## **Instructions-Parts**



# LineSite™ Remote Monitoring Solution

334610D

Wireless monitoring for Graco InvisiPac® Tank-Free™ Hot Melt Delivery Systems. For professional use only. Not approved for use in explosive atmospheres or hazardous locations.



Read all warnings and instructions in this manual and in InvisiPac System manual. Save all instructions.

See page 3 for model information.



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## **Models**

#### **North America Models**

26A092 - North America Starter Kit		
Includes	Description	
24W982	Server	
24W983	Gateway	
24Y474	Ethernet Switch	
	Mounting Plate	

Additional North America Kits		
Kit No.	Description	
24W984	Wireless Monitor	
24W985	Repeater	

### **International Models**

26A114 – International Starter Kit		
Kit	Description	
24W982	Server	
24Y131	Gateway	
	Ethernet Switch	
	Mounting Plate	

Additional International Kits		
Kit No.	Description	
24Y126	Wireless Monitor	
24Y127	Repeater	

### **LineSite Overview**

Graco LineSite is a remote monitoring solution for your Graco InvisiPac. LineSite Wireless Monitor(s) attach to your machine and access settings and measurements contained in the machine. This information is communicated to the LineSite Server and displayed on a website.

The website allows you to:

- Track the status of your InvisiPac(s)
- View productivity of production line(s)
- See event logs from each of your InvisiPac(s)
- · Get troubleshooting information
- Get real-time e-mail alerts for InvisiPac events
- · View live information as your InvisiPac is running

## **Component Identification**

# Server: · Stores data from the Graco InvisiPac В Gateway: · Receives data wirelessly from Wireless Monitor(s) · Sends Data to Server Wireless Monitor: Connects to Graco InvisiPac to access system data · Sends data wirelessly to Gateway Wireless Repeater: · Boosts signal from Wireless Monitor to Gateway Use when Wireless Monitor range cannot reach Gateway Ε **Ethernet Switch** Allows communication between Gateway, Server, and PC/Network

## **LineSite Configuration Options**

Select a configuration listed below. Keep in mind your network infrastructure and your desired features.

Network, page 5: LineSite is available on your company's network.

Optional: Access on any internet-connected computer, tablet, or smart phone via MyLineSite.

Cellular, page 6: LineSite is connected to a cellular data service and available to any internet-connected computer, tablet, or smart phone.

Stand-Alone, page 7: LineSite isolated on one computer.

## MyLineSite Cloud Service Overview

MyLineSite Cloud Service is a free, optional feature included with LineSite. MyLineSite makes your InvisiPac system data available to all of your internet-connected devices. Enable MyLineSite to benefit from additional functionality and stay informed about your InvisiPac systems.

In exchange for the use of this service, Graco can collect usage data from your machine. Graco uses the information for purposes such as providing troubleshooting assistance and equipment use analysis.

See the End User License Agreement for more details and information about MyLineSite.

## **Network Configuration**

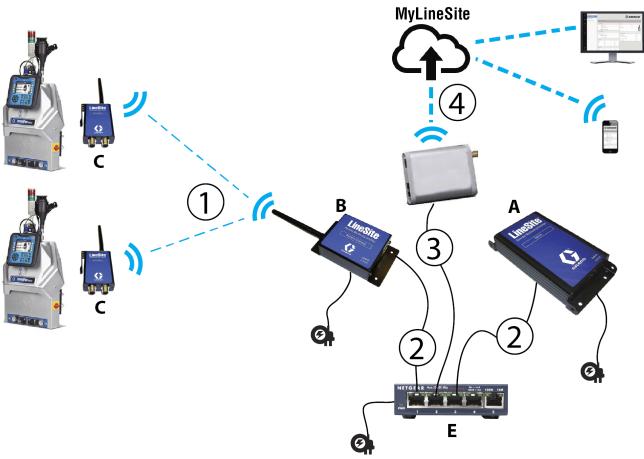


Figure 1

### How it works

1	Graco InvisiPac data sent wirelessly from Wireless Monitor(s) to the Gateway(s) (C to B).
2	Data sent over Ethernet from Gateway to Server (B to A).
3	Data sent over Ethernet from Server to Corporate Network. Access LineSite through internet browser on device connected to corporate network.
4	If MyLineSite is ENABLED (optional): Data is sent through the Cloud from the Corporate Network to the internet browser of any Internet connected computer, smartphone or tablet.

## **Cellular Configuration**

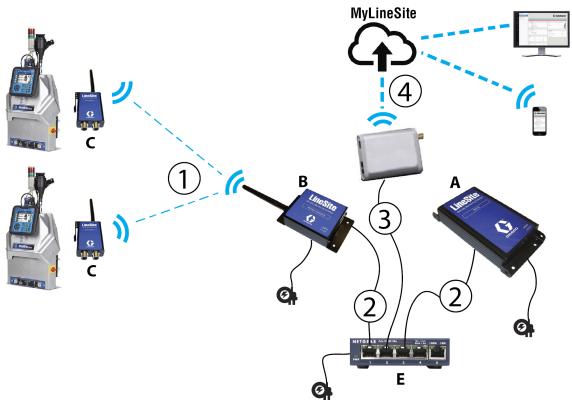


Figure 2

### How it works

1	Graco InvisiPac data sent wirelessly from Wireless Monitor(s) to the Gateway(s) (C to B).
2	Data sent over Ethernet from Gateway to Server (B to A).
3	Data sent over Ethernet from Server to Cellular Modem (modem not provided).
4	Access LineSite through internet browser on any internet connected device.

## **Stand-Alone Configuration**

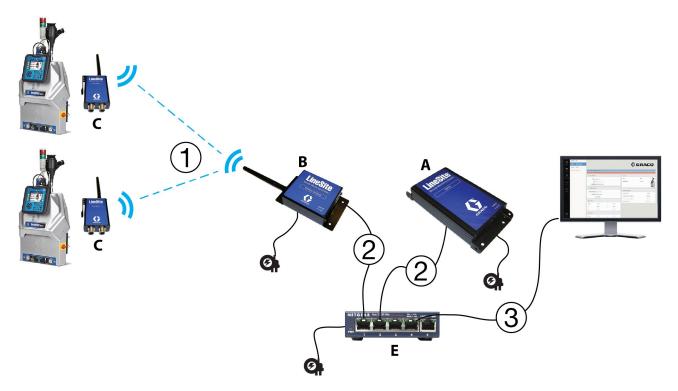


Figure 3

### How it works

1	Graco InvisiPac data sent wirelessly from Wireless Monitor to the Gateway (C to B).
2	Data sent over Ethernet from Gateway to Server (B to A).
3	Access LineSite through internet browser of Computer connected as shown.

