask is 255.255.255.0. You need to configure your computer so that it is on the same IP network as the ProtoCessor. The required steps are outlined in the following sections for Microsoft Windows 7 and Windows 10. If you have already changed the IP Address and/or Subnet Mask of the ProtoCessor, you will need to use the appropriate values.

## Windows 7

Open the "*Windows Control Panel*" (Start->Control Panel) and click "*Network and Sharing Center*", as shown in figure 1, to open the "*Network Connections*" window.

djust your computer's settings			View by: Small icons 🔻
Action Center	🔠 Administrative Tools	🤤 Autodesk Plot Style Manager	📮 Autodesk Plotter Manager
AutoPlay	🐌 Backup and Restore	💶 Color Management	Credential Manager
Date and Time	🍘 Default Programs	📑 Desktop Gadgets	🚔 Device Manager
Devices and Printers	🔄 Display	🕒 Ease of Access Center	📕 Flash Player (32-bit)
Folder Options	🗼 Fonts	릙 Getting Started	🌏 HomeGroup
Indexing Options	👰 Intel® Rapid Storage Technology	🔂 Internet Options	🝰 Java (32-bit)
🗈 Keyboard	😽 Lenovo - Factory Recovery Disks	🚱 Lenovo - System Health and Diagno	🚱 Lenovo - Update and Drivers
Lenovo HD Audio Manager	🔫 Lenovo's SimpleTap	🜃 Location and Other Sensors	🍘 LonWorks Interfaces (32-bit)
Mail		Network and Sharing Center	Real Constitution Area Icons
Performance Information and Tools	Personalization	🔚 Phone and Modem 😽	Power Options
Programs and Features	🔕 RapidBoot HDD Accelerator (32-bit)	P Recovery	🔗 Region and Language
RemoteApp and Desktop Connections	🛒 Sound	🗄 Speech Recognition	Sync Center
System	🛄 Taskbar and Start Menu	Troubleshooting	🍇 User Accounts
🕻 Windows Anytime Upgrade	📑 Windows CardSpace	Windows Defender	🔗 Windows Firewall
Windows Live Language Setting	Windows Update		

Figure 1 - Windows 7 – Control Panel

Click on *"Local Area Connection"* as shown in figure 2 to open the *"Local Area Connection Status"* dialog.

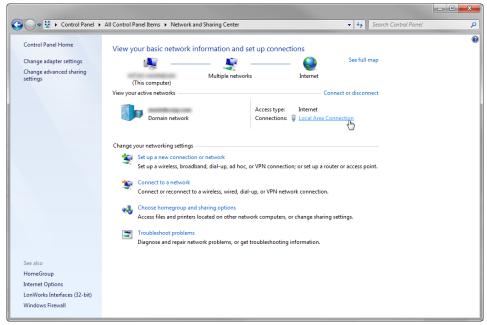


Figure 2 - Windows 7 – Network Sharing Center

Click on the "Properties" button as shown in figure 3 to open the "Local Area Connection Properties" dialog.

🔋 Local Area Connecti	on Status	×
General		
Connection		
IPv4 Connectivity:		Internet
IPv6 Connectivity:		No Internet access
Media State:		Enabled
Duration:		00:18:18
Speed:		100.0 Mbps
Details		
Activity		
	Sent —	Received
Bytes:	2,731,598	108,514,230
Properties	🕑 Disable	Diagnose
		Close

Figure 3 - Windows 7 – Local Are Connection Status

Select *"Internet Protocol Version 4 (TCP/IPv4)"* and click the *"Properties"* button as shown in figure 4 to open the *"Internet Protocol Version 4 (TCP/IPv4) Properties"* dialog.

	g Sharing				
Connect	using:				
💇 Ini	el(R) 82579LI	M Gigabit Netv	vork Conne	ction	
				Conf	igure
This con	nection uses t	he following ite	ems:		
🗹 📑	Client for Micr	osoft Network	s		
🛛 🗹 🔒	QoS Packet S	Scheduler			
Image: Second	File and Printe	er Sharing for I	Microsoft N	etworks	
<ul> <li></li></ul>	Internet Proto	col Version 6	(TCP/IPv6)		
<ul> <li>✓</li> </ul>	Internet Proto	col Version 4 (	(TCP/IPv4)		
<ul> <li></li></ul>	Link-Layer To	pology Discov	very Mappe	r I/O Driv	er
	Link-Layer To	pology Discov	very Respor	nder	
In	stal	Uninsta		Prop	erties
				1	onioo
Descrip					
		I Protocol/Inte protocol that pr			
		connected net		in an a court	
across					