### Not Included

- Coporate Network Access
- · WiFi Access
- Cellular Access (3G, 4G...)
- MyLineSite

## Installation

#### Install Server

### **Install Server: Network Configuration**

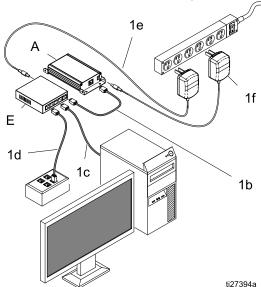
See Fig 4.

- 1. Connect the Server (A).
  - a. Mount the Server (A) and Ethernet Switch (E) near a power source.
  - b. Connect Ethernet cable between Server (A) and Ethernet Switch (E).
  - c. Connect Ethernet cable between Computer and Ethernet Switch (E).
  - d. Connect the Ethernet cable between your company's Ethernet (usually from an Ethernet Router) and the Ethernet Switch (E) .
  - e. Connect power to the Ethernet Switch (E) and wait one minute while the device starts.

#### **Note**

Ensure switch on back of Ethernet Switch is in the "ON" position.

f. Connect power to the Server (A) and wait for three minutes while the Server starts. The green LED on the Server will be on when complete.



2. Set the Computer's IP Address so that the computer can communicate with the Server.

a. Determine IP address of Router. Use method 1 or method 2.

#### Note

For Mac and Linux operating systems, see Appendix A — Mac or Linux, page 32.

#### Method 1: Command Prompt

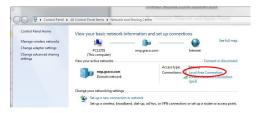
- Click on "Start" menu.
- ii. In "Search for programs and files," type 'cmd', then press ENTER.
- iii. In the Command Prompt window, type "ipconfig", then press ENTER.
- iv. Find the line that reads "Default Gateway..." The four number sequence (W.X.Y.Z) is your company's Ethernet Router's IP Address. For example, "192.168.0.1."

#### Method 2: Network & Sharing Center

- Click on "Start" menu.
- ii. In "Search for programs and files," type 'Network and sharing center', then press ENTER.



iii. Click on Local Area Connection.



iv. In the "Local Area Connection Status" window, click on "Details..."

- v. In the "Network Connection Details" window, find the row that reads "IPv4 Default Gateway." It should be in the format "W.X.Y.Z". For example, "192.168.0.1." This four number sequence is your company's Ethernet Router's IP Address.
- Navigate to Router's configuration page and determine IP Address of Server.

#### Note

All routers have slightly different configuration pages and methods of accessing the page. These steps are written generically. There may be other steps needed to complete this task. Contact your IT support person for further assistance.

- a. Open an internet browser (Internet Explorer, Firefox, Chrome, Safari, etc.).
- b. Type the IP Address of the Router into the address bar, then press ENTER.
- c. A username and password screen may appear. If so, enter the username and password of the router to continue to the router's configuration page.

#### **Note**

Many routers have a default user/password. If you do not know the user/password, determine the manufacturer and model of your router and search for the default user/password on the Internet. If you cannot find the correct user/password, contact your IT support person for further assistance.

d. You should now be viewing the Router's configuration page. Look for a section that

- says "DHCP." Click on "DHCP" and find the "DHCP Client List." In the list, you should see one item named "linesite," with an associated "MAC Address" and "Assigned IP." Write down this "Assigned IP."
- e. In the DHCP settings, there are two IP address, usually named "Start IP Address" and "End IP Address." Write these two IP addresses down.
- Navigate to the Server's IP address to setup LineSite.
  - a. Open a new Internet Browser window, and navigate to the IP address of the Server, which was determined in step 3.d. Place the IP address into the browser's address bar and press ENTER.
  - b. Follow the on-screen steps to complete the setup of the Server.
- 5. Assign Static IP address to Server.
  - a. Navigate to IP settings on LineSite website. See Connectivity & Network, page 20.
  - b. Assign the static IP address of the Server. Make certain that the IP address you choose is outside the "Start" to "End" IP address range (values were noted in step 3e). For example, if the "End" IP address is 192.168.0.199, enter "192.168.0.200" as the Static IP address.
  - c. Write down the assigned Static IP address and store in a permanent location.
- Bookmark the Server's IP address for easy access. See Bookmark the Server IP Address, page 12.
- 7. The Server is installed. Continue to Gateway setup, see Install Gateway, page 13.

#### **Install Server: Cellular Configuration**

See Fig 5.

#### Note

For Mac and Linux operating systems, see Appendix B — Mac or Linux, page 33.

- 1. Cellular Modem Setup
  - Set up cellular service through a cellular service provider known to have coverage at the installation location.
  - b. Position the modem near a window or area where signal strength is not reduced.
  - c. Connect the antenna provided with the cellular modem (F).
  - d. Connect Ethernet cable to the cellular modem (F). Let other end hang free until further instruction.
  - e. Plug the Cellular Modem's power supply into a wall outlet.
- 2. Connect the Server (A).
  - a. Mount the Server (A) and Ethernet Switch (E) near a power source.
  - b. Connect Ethernet cable between Server (A) and Ethernet Switch (E).
  - c. Connect Ethernet cable between Computer and Ethernet Switch (E).
  - d. Connect free end of the Ethernet cable from the Cellular Modem (F) to the Ethernet Switch (E).
  - e. Connect power to the Ethernet Switch (E) and wait one minute while the device starts.

#### Note

Ensure switch on back of Ethernet Switch is in the "ON" position.

f. Connect power to the Server (A) and wait for three minutes while the Server starts. The green LED on the Server will be on when complete.

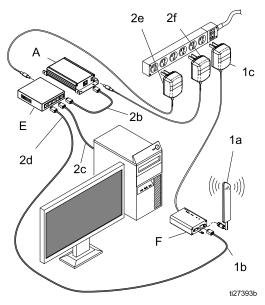


Figure 4

- Follow on-screen setup. Enable MyLineSite (Cellular Configuration must have MyLineSite enabled), and setup the custom URL at which LineSite will be accessed.
- 4. After completing the on-screen setup, open the LineSite URL on an internet connected device. Bookmark the URL for easy access.
- 5. The Server is installed. Continue to Gateway setup, see Install Gateway, page 13.

#### **Install Server: Stand-Alone Configuration**

See Fig 6.

- 1. Connect Server.
  - a. Mount the Server (A) and Ethernet switch (E) near a power source.
  - b. Connect Ethernet cable between Server (A) and Ethernet Switch (E).
  - c. Connect Ethernet cable between Computer and Ethernet Switch.
  - d. Connect the power to the Ethernet Switch (E) and wait about one minute while the device starts.