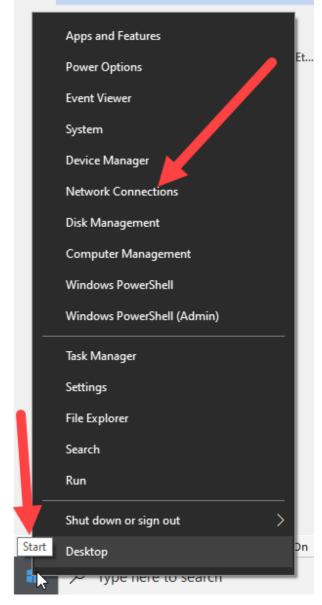
Figure 4 - Windows 7 – Local Area Connection Properties

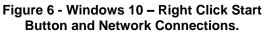
Write down the current settings so that they can be restored when you are no longer connected to the ProtoCessor. Choose *"Use the following IP address*", set the *"IP Address"* to 192.168.1.99, and set the *"Subnet Mask"* to 255.255.255.0 as shown in figure 5. Click the *"OK"* button to save your changes.

Internet Protocol Version 4 (TCP/IPv4)	Properties				
General					
You can get IP settings assigned auton this capability. Otherwise, you need to for the appropriate IP settings.					
Obtain an IP address automatical	Obtain an IP address automatically				
Ouse the following IP address:					
IP address:	192.168.1.99				
Subnet mask:	255 . 255 . 255 . 0				
Default gateway:	· · ·				
Obtain DNS server address autom	natically				
Ose the following DNS server add	resses:				
Preferred DNS server:					
Alternate DNS server:	· · ·				
Validate settings upon exit	Advanced				
	OK Cancel				

Figure 5 - Windows 7 – Internet Protocol Properties

## Windows 10





Right click on the Windows "Start" button.

Then choose "Network Connections" as shown in figure 6.

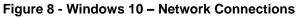
Click *"Network and Sharing Center",* in the network status window shown in figure 7 to open the *"Network Connections"* window.

Settings		- 🗆 X
යි Home	Status	
Find a setting	Network status	Help from the web
Network & Internet	□— □ — ⊕	Updating network adapter or driver Finding my IP address
Status	Ethernet mestekcorp.com	Get help
문 Ethernet Dial-up	You're connected to the Internet If you have a limited data plan, you can make this network a metered connection or change other properties.	Give feedback
% VPN	From the last 30 days	
Proxy	Properties Data usage	
	Show available networks View the connection options around you.	
	Advanced network settings	
	Change adapter options View network adapters and change connection setting	
	For the networks you connect to, decide what you want to share.	
	Network troubleshooter Diagnose and fix network problems.	
	View hardware and connection properties	
	Windows Firewall	
	Network reset	

Figure 7 - Windows 10 Network Status

Select "*Ethernet*" to enter the "*Ethernet Status*" window as shown in figure 8.

View your basic network information and	set up connections
View your active networks	
abccorp.com	Access type: Internet
Domain network	Connections: 🦉 <u>Ethernet</u>
Change your networking settings	
🛬 Set up a new connection or network	
Set up a broadband, dial-up, or VPN connecti	ion; or set up a router or access point.
Troubleshoot problems	
Diagnose and repair network problems, or ge	t troubleshooting information.
and a grant way and	and the second



Click on the "Properties" button to open the "Ethernet Status" dialog shown in figure 9.

🖗 Ethernet Status			×
General			
Connection			_
IPv4 Connectivit	у:	Internet	
IPv6 Connectivit	y:	No network access	
Media State:		Enabled	
Duration:		08:05:30	
Speed:		100.0 Mbps	
Details			
Activity			
	Sent —	Received	
Bytesy	90,899,877	368,304,900	
Properties	😜 Disable	Diagnose	
		Close	

Figure 9 - Windows 10 – Local Area Connection Status

Select Internet Protocol Version 4 (TCP/IPv4) and then click on Properties as shown in figure 10 to open the *"Internet Protocol Version 4 (TCP/IPv4) Properties"* dialog.

Networking Sharing		
Connect using:		
Intel(R) Ethem	et Connection (2) I219-V	
		Configure
This connection uses	the following items:	
Client for Mi	crosoft Networks	^
🗹 🐙 File and Prin	ter Sharing for Microsoft	Networks
QoS Packe	t Scheduler	
	IDIS 6.3 Packet Filter Dri	
	tocol Version 4 (TCP/IPv	
	etwork Adapter Multiplex	or Protocol
Microsoft Ll	DP Protocol Driver	×
	2012 - 2014	,
Install	Uninstall	Properties
Description	· · · · · · · · · · · · · · · · · · ·	
Transmission Cont	rol Protocol/Internet Prot	ocol. The defau
wide area network	protocol that provides c	ommunication
across diverse inte	aconnected networks.	