#### Note

Ensure switch on back of Ethernet Switch is in the "ON" position

e. Connect power to the Server (A) and wait for three minutes while the Server starts. The green LED will be on when complete.

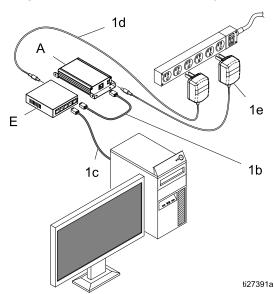


Figure 5

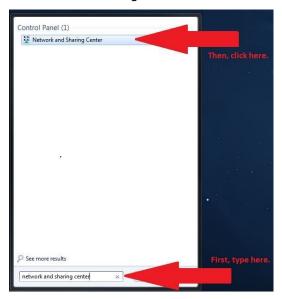
2. Set the Computer's IP Address so that the computer can communicate with the Server.

#### Note

For Mac and Linux operating systems see Appendix C — Mac or Linux, page 34.

a. Click on the Start menu.

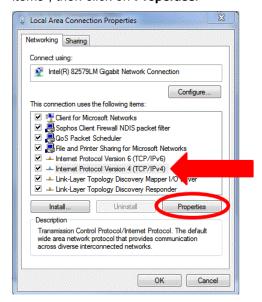
b. Use the Search feature to find and open "Network and Sharing Center".



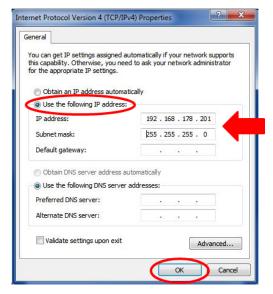
c. Click on Local Area Connection.



- d. In the "Local Area Connection Status" window, click **Properties**.
- e. In the "Local Area Connection Properties" window, highlight **Internet Protocol Version 4** in the list "This connection uses the following items", then click on **Properties**.



f. Click the radio button **Use the following IP address**, then type the **IP address** (192.168.178.201) and **subnet mask** (255.255.25.0):



- g. Click **OK** in the "Internet Protocol Version 4 (TCP/IPv4) Properties" window. Then click **Close** twice.
- 3. Open an internet browser (i.e. Internet Explorer, Mozilla Firefox, Google Chrome, Safari, etc.)
- 4. In the Internet Address field of the browser, type the following address: 192.168.178.200
- 5. Follow the on-screen setup steps to complete Server installation.

- 6. Use LineSite website to set the Server to use a static IP of *192.168.1.10*.
- 7. Follow same procedure as step 2 to assign computer static IP to *192.168.1.20*.
- 8. Type in Server IP *192.168.1.10* into Internet Browser, Press **Enter**.
- The LineSite Login/Home page should appear.
   Bookmark this page in your internet browser.
   See Bookmark the Server IP Address, page 12
- 10. The Server is installed. Continue to Gateway setup, see Install Gateway, page 13.

#### Bookmark the Server IP Address

- 1. Navigate to the LineSite Dashboard.
- 2. Use your Internet Browser to make a Bookmark for the LineSite Dashboard.
- Use your Internet Browser to rename the Bookmark to "LineSite Dashboard". This will allow you and other users to click on the bookmark "LineSite Dashboard" instead of manually typing in the IP address of the Server.

#### **Verify Software Updates**

Verify all software is updated. For details, see Software and Applications, page 22.

#### **Install Wireless Monitors**

 Turn off the InvisiPac main power disconnect switch.

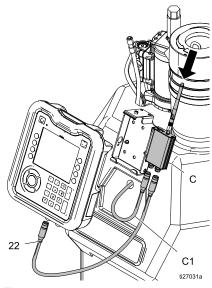


Figure 6

- 2. Install antenna on the Wireless Monitor (C). See Fig. 7.
- 3. Disconnect the cable (C1) from the bottom of the ADM and attach it to the LineSite Wireless Monitor (C).
- Connect supplied cable (22) from the bottom of the Wireless Monitor (C) to the ADM. See Fig. 1.
- 5. Mount Wireless Monitor (C) on the bracket behind the ADM . Do not let the device hang from the machine by the cable.

#### Note

Wireless range of the Wireless Monitor is 150 ft (25 m for European models), but may vary depending on obstacles between the machines.

#### Note

The Wireless Monitors (C) allow information to "hop" from monitor to monitor before reaching a Gateway (B). If a "hop" is required for a Wireless Monitor (C) to reach a Gateway (B), the intermediate monitor will need to remain powered at all times.

## **Install Gateway**

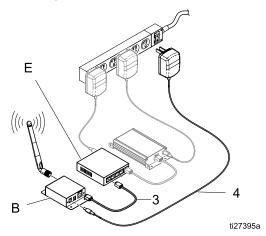
To ensure a strong wireless connection between the Monitor and the Gateway, install a Gateway in each room with a Monitor.

- 1. Install antenna on the Gateway (B).
- 2. Mount within wireless range of at least one Monitor that will be paired with this Gateway.

#### Note

Wireless range of Gateways is 150 ft (25 m for European models), but may vary depending on obstacles between the machines.

- 3. Connect Ethernet cable between Gateway (B) and Ethernet Switch (E).
- 4. Connect power supply between the Gateway (B) and power outlet.



#### **Add Hardware**

This section will guide you through configuring the LineSite wireless network. Follow these steps to add Gateway(s), Monitor(s), and/or Repeater(s) to the LineSite installation.

**NOTE:** To complete this section, you must be logged into Server with system\_admin permissions. See User Management for details.

#### **Add Gateway**

- Log in to LineSite with system\_admin permissions. On the left side menu, click on Settings, then on Hardware Management.
- 2. If the Gateway was wired into the same network as the Server:
  - The Gateway will be shown in the "Add Hardware" section of the "Hardware Management" page. Click the Gateway icon to add it to the Server.
  - b. If the Gateway does not appear in the "Add Hardware" section, manually pair the Gateway. See Appendix D, page 37.
- Assign the Gateway a name and click Add Hardware.
- After adding the hardware, click Setup Gateway and follow the on-screen instructions to create a Setup Token. Continue to Create Setup Token, page 14.

### Create Setup Token

Create a Setup Token to pair LineSite Wireless Monitors and Repeaters to a Gateway.

#### Note

Tokens can only be created by users with *system\_admin* permission.

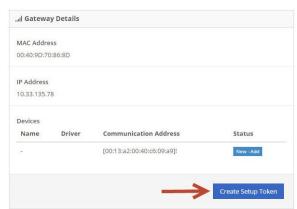
- 1. From the LineSite Dashboard, click **Settings** and then **Hardware Management**.
- 2. Click next to the Gateway that needs to be paired with the Wireless Monitor(s) and Repeater(s).