Figure 10 - Windows 10 – Local Area Connection Properties

Write down the current settings so that they can be restored when you are no longer connected to the ProtoCessor. Choose "Use the following IP address", set the "IP Address" to 192.168.1.99, and set the "Subnet Mask" to 255.255.255.0 as shown in Figure 11. Click the "OK" button to save your changes.

Internet Protocol Version 4 (TCP/IPv4)	Properties X
General	
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	
Obtain an IP address automatical	ly
• Use the following IP address:	
IP address:	192.168.1.99
Subnet mask:	255.255.255.0
Default gateway:	
Obtain DNS server address auton	natically
Use the following DNS server add	resses:
Preferred DNS server:	
Alternate DNS server:	
Ualidate settings upon exit	Advanced
	OK Cancel

Figure 11 - Windows 10 – Internet Protocol Properties

## Connecting to the ProtoCessor

Connect your computer directly to the ProtoCessor using an Ethernet cable, power up the ProtoCessor (apply power to the Mestek product) and run the *FieldServer Toolbox* application. The bridge should be displayed with a green connectivity indicator as shown in Figure 12. Please note that the bridge name may be different on your product. If no bridges show up, or if the bridge shows up with a yellow connectivity indicator there are several possibilities:

- 1) The Microsoft Windows (or another OEM) Firewall is preventing communications with the bridge. Disable any firewalls and try again.
- 2) The IP network settings on your computer were not correctly set. Please double check the settings outlined in the preceding sections to verify that they are set correctly.
- 3) The computer has multiple network cards and you have not configured or are not plugged into the correct port.
- 4) The IP network settings (IP Address/Subnet) on the bridge have been changed from the default settings.
- 5) The bridge is not powered or is defective. Please check for power, flashing lights, etc.

6	FieldServer Toolbox						
	FieldServer	r Toolb	ох			£	
	Setup He	р				Q	FieldServer Technologies
	DEVICES	÷	IP ADDRESS	MAC ADDRESS	FAVORITE	CONNECTIVITY	
	Mestek v1.0		192.168.1.24	00:50:4E:10:0A:30	*	•	Connect
							1
L							
							.4

Figure 12 – FieldServer Toolbox - ProtoCessor Found

If the bridge is displayed, and the Connectivity light is green, as shown in Figure 12, you are now ready to monitor and/or configure the bridge. Please consult our technical bulletins (or the Field Server documentation) for configuring the most common settings.

# Connecting a Computer to a FieldSafe Secure Mestek Communications Bridge

## 1 LOGIN TO THE PROTOCESSOR

The first time the FieldServer GUI is opened in a browser, the IP Address for the gateway will appear as untrusted shown in figure 13. This will cause the following pop-up windows to appear.

• When the Web Server Security Unconfigured window appears, read the text, and choose whether to move forward with HTTPS or HTTP

Web Server Security Unconfigured
Web server security has not yet been configured for the gateway. You have the option to continue with HTTP, which is not secure, or rather to use HTTPS.
When using HTTPS without an internet connection your browser will issue a security warning.
When using HTTPS with an internet connection your browser will redirect you to a trusted domain ie. <a href="https://192-168-1-24.gw.fieldpop.io">https://192-168-1-24.gw.fieldpop.io</a> for IP address 192.168.1.24.
Use HTTPS (Recommended) Continue with HTTP

Figure 13 Web Server Security Unconfigured

• When the warning that "Your connection is not private" appears, click the Advanced button on the bottom left corner of the screen as shown in figure 14.

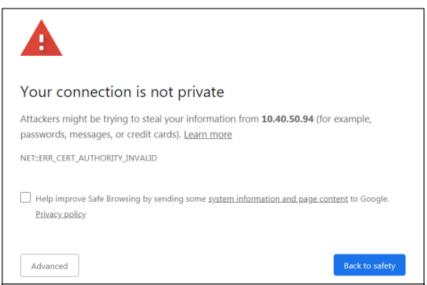


Figure 14 Your Connection is Not Private.

• Additional text will expand below the warning, click the underlined text "Proceed to 192.168.1.24 (unsafe)" as shown in figure 15.



#### Figure 15 Advanced Window Expanded Text Warning

• When the login screen appears, as in figure 16, type in the Username (default is "admin") and the Password (found on the label of the ProtoCessor).

SMC		
	Log In	
	Username	
	Password Log In	
	Forgot Password?	

#### Figure 16 Log In screen

**NOTE:** A user has 5 attempts to log in, then there will be a 10-minute lockout. There is no timeout on the ProtoCessor to enter a password.

There is also a QR code in the top right corner of the ProtoCessor label as shown in figure 17 that shows the default unique password when scanned. The SMC login screen will be displayed.

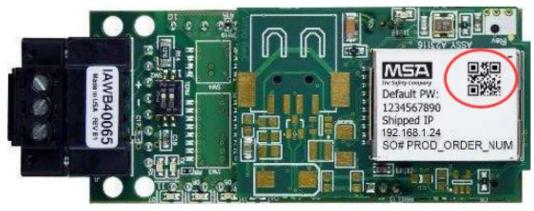


Figure 17 ProtoCessor QR Code

## 2 SELECT THE SECURITY MODE

• On the first login to the ProtoCessor, as shown below in figure 18, the following screen will appear that allows the user to select which mode the ProtoCessor should use.

SM	sierra monitor
A	Web server security is not configured Please select the web security profile from the options below. Note that browsers will issue a security warning when browsing to a HTTPS server with an untrusted self-signed certificate.
HTTPS with	h own trusted TLS certificate ( <b>recommended</b> and most secure) h default untrusted self-signed TLS certificate (vulnerable to man-in-the-middle attack) built-in payload encryption (vulnerable to man-in-the-middle attack)
Save	

#### Figure 18 Security Mode Selection Screen

#### NOTE: Cookies are used for authentication.

# 2.1 HTTPS with Own Trusted TLS Certificate

This is the recommended selection and the most secure.

• Once this option is selected, the Certificate, Private Key and Private Key Passphrase fields will appear under the mode selection.