 Verify that the Network Address is the same as the MAC address labeled on the back of the Gateway.



- 4. Insert the blue Setup Token (supplied with the Server) into the token slot on the Server.
- 5. Click **Create Setup Token**. After the Setup Token is created, remove the token from the Server.



## Pair and Add Monitor(s) and Repeater(s)

Pair Wireless Monitor(s) and Repeater(s) with a Gateway to make them appear in the Hardware Management page.

 Pair repeater(s), if used. If a Repeater is needed to boost the signal between Wireless Monitor and Gateway, the Repeater must be paired and powered on first.

- Insert the Setup Token into the Repeater while it is powered on.
- b. Wait for LEDs to flash on and off. When they stop flashing, remove token.

#### Note

If the LEDs do not flash, remove the Setup Token from the Repeater. Wait for 10 seconds, then re-insert the Setup Token into the Repeater.

- 2. Pair Wireless Monitor.
  - Open the token cover in the bottom right corner on the ADM.
  - Remove any existing token already inside the ADM and store in safe location.

#### Note

Ensure InvisiPac is inactive while removing the token.

- Insert the Setup Token into the ADM while the InvisiPac is powered on and the ADM is displaying the Home screen.
- d. Observe the LEDs on the Wireless Monitor. Wait for LEDs 2 and 3 to flash on and off several times. See LED Status. When they stop flashing, remove the Setup Token from the ADM.

- e. Reinstall any existing token that was removed in Step 2b.
- f. Reinstall the token cover on the ADM.
- 3. Repeat steps 1 and 2 until all Monitor(s) and Repeater(s) are paired with the desired Gateway. To pair with a new or different Gateway, return to Create Setup Token, page 14.
- Paired Wirless Monitor(s) and Repeater(s) will now appear in the Hardware Mangement page on LineSite. On the left side menu, click Settings, then Hardware Management to add the desired hardware.

#### Note

A Wireless Monitor will appear as an InvisiPac system icon. A Repeater will appear as an icon of the Repeater.

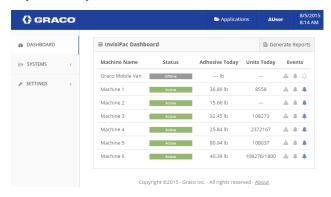
- 5. Click on the hardware icon and then assign it a name. To complete click the **Add Hardware** button.
- The Wireless Monitor and/or Repeater is now added to the LineSite installation. Repeat the "Pair and Add Wireless Monitor(s) and Repeater(s)" procedure for all Wireless Monitors and Repeaters that will be paired with that specific Gateway.

## Use the LineSite Website

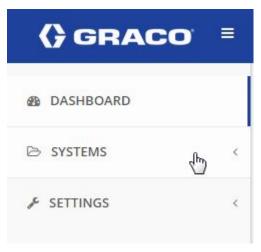
The left menu bar is used to navigate throughout the LineSite Website.

#### **Dashboard**

All InviisiPac systems with installed Wireless Monitors in your facility are listed on the Dashboard.



To see InvisiPac system details, click on the desired system on the Dashboard. Alternately, expand the Systems tab on the left menu bar to see a list of all systems. Click the desired system.



### System Page

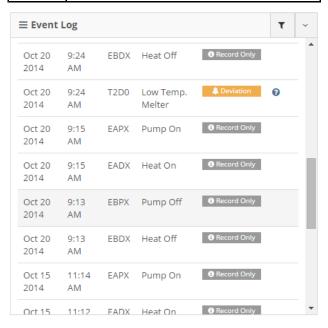
Each system page contains InvisiPac system status and general information such as:

- · Event Logs
- · Temperatures and Setpoints
- · Material Usage

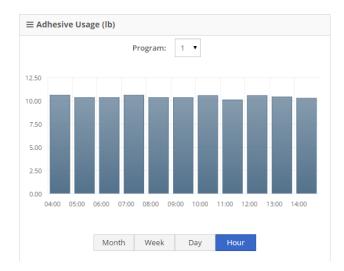
## **Event Log**

The Event Log lists events that have occurred.

Icon	Description	
0	View troubleshooting information on help.graco.com.	
•	Click to show or hide the several different types of Events.	



### **Adhesive Usage**



### **Actions**

### **Diagnostics**

View live InvisiPac or Pattern Controller system diagnostic information of the selected system. Click on **View InvisiPac Diagnostics Data** in the "Actions" section to view.

- Channel Information: Current, Temperature, Duty Cycle
- Miscellaneous: Pump CPM, Lifetime Cycle Count, CAN Voltage, MZLP 1 Temp.
- Voltage: view the voltage connected to the InvisiPac
- · Software: Part Number, Serial Number, Version
- Inputs & Outputs: PLC Input and Output states, system input and outputs

Click on **View Pattern Controller Diagnostics Data** in the "Actions" section to view:

- Line Information: Line Speed, Runup information, Units per Minute, Total units, and Adhesive per Unit
- · Inputs and Outputs: All PLC Inputs and Outputs

 Miscellaneous: PCM Voltage, Gun Setup Information, Trigger Setup Information

#### Note

See the InvisiPac manual for detailed information about diagnostic information.

Click the back arrow, next to the system name at the top of the page, to go back to the selected System Page.

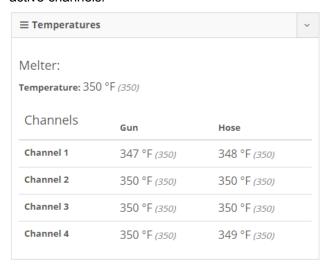


### **System**



#### **Temperatures**

Displays actual temperatures for the melter and active channels.



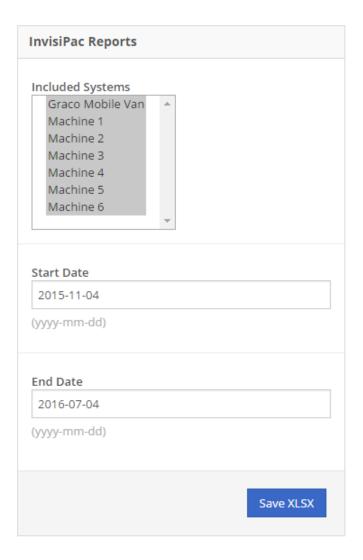
#### **Generate Reports**

#### Report data includes

- Machine Name the name assigned to InvisiPac in LineSite
- Active Program the Program currently running on the Pattern Controller
- Units Line 1, Line 2, Aux product counters for LIne 1, 2, and Auxiliary input
- Adhesive Usage (lb)
- · Adhesive/Unit (g)
- From the Dashboard or Actions panel on a System page, click Generate Reports.