sted self-signed TLS certificate (vulnerable to man-in-the-middle attack) d encryption (vulnerable to man-in-the-middle attack) 4LcHOrHLowoUFoVTaBMYd4d6VGdNkiKazBvWKcNOL7mrX VEmaiXqE3bx3zEuBEJ6pWPiw7LHf2r2ZoHw+9xb+aNMU p0xj3psSv2EJyKXS1bOYNRLsq7UzpwuAdT/Wy3o6vUM5 167MkcHMiuEi5pk7TRicHnQE/sfOAYOulduHOy9exlk9 iSph+gEr0lQo2wvmhyc7L22UXse1NoOfU2Zq0Eu1VVtu KFWVC+8q2JQsVcgiRWM7naobILEhOCMH+sKHJMCxDoXGt ZdGiAP5e	<ul> <li>HTTPS with own trusted TLS certificate (recommended and most secure)</li> <li>HTTPS with default untrusted self-signed TLS certificate (vulnerable to man-in-the-middle attack)</li> <li>HTTP with built-in payload encryption (vulnerable to man-in-the-middle attack)</li> <li>Certificate</li> <li>XzyMbQZFiRuJZJPe7CTHLcHOrHLowoUFoVTaBMYd4d6VGdNklKazByWKcNOL7mrX A4IBAQBEM+IPvOx3T/47VEmaiXqE3bx3zEuBEJ6pWPIw7LHf2r2ZoHw+9xb+aNMU</li> </ul>	
d encryption (vulnerable to man-in-the-middle attack) 4L cHOrHLowoUFoVTaBMYd4d6VGdNklKazByWKcNOL7mrX VEmaiXqE3bx3zEuBFJ6pWPIw7LHf2r2ZoHw+9xb+aNMU /p0xj3psSv2EJyKXS1bOYNRLsq7UzpwuAdT/Wy3o6vUM5 167MkcHMiuFi5pk7TRicHnQF/sfOAYOulduHOy9exlk9 iSph+gEr0IQo2wvmhyc7L22UXse1NoOfU2Zg0Eu1VVtu KFWVC+8q2JQsVcgiRWM7naobILEhOCMH+sKHJMCxDoXGt ZdGiAP5e 	HTTP with built-in payload encryption (vulnerable to man-in-the-middle attack) Certificate XzyMbQZFiRuJZJPe7CTHLcHOrHLowoUFoVTaBMYd4d6VGdNkiKazByWKcNOL7mrX	
d encryption (vulnerable to man-in-the-middle attack) 4LcHOrHLowoUFoVTaBMYd4d6VGdNklKazByWKcNOL7mrX VEmaiXqE3bx3zEuBFJ6pWPlw7LHt2r2ZoHw+9xb+aNMU /p0xj3psSv2EJyKXS1bOYNRLsq7UzpwuAdT/Wy3o6vUM5 167MkcHMiuFi5pk7TRicHnQF/sfOAYOulduHOy9exlk9 iSph+gEr0IQo2wvmhyc7L22UXse1NoOfU2Zg0Eu1VVtu KFWVC+8q2JQsVcgiRWM7naobILEhOCMH+sKHJMCxDoXGt ZdGiAP5e 	HTTP with built-in payload encryption (vulnerable to man-in-the-middle attack) Certificate XzyMbQZFiRuJZJPe7CTHLcHOrHLowoUFoVTaBMYd4d6VGdNkiKazByWKcNOL7mrX	
VEmaiXqE3bx3zEuBEJ6pWPIw7LHI2r2ZoHw+9xb+aNMU 'p0xj3psSv2EJyKXS1bOYNRLsq7UzpwuAdT/Wy3o6vUM5 t67MkcHMiuEi5pk7TRicHnQE/sfOAYOulduHOy9exlk9 iSph+gEr0IQo2wvmhyc7L22UXse1NoOfU2Zg0Eu1VVtu KFWVC+8q2JQsVcgiRWM7naobILEhOCMH+sKHJMCxDoXGt ZdGiAP5e 	XzyMbQZFiRuJZJPe7CTHLcHOrHLowoUFoVTaBMYd4d6VGdNklKazByWKcNOL7mrX	
VEmaiXqE3bx3zEuBEJ6pWPIw7LHf2r2ZoHw+9xb+aNMU 'p0xj3psSv2EJyKXS1bOYNRLsq7UzpwuAdT/Wy3o6vUM5 t67MkcHMiuEi5pk7TRicHnQE/sfOAYOulduHOy9exlk9 iSph+gEr0IQo2wvmhyc7L22UXse1NoOfU2Zg0Eu1VVtu KFWVC+8q2JQsVcgiRWM7naobILEhOCMH+sKHJMCxDoXGt ZdGiAP5e 		
p0xj3psSv2EJyKXS1bOYNRLsq7UzpwuAdT/Wy3o6vUM5 t67MkcHMiuFi5pk7TRicHnQF/sfOAYOulduHOy9exlk9 iSph+gEr0lQo2wvmhyc7L22UXse1NoOfU2Zg0Eu1VVtu KFWVC+8q2JQsVcgiRWM7naobILEhOCMH+sKHJMCxDoXGt ZdGiAP5e 	A4IBAQBFM+IPvOx3T/47VEmaiXqE3bx3zEuBFJ6pWPIw7LHt2r2ZoHw+9xb+aNMU	
t67MkcHMiuFi5pk7TRicHnQF/sfOAYOulduHOy9exlk9 iSph+gEr0lQo2wvmhyc7L22UXse1NoOfU2Zg0Eu1VVtu KFWVC+8q2JQsVcgiRWM7naobILEhOCMH+sKHJMCxDoXGt ZdGiAP5e 		
ASph+gEr0IQo2wvmhyc7L22UXse1NoOfU2Zg0Eu1VVtu KFWVC+8q2JQsVcgiRWM7naobILEhOCMH+sKHJMCxDoXGt ZdGiAP5e VzzbI0LDuKtc8+JiO3ooGjoTuHngkeAj/fKfbTAsKeAzw rm6daDK2vVDmR5k+jUUhEj5N49upIroB97MQgYotzgfT+ mHF5I8fck+ru545sVmpeezh0m5j5SURYAZMvbq5daCu MCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF ZbM/rPin4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VQ n5NBWg202Cy9IAYnuujs3aALI5uGBeekA62oTMxIzx	dVyAelhBMTMsni2ERvQVp0xj3psSv2EJyKXS1bOYNRLsq7UzpwuAdT/Wy3o6vUM5	- 1
KFWVC+8q2JQsVcgiRWM7naoblLEhOCMH+sKHJMCxDoXGt ZdGiAP5e Vzzbl0LDuKtc8+JiO3ooGjoTuHngkeAj/fKfbTAsKeAzw rm6daDK2vVDmR5k+jUUhEj5N49upIroB97MQgYotzgfT+ mHF5l8fck+ru545sVmpeezh0m5j5SURYAZMvbq5daCu MCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF ZbM/rPin4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VQ n5NBWg202Cy9IAYnuujs3aALI5uGBeekA62oTMxIzx	K+Cwf9qEoQ0LuxDZTIECt67MkcHMiuFi5pk7TRicHnQF/sfOAYOulduHOy9exlk9	
ZdGiAP5e Vzzbl0LDuKtc8+JiO3ooGjoTuHngkeAj/fKfbTAsKeAzw rm6daDK2vVDmR5k+jUUhEj5N49upIroB97MQgYotzgfT+ mHF5l8fck+ru545sVmpeezh0m5j5SURYAZMvbg5daCu MCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF ZbM/rPin4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VO n5NBWg202Cy9IAYnuujs3aALI5uGBeekA62oTMxIzx	FmHFVDIZt/cJUaF+e74EuSph+gEr0IQo2wvmhyc7L22UXse1NoOfU2Zg0Eu1VVtu	
Vzzbl0LDuKtc8+JiO3ooGjoTuHngkeAj/fKfbTAsKeAzw rm6daDK2vVDmR5k+jUUhEj5N49upIroB97MQgYotzgfT+ mHF5l8fck+ru545sVmpeezh0m5j5SURYAZMvbg5daCu MCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF ZbM/rPjn4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VQ n5NBWg202Cy9IAYnuujs3aALI5uGBeekA62oTMxIzx	JRryaMWiRFEWuuzMGZtKFWVC+8q2JQsVcgiRWM7naoblLEhOCMH+sKHJMCxDoXGt	
Vzzbl0LDuKtc8+JiO3ooGjoTuHngkeAj/fKfbTAsKeAzw rm6daDK2vVDmR5k+jUUhEj5N49upIroB97MQgYotzgfT+ mHF5l8fck+ru545sVmpeezh0m5j5SURYAZMvbg5daCu MCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF ZbM/rPjn4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VQ n5NBWg202Cy9IAYnuujs3aALI5uGBeekA62oTMxIzx	vtZjpZUoAL51YXxWSVcyZdGiAP5e	- 5
rm6daDK2vVDmR5k+jUUhEj5N49upIroB97MQgYotzgfT+ mHF5l8fck+ru545sVmpeezh0m5j5SURYAZMvbg5daCu MCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eE ZbM/rPin4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VO n5NBWg202Cy9IAYnuujs3aALI5uGBeekA62oTMxIzx	END CERTIFICATE	
mHF5l8fck+ru545sVmpeezh0m5j5SURYAZMvbq5daCu MCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF ZbM/rPin4tmO1Xf8HqONVN1x/iaMynOXG4cukoi4+VO n5NBWq202Cy9lAYnuujs3aALl5uGBeekA62oTMxIzx	sHB0zZoHr4YQSDk2BbYVzzbl0LDuKtc8+JiO3ooGjoTuHngkeAj/lKfbTAsKeAzw	8
MCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF ZbM/rPin4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VQ n5NBWg202Cy9lAYnuujs3aALl5uGBeekA62oTMxIzx	gKQe+H5UQNK0bdvZfOJrm6daDK2vVDmR5k+jUUhEj5N49upIroB97MQgYotzgfT+	
YtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF ZbM/rPin4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VO n5NBWg202Cy9lAYnuujs3aALl5uGBeekA62oTMxIzx	THIbpg5t1SIK617k04ObKmHF5l8fck+ru545sVmpeezh0m5j5SURYAZMvbq5daCu	
ZbM/rPin4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VO n5NBWg202Cy9lAYnuujs3aALl5uGBeekA62oTMxlzx	J4I5NIihbEvxRF4UK41ZDMCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46	- 1
n5NBWg202Cy9lAYnuujs3aALl5uGBeekA62oTMxlzx	+7aOFY9E+7j5ljmnkoS3GYtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF	
	GYeVSkl9fxxkxDOFtfdWRZbM/rPin4tmO1Xf8HgONVN1x/iaMynOXG4cukoi4+VO	- 1
V	u0rZaUEsII2zNkfm7fAASm5NBWg202Cy9IAYnuujs3aALI5uGBeekA62oTMxlzx	
2 Value	END BSA PRIVATE KEY	23
	gKQe+H5UQNK0bdvZfOJrm6daDK2vVDmR5k+jUUhEj5N49upIroB97MQgYotzgfT+ THIbpg5t1SIK617k04ObKmHF5l8fck+ru545sVmpeezh0m5j5SURYAZMvbq5daCu J4I5NIihbEvxRF4UK41ZDMCvujoPcBKUWrb1a/3XXnDnM2K9xyz2wze998D6Wk46 +7aOFY9F+7j5IjmnkoS3GYtwCyH5jP+mPP1K6RnuiD019wvvGPb4dtN/RTnfd0eF GYeVSkI9fxxkxDOFtfdWRZbM/rPjn4tmO1Xf8HqONVN1x/iaMynOXG4cukoi4+VQ	
	Private Key Passphrase	
ase	Specify if encrypted	
ase		
ase		