#### Generate Reports

- 2. Select the systems to include in the report.
- 3. Select a start date, end date, and report intervals.
- 4. Click Save XLSX.



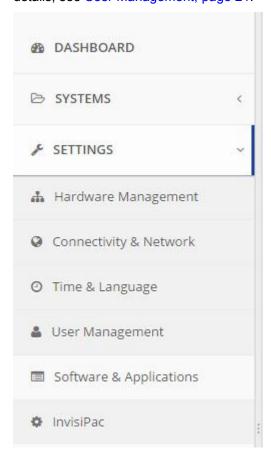
#### **Graco Technical Assistance Download**

In the Actions panel, click on Graco Tech Assistance Download to download a file that can be emailed to Graco InvisiPac Technical Assistance.

- 1. Choose a Start Date. This is the date of the oldest data included in the download.
- Choose a Duration. This is the number of days past the Start Date that will be included in the data download.
- 3. Click Save.
- Locate the \*.gdl file on your computer and email as an attachment to Graco InvisiPac Technical Assistance.

## **LineSite Settings**

Depending on your current user permissions, some pages may not be available. For permission control details, see User Management, page 21.



### **Hardware Management**

This page allows you to add and configure settings for Wireless Monitors, Repeaters, and Gateways.

For details, see Add Hardware, page 14.

#### Note

Click ito remove hardware.

#### Device & System

This section of the page shows a list of the Wireless Monitors and Repeaters that are added to LineSite.

- Name
- Driver
- · Communication Address
- Gateway
- · Status
- · Actions

#### **Gateways**

This section of the page shows a list of the Gateway(s) that are added to the LineSite Server.

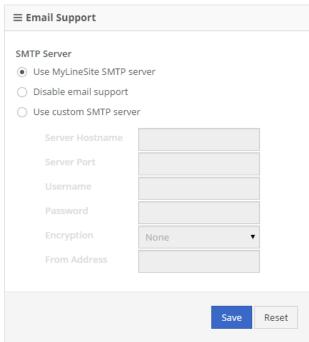
- Name
- Driver
- · Network Address
- Status
- · Actions

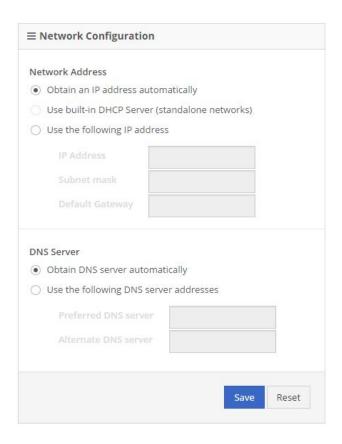
## **Connectivity & Network**

#### Settings include:

- MyLineSite Relay
- E-mail Support
- · Network Configuration

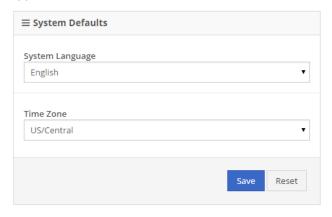






## Time & Language

Select a system language and time zone for the web application.



### **User Management**

The User Mangement page is accessed by clicking **Settings** and then **User Management** on the left menu bar.

#### Note

The User Management page is only visible for users with *user\_admin* permissions.

This page lists the following information for all users that have been added:

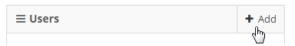
- ID
- Username
- Name
- Email
- Language
- Permissions
- Status

#### **Permission Levels**

Permission	Description
superuser	Able to access all items
sys_admin	Able to manage hardware
user_admin	Able to manage users
none	Able to view connected systems

#### Add User

1. Click the Add button.



- 2. Enter user information.
- 3. Click Create User.

#### **Change or Reset Password**

- 1. Click on User Management on the left menu.
- 2. Click a user from the Users List.
- 3. Click Change Password or Reset Password.
- 4. Click Save.

#### Disable User

When a user is disabled, the user is unable to login. All data associated with the user is still available. Only users with *user\_admin* permissions are able to disable users.

- 1. Click a user from the users list.
- 2. Click Disable user from the Actions module.
- 3. Enter your password and click Save.

#### **Delete User**

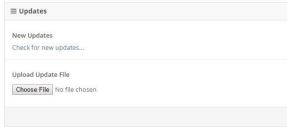
Only users with user\_admin permissions are able to delete users.

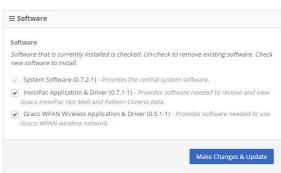
- 1. Click a user from the users list.
- 2. Click Delete user from the Actions module.
- 3. Enter your password and click Save.

## Software and Applications

Follow steps below to complete a LineSite software update.

- 1. On the LineSite side menu bar, click **Settings**, then click **Software & Applications**.
- 2. The following screen will appear.





#### If MyLineSite is enabled:

MyLineSite service will automatically determine which updates are available. Click on **Check for new updates...**, then continue to step 3.

#### If MyLineSite is not enabled:

Download the latest version of LineSite software from the Graco Product Knowledge Exchange (Graco PKE). After downloading the file, click on the **Choose File** button on the LineSite Software

& Applications page. Navigate to the file's location on the computer and select the \*.gup file to upload.

#### Note

The \*.gup update file must be saved on the computer on which you are currently viewing the LineSite Software & Applications page.

3. Available updates will be highlighted with a green icon next to the software description.

#### Note

If no green icons appear next to the software descriptions, the software is already up to date or the uploaded file is older than what is currently installed.

4. To complete the updates with a green icon shown, click "Make Changes & Update" button.

#### Note

The Server will restart during the update process. Wait until the Server LED is solid green before navigating away from the Software & Applications page.

5. **To Remove Existing Application & Driver from LineSite:** un-check the check-box next to the desired Application & Driver, then click "Make Changes & Update".

#### Note

Removing Application & Driver software from LineSite could have unintended consequences. Consult your Graco Representative before performing this procedure.