#### Figure 19 Security Mode Certificate and Private Key Selection

• Copy and paste the Certificate and Private Key text into their respective fields. If the Private Key is encrypted type in the associated Passphrase.

• Click Save.

• A "Redirecting" message will appear and after a short period of time the FieldServer GUI will open.

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# 2.2 HTTPS with Default Untrusted Self-Signed TLS Certificate or HTTP with Built-in Payload Encryption

• Simply select one of these options and click the Save button.

• A "Redirecting" message will appear and after a short period of time the FieldServer GUI will open.

# 3 CHANGE SETTINGS AFTER INITIAL SETUP

NOTE: Any changes will require a **ProtoCessor** reboot to take effect.

• Navigate from the FieldServer Web App Landing screen to the FS-GUI by clicking the blue "Diagnostics" text on the bottom of the screen.

SMG		🛔 Profile 👻
Device List	≡ System View	
🗠 Data Log Viewer	-	
🛱 Event Log		
SMC Cloud™		
O <sub>0</sub> <sup>o</sup> Settings >		
About		
	Copyright © Sierra Monitor Corporation 2019 All Rights Reserved - Diagnostics	

#### Figure 20 FS-GUI Web App Landing Screen

Click Setup in the Navigation pane.

avigation	Test Bridge 1		
est Bridge 1 About	Status Settin	gs info Stats	
Setup	Status		
View	Name	Value	
User Messages	Driver_Configuration	DCC000	
Diagnostics	DCC_Version	V6.05p (A)	
0	Kernel_Version	V6.51c (B)	
	Release_Status	Normal	
	Build_Revision	4.43.6-45-gcd82a452bb	
	Build_Date	2019-11-28 14:05:21 +0200	
	Platform_Name	ProtoAir_2R5485_ARMv7	
	BIO5_Version	4.1.2	
	FieldServer_Model	FS-Q5-2010-F	
	Serial_Number	1902300071VZL	
	Carrier Type	• •	
	Data_Points_Used	0	
	Data_Points_Max	250	
	Application Memory:		
	Protocol_Engine_Memory_Use	d 0.31%	
	Memory_Used	440 kB	
	Memory_Available	141,433 kB	
	Memory_Free_Bytes	141,433 kB	
	Memory_Min_Free_Bytes	140,526 kB	

Figure 21 FS-GUI Landing Screen

# 3.1 Change Security Mode

• Click Security in the Navigation panel.

SMC		
Navigation	Security Web Server Mode A HTTPS with own trusted TLS certificate (recommended and most secure) HTTPS with default untrusted self-signed TLS certificate (vulnerable to man-in-the-middle attack) HTTP with bult-in payload encryption (vulnerable to man-in-the-middle attack) Save	
Home HELP (F1) Contact Us		Logout

Figure 22 FS-GUI Security Setup

• Click the Mode desired.

o If HTTPS with own trusted TLS certificate is selected, follow instructions in Section 2.1

• Click the Save button.

## 3.2 Edit the Certificate Loaded onto the ProtoCessor

NOTE: A loaded certificate will only be available if the security mode was previously setup as HTTPS with own trusted TLS certificate.

- Click Security in the Navigation panel.
- Click the Edit Certificate button to open the certificate and key fields.
- Edit the loaded certificate or key text as needed.
- Click Save.

avigation	Security	
est Bridge 1 About Setup	Web Server	
<ul> <li>File Transfer</li> <li>Network Settings</li> </ul>	Mode	
Iver Management	HTTPS with own trusted TLS certificate (recommended and most secure)	
Security	<ul> <li>HTTPS with default untrusted self-signed TLS certificate (vulnerable to man-in-the-middle attack)</li> </ul>	
nine settings	<ul> <li>HTTP with built-in payload encryption (vulnerable to man-in-the-middle attack)</li> </ul>	
View		
User Messages Diagnostics	Certificate Loaded	
ong routo	Issuer: Internet Widgits Pty Ltd	
	Subject: Internet Widgits Pty Ltd Valid From: 2019-11-25T13:52:29.000Z	
	Valid To: 2019-12-25T13:52:29.000Z	
	Edit Certificate Save	

Figure 23 FS-GUI Security Setup-Certificate Loaded

## 3.3 Change User Management Settings

• Click User Management in the navigation panel.

NOTE: If the passwords are lost, the unit can be reset to factory settings to reinstate the default unique password on the label. For ProtoNode, ProtoCessor or ProtoCarrier recovery instructions, follow the FieldServer Recovery Instructions in section 4.

## 3.3.1 User Management

• Check that the Users tab is selected.

SMC		
Navigation	User Management	i
<ul> <li>Test Bridge 1</li> <li>About</li> <li>Setup</li> </ul>	Users Password	
File Transfer     Network Settings     User Management	Username V Groups	✓ Actions ✓
Security     Time Settings     View     User Messages		
Diagnostics	and the second	

Figure 24 FS-GUI User Management

User Types: Admin – Can modify and view any settings on the ProtoCessor.

**Operator** – Can modify and view any data in the ProtoCessor array(s).

Viewer - Can only view settings/readings on the ProtoCessor.

#### **Create Users**

Create U	ser	
Username:		
Enter a unique username		
Security Groups:		
Admin		
Operator		
✓ Viewer		
Password:		0 Weak
Enter password		
Show passwords		
Confirm Password:		
Confirm password		
Use Auto Generated Password		
	Create	Cancel

• Enter the new User fields: Name, Security Group and Password.

NOTE: Passwords must be at least 10 characters long. An algorithm automatically checks the password entered, and notes the level of strength on the top right of the Password text field.

- User details are hashed and salted.
- Click the Create button.
- Once the Success message appears, click

OK.

# Figure 25 Create User Window 3.3.1.1 Edit Users

• Click the pencil icon next to the desired user to open the User Edit window.