## **Troubleshooting**

## **During Setup/Installation**

Problem	Cause	Solution
All Configurations		
Unable to set Static IP on Computer.	Do not have Admin privileges.	Contact I.T. department to set static IP on Computer.
Unable to access LineSite setup page at 192.168.178.200.	Server is not powered.  Server has not booted up.  Server has error.	Perform Server Verification, page 27.
	Computer is not connected to same network as Server.  Computer is not on same Subnet.	Review Install Server, page 8 ,for your LineSite configuration.
	Firewall blocking access.  IP Address conflict.	Contact IT department to resolve firewall restrictions and IP address conflicts.
	Ethernet cable compatibility (cross-over vs. patch).	Replace Ethernet cable between Server and Ethernet Switch with the opposite Ethernet cable type.
Gateway does not appear in the Hardware Management page.	Gateway not powered. Gateway not booted up. Gateway has error/misconfigured. Gateway is not connected to the same network as the Server. Gateway is not on same subnet as the Server.	Perform Gateway Verification, page 28.
	Firewall is blocking Gateway (UDP ports).  IP Address conflict.	Contact I.T. department to resolve firewall restrictions and IP address conflicts.
	Ethernet cable compatibility (cross-over vs. patch).	Replace Ethernet cable between Gateway and Ethernet Switch with the opposite Ethernet cable type.

Problem	Cause	Solution
Wireless Monitor will not Pair	ADM Software needs to be updated.	Update ADM software to latest
with the Gateway (i.e. the LED's		version.
don't flash when I insert the Setup Token).		Note
		The latest version of
		software can be found
		on the Graco Product
		Knowledge Exchange
		(graco.custhelp.com).
	Token was not inserted while system power was already ON.	Power ON system and wait until the home screen is shown before
	power was anotacy or .	inserting token into the ADM
	Wireless Monitor is not plugged into the	Review Install Wireless Monitors,
	InvisiPac.	page 13.
	Wrong token inserted (black token or	Locate the LineSite pairing token
	blue token with a different function).	that came with the Server and
		repeat Add Hardware, page 14.
Wireless Monitor does not	Monitor was paired using the wrong	Review
appear on the LineSite Hardware Management page.	Setup Token.	Create Setup Token, page 14, and Add Hardware, page 14.
Management page.		
		Ensure pairing token was created
		for the Gateway that is closest to
	Out of range	the Monitor.
	Out of range.	Place Repeater between Gateway and Monitor or move
		Gateway and Monitor of Thove
Wireless Repeater does not	Repeater was paired using the wrong	Review
appear on the LineSite Hardware		Create Setup Token, page 14,
Management page.		and Add Hardware, page 14.
		Ensure pairing token was created
		for the Gateway that is closest to
	Out of range	the Monitor.
	Out of range.	Remove any physical obstacles between Gateway and Repeater.
		Place Gateway and Repeater
		closer to each other.
Stand-Alone Configuration		
After setting static IP on LineSite	Server is unplugged.	Perform
Settings page, I cannot access LineSite.	Server has not booted.	Server Verification, page 27.
	Server has error.	
	Server is not on same network as	Review Install Server: Stand-
	computer.	Alone Configuration, page 11.
	PC was not moved to same Subnet as new IP of Server.	
	Server and PC accidentally got assigned the same IP address.	
	Anti-Virus software could be blocking	Contact I.T. department to enable
	access.	website access.

Problem	Cause	Solution
When I try to enable MyLineSite,	MyLineSite is not available in the	Network or Cellular Configuration
it gives an error message.	Stand-Alone configuration because the	is required for MyLineSite
	Server is NOT connected to the Internet.	service.
I tried to setup the SMTP Server	SMTP Server not available in	Network or Cellular Configuration
for email alerts, and I am not	Stand-Alone because the Server is NOT	is required to receive emails.
getting emails.	connected to the corporate Network.	
Network Configuration		
When I try to enable MyLineSite,	Server has error.	Perform
it gives error message.		Server Verification, page 27.
	Server is not connected to Internet.	Check physical network
		connections between devices.
		If issue persists, contact I.T.
		department.
	Outgoing Port 443 is blocked by I.T.	Contact I.T. department to enable
	(SSH must be allowed).	access to port 443.
Cellular Configuration		
When I try to enable MyLineSite,	Cellular Modem is not plugged into same	Review Install Server: Cellular
it gives error message.	Ethernet Network as Server.	Configuration, page 10.
	Bad Ethernet cable (wiring issue).	
	Cell Modem powered up after the Server	Cycle power to the Server (leave
		Cell Modem on) and retry.
	Antenna for Cell Modem is disconnected.	Verify Cell Modem has the
	Wrong Antenna connected to Cell	appropriate antenna connected.
	Modem.	See Install Server: Cellular
		Configuration, page 10.
	Cell Modem is not configured (APN).	Only applies to 4G modems. See
		Cell Modem manual for proper
		setup.
	Cellular Data Plan is not enabled for the	Contact cellular provider to set
	Cell Modem.	up a plan.
	No Cellular coverage.	Move Cellular Antenna to new
	3 3 3 3 3 3 3 3 3	location.
I setup the custom URL for	Device (computer, tablet, smartphone) is	Verify device is able to connect
MyLineSite. Even though I type	not connected to the Internet.	to the Internet.
the URL into a web-browser, I	Website is blocked by I.T.	Contact I.T. department to enable
cannot access LineSite.		website access.

## After Setup/Installation

Problem	Cause	Solution
I cannot remember how to get to	N/A	Repeat installation process for
the LineSite page.		your LineSite configuration and
		bookmark URL upon completion.
LineSite says my InvisiPac is	A connection cannot be established	Perform Wireless Monitor
"Offline".	to the system.	Verification, page 29. If
		problem persists, perform
11.00		Gateway Verification, page 28.
LineSite page loads too slow.	Poor connection to the Server.	Cellular configuration:
		Move Cell Modem and/or antenna
		for better reception. If better cell
		reception is not an option, consider
		changing to network configuration.
		Network configuration:
		Contact I.T department to improve
		page loading time.
I can login to LineSite, but the data	A connection cannot be established	Perform Wireless Monitor
never updates even though the	to the system.	Verification, page 29. If
InvisiPac is running.		problem persists, perform
		Gateway Verification, page 28.
I forgot my Password.	N/A	If SMTP is enabled and device is
		connected locally to the Server,
		press the "Forgot Password" button
		to receive an email with credentials
		Otherwise, contact the LineSite
		user_admin to have password
		reset.
I forgot my Password and I am not	N/A	Contact the LineSite user_admin
using MyLineSite or SMTP Email		to have password reset. This most
Server.		likely is the person who performed
		the initial LineSite installation.

#### **Server Verification**

Use this procedure to verify that the Server is working correctly.

Follow the steps in sequential order until a contradiction is found, then follow instructions to correct Server operation.

1. Green LED is on.

#### Note

The Green LED should be ON when Power is plugged in and the Server boots up. This can take up to 3 minutes.

If Green LED is not on:

- Plug in power and wait for Server to boot up (can take a few minutes).
- If Red LED is on, there was an error. Try to reboot. If Red LED is still on, replace Server.
- 2. Ethernet cable is plugged into Server.

#### Note

An Ethernet Cable must ALWAYS be plugged into the Server. The Ethernet cable should go from the Server to the Ethernet Switch.

If Ethernet Cable is not plugged in:

- Plug Ethernet Cable in between the Server and Ethernet Switch
- 3. Ethernet Switch is plugged into a "Network"

#### Note

For the LineSite to be accessed via a Computer, tablet, or smartphone, the Server must be discoverable on the Network to which those devices are attached.

If Ethernet Switch is not on a "Network":

- Stand—Alone Configuration: The "Network" consists of the Computer(s) plugged directly into the Ethernet Switch.
- Network Configuration: The "Network" is the Corporate Intranet. Plug the Ethernet Switch into the Corporate Intranet.
- Cellular Configuration: The "Network" is connected to the Cellular Modem. Plug the Ethernet Switch into the Cellular Modem.
- 4. First-Time Setup completed

#### Note

To use LineSite, a user must complete the First-Time setup. The First-Time setup should be completed the first time a user connects to the Server.

- Stand-Alone Configuration: Connect to LineSite using a Computer that is plugged directly into the Ethernet Switch (See Install Server: Stand-Alone Configuration, page 11).
- Network Configuration: Connect to LineSite using a Computer that is plugged into the Corporate Network (See Install Server: Network Configuration, page 8). The Computer must be on the same Subnet as the Server.
- Cellular Configuration: Connect to LineSite by connecting a Computer directly to the Ethernet Switch (See Install Server: Cellular Configuration, page 10). After setup is complete, disconnect this Computer from the Ethernet Switch.

### **Gateway Verification**

Use this section to verify that the Gateway is working correctly.

Follow the steps in sequential order until a contradiction is found, then follow instructions to correct Gateway operation.

1. LED # 3 is flashing. See LED Status.

#### Note

LED #3 should be FLASHING when Power is plugged in and the Gateway is connected to the network.

If LED #3 is not flashing:

- · Plug in power and wait for Gateway to start
- 2. Gateway is paired to Server.

#### Note

Gateway should be listed in the Hardware Management, page 19, after the Gateway has been added to the Server. See Add Hardware, page 14.

If Gateway is not listed:

- Perform Add Hardware, page 14 for the Gateway.
- 3. Gateway is connected on hardware management page.

#### Note

Gateway should have a status of

Connected when the Gateway is powered on and connected to the network.

If Gateway is not connected:

- Ensure the Gateway is plugged into the Ethernet Switch with an Ethernet cable.
- Ensure the Gateway is on the same subnet as the Server.
- Attempt power cycle on Gateway. Ensure Ethernet switch is powered on before applying power to the Gateway.

### **Repeater Verification**

Use this section to verify that the Repeater is working correctly.

Follow the steps in sequential order until a contradiction is found, then follow instructions to correct Repeater operation.

1. LED #6 is ON. See LED Status)

#### Note

LED #6 should be ON when Power is plugged into the Repeater.

If LED #6 is not ON:

- Plug power into the Repeater. If LED #6 does not turn on, replace Repeater.
- 2. Repeater is paired to Server.

#### Note

Repeater should be listed in the Hardware Management, page 19, after the Repeater has been added to the Server. See Add Hardware, page 14.

If Repeater is not listed:

- Perform the Add Hardware, page 14 for the Repeater.
- 3. Repeater should display as on the Hardware Management page when:
  - · Repeater is powered ON.
  - Repeater is within wireless range of the Gateway it is paired to.

#### **Wireless Monitor Verification**

Use this section to verify that the Wireless Monitor is working correctly. Follow the steps in sequential order until a contradiction is found, then follow instructions to correct Wireless Monitor operation.

1. LED #6 is ON. See LED Status for LED numbers.

#### Note

LED #6 should be ON when Power is plugged into the Wireless Monitor.

If LED #6 is not ON:

 Plug power into the Wireless Monitor, see Install Wireless Monitors, page 13. If LED #6 does not turn on, replace Wireless Monitor. 2. Wireless Monitor is paired to Server.

#### Note

Wireless Monitor should be listed in the Hardware Management, page 19, after it has been added to the Server. See Add Hardware, page 14

If Wireless Monitor is not listed:

- Perform the Add Hardware, page 14.
- 3. Wireless Monitor should display as

  Connected on the Hardware Management page when:
  - Wireless Monitor is powered ON.
  - The Wireless Monitor is within wireless range of the Gateway it is paired to.

## **LED Status**

Wireless Monitor and Repeater	Server	Gateway
1 4	1	1 4
2 5	2	2 5
3 6	3	3 6

## Wireless Monitor and Repeater

LED	Description	Condition	Status
1	Send/Receive	Solid Green	Data is being sent or received
		Solid Green	Strong signal
2	Signal Strength	Flashing Green	Strong signal if the LED is on for longer than it is off.
3	Network Connection	Solid Green	Connected to network
4	Error	Solid Red	Error with device
5	CAN Communication	Flashing Orange	Server is loading
6	Power	Solid Green	Power is on

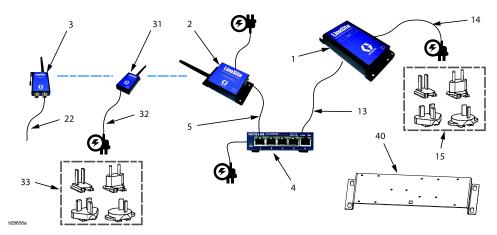
## Server

LED	Description	Condition	Status
1	Error	Solid Red	Error with device
2	Loading	Solid Orange	Server is loading
3	Ready	Solid Green	Power is on

## Gateway

LED	Description	Condition	Status
1	Send	Solid Green	Data is being sent
2	Receive	Solid Green	Data is being received
2	Natural Connection	Solid Green	Power is on
3	Network Connection	Flashing Green	Connected to network
4, 5 and 6	Signal Strength	Solid Green	Strong signal
4 and 5	Signal Strength	Solid Green	Medium signal
6	Signal Strength	Solid Green	Low signal

## **Parts**



		North America 26A092	International 26A114	
Ref.	Description	Part No.	Part No.	Qty.
1	Server	24W982	24W982	1
2	Gateway	24W983	24Y131	1
4	Ethernet Switch	24Y474	24Y474	1
40	Mounting Plate			1

## LineSite Server, 24W982

Ref	Part	Description	Qty
11	24W322	MODULE, server	1
12	15M122	TOKEN, blue	1
13	120050	CABLE, communication, CAT5, straight thru pin out	1
14	127991	POWER SUPPLY, 12V DC, lps, barrel, US	1
15	127992	KIT, power supply, international AC plug (4 interchangeable plugs)	1

## Repeater

	24W985 — North America 24Y127 — International		
Ref	Part	Description	Qty
31		MODULE, repeater	1
32		POWER SUPPLY, 12V DC, lps, barrel, international	1
33		KIT, power supply, international AC plug (4 plugs)	1

## **Wireless Monitor Kits**

24W984 — North America 24Y126 — International

Ref	Part	Description	Qty
21		MODULE, monitor	1
22		CABLE, CAN, female/female	1

## Appendix A — Mac or Linux

Instructions to install the Server on Mac or Linux computer operating systems.

## **Install Server: Network Configuration**

Installation instructions for Mac and Linux operating systems.

- Connect the Server.
  - Mount the Server and Ethernet switch near a power source.
  - b. Connect two Ethernet cables between the Server, Ethernet Switch, and Computer.
  - c. Connect the Ethernet cable between your company's Ethernet (usually from an Ethernet Router) and the Ethernet Switch.
  - d. Connect the power to the Ethernet Switch and wait one minute while the device starts.
  - e. Connect power to the Server and wait for three minutes while the Server starts. The green LED on the Server will be on when complete.
- 2. Set the Computer's IP Address so that the computer can communicate with the Server.
  - a. Determine IP address of Router. Use method 1 or method 2.

#### Mac

- Click on the Apple Menu in the top left. Click on System Preferences. Click on Network.
- ii. On the left side of the *Network* window, ensure **Ethernet** is highlighted.
- The Router IP Address is the four-number sequence (W.X.Y.Z) next to the "Router" label.
- iv. Go to step 3.

#### Linux

- Click the **System Settings** icon on the left task bar.
- In the System Settings Page, click the Network icon.
- iii. In the *Network* page ensure **Wired** is highlighted. Once **Wired** is highlighted, the connection information will display.

- iv. The Router IP Address is the four-number sequence (W.X.Y.Z) next to the "Default Route" label.
- v. Go to step 3.
- Navigate to Router's configuration page and determine IP Address of Server.

#### Note

All Routers have slightly different configuration pages and methods of accessing the page. These steps are written generically. There may be other steps needed to complete this task. Contact your IT support person for further assistance.

- a. Open an internet browser (internet explorer, firefox, chrome, safari, etc.).
- b. Type the IP Address of the Router into the address bar, then press ENTER.
- c. A username and password screen may appear. If so, enter the username and password of the router to continue to the router's configuration page.

#### Note

Many routers have a default user/password. If you do not know the user/password, determine the manufacturer and model of your router and search for the default user/password on the Internet. If you cannot find the correct user/password, contact your IT support person for further assistance.

- d. You should now be viewing the Router's configuration page. Look for a section that says "DHCP". Click on "DHCP" and find the "DHCP Client List". In the list, you should see one item named "linesite", with an associated "MAC Address" and "Assigned IP". Write down this "Assigned IP."
- e. In the DHCP settings, there are two IP address, usually named "Start IP Address" and "End IP Address". Write these two IP addresses down.
- 4. Navigate to the Server's IP address to setup LineSite.

- a. Open a new Internet Browser window, and navigate to the IP address of the Server, which was determined in step 3.d. Place the IP address into the browser's address bar and press ENTER.
- Follow the on-screen steps to complete the setup of the Server.
- 5. Assign Static IP address to Server.
  - Navigate to IP settings on LineSite website.
     See Connectivity & Network, page 20.
  - Assign the static IP address of the Server.
     Make certain that the IP address you choose

- is outside the "Start" to "End" IP address range (values were noted in step C.f.). For example, if the "End" IP address is 192.168.0.199, enter "192.168.0.200" as the Static IP address.
- c. Write down the assigned Static IP address and store in a permanent location
- Bookmark the Server's IP address for easy access. See Bookmark the Server IP Address, page 12.
- 7. The Server is installed.

## Appendix B — Mac or Linux

### Install Server: Cellular Configuration

Installation instructions for Mac and Linux operating systems.

- 1. Connect the hardware.
- Access the LineSite using default IP (192.168.178.200. The PC must be on the same subnet) or Cellular Model DHCP assigned IP (login to cell modem at 192.168.1.1).
- Follow on-screen setup. Enable MyLineSite (Cellular Configuration must have MyLineSite enabled), and setup the custom URL at which LineSite will be accessed.
- 4. After completing the LineSite URL on an internet connected device.
- 5. Server is installed. Continue to Gateway setup, see Install Gateway, page 13.

## Appendix C — Mac or Linux

# Install Server: Stand-Alone Configuration

- 1. Connect Server.
  - a. Mount the Server and Ethernet switch near a power source.
  - Connect Ethernet cable between the Server and Ethernet Switch. Connect second Ethernet cable between the computer and Switch.
  - c. Connect the power to the Ethernet Switch and wait 1 minute while the device starts.
  - d. Connect power to the Server and wait for 3 minutes while the Server starts. The green LED will be on when complete.
- 2. Set the Computer's IP Address so that the computer can communicate with the Server.

#### Mac (OS-X)

a. Click on the "System Preferences" tab at the bottom of the screen.



In "System Preferences" click on the **Network** icon.



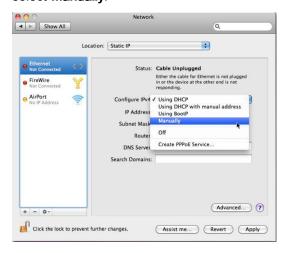
c. In the "Network" window, click on the pull-down menu by "Location:" and click **Edit Locations...** 



 d. Add a location named Static IP and click Done.



 Back in the "Network" window, click on the pull-down menu by Configure IPv4: and select Manually.



f. Type 192.168.178.201 in the "IP Address" field. Type 255.255.255.0 in the "Subnet Mask" field. Type 192.168.178.1 in the "Router" field. Type 8.8.8.8 in the "DNS Server" field and click Apply.



#### Linux

a. Click on the System Settings icon.



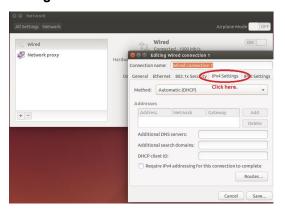
b. In "System Settings", click on Network.



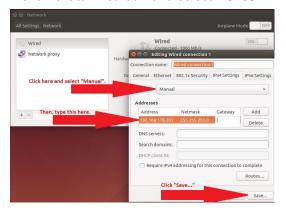
c. In