✓ Groups	✓ Actions ✓
Viewer	/ 0 ^
Admin, Operator, Viewer	/ 0
	Viewer

Figure 26 Setup Users

## Edit Users

Edit Us	er	
Username:		
User A		
Security Groups:		
Admin		
Operator		
Viewer		
Password:		
Optional		
Show passwords		
Confirm Password:		
Optional		
Use Auto Generated Password		
	Confirm	Cancel

- Once the Edit User window opens, change the User Security Group and Password as needed.
- Click Confirm.
- Once the Success message appears, click OK.

Figure 27 Edit User Window

## 3.3.1.2 Delete Users

Г

• Click the trash can icon next to the desired user to delete the entry.

Users Password				
Username	~ Groups	×	Actions ~	
User A	Viewer		10	-
User B	Admin, Operator, Viewer		10	
				÷
4			Þ	

Figure 28 Setup Users

• When the warning message appears, as in figure 29, click Confirm.



Figure 29 User Delete Warning

## 3.3.2 Change ProtoCessor Password

• Click the Password tab.

SMC			
Navigation   Test Bridge 1  About  Setup  File Transfer	User Management Users Password		
<ul> <li>Network Settings</li> <li>User Management</li> <li>Security</li> <li>Time Settings</li> <li>View</li> <li>User Messages</li> <li>Diagnostics</li> </ul>	Password: Enter password Show passwords Confirm Password: Confirm password Use Auto Generated Password	Confirm	
Home HELP (F1) Contact Us			• Logout

Figure 30 ProtoCessor Password Update via FS-GUI

• Change the login password for the ProtoCessor as needed.

NOTE: Passwords must be at least 10 characters long. An algorithm automatically checks the password entered and notes the level of strength on the top right of the Password text field.

## 4.0 ProtoNode, ProtoCessor, and ProtoCarrier Quick Recovery Instructions

Perform the following recovery if the password has been changed, lost, or forgotten, and now you are unable to connect to a Fieldserver.

The following recovery instructions only apply to Fieldserver ProtoNodes, ProtoCarriers, or ProtoCessors Model Type 2 shown in figure 31.



Model Type 2 Standard (Left) and LonWorks (Right) ProtoCessors



Figure 31 Model Type 2 Standard and LonWorks ProtoCessors

## 4.1 Recovery Instructions

• Put a jumper on the first and second pins shown on the left side of the Ethernet port shown in figure 32.

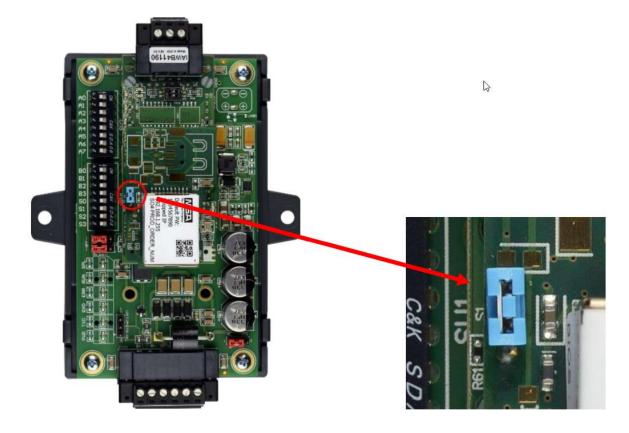


Figure 32 ProtoNode with Jumper Set for Recovery

• Wait 1 to 2 minutes for the run LED to start flashing.

# 4.2 Run LED Location

The RUN LED and other diagnostic LED's locations are shown below in figure 33.

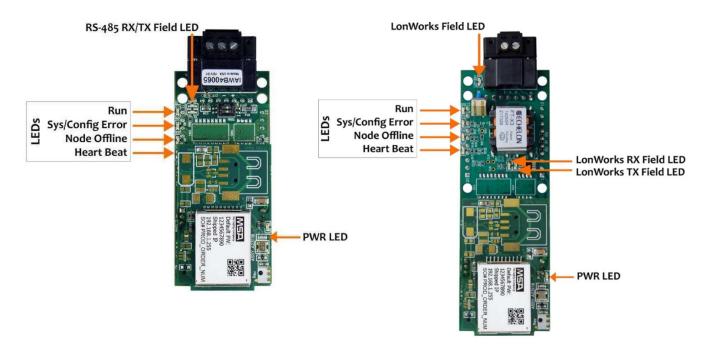


Figure 33 Run LED Location Standard (Left) and LonWorks (Right)

- When Run LED starts flashing, remove the jumper.
- The Unit IP Address reverts to the one determined by the firmware:
  - For current firmware ProtoNodes, ProtoCarriers and ProtoCessors: 192.168.1.24

V3.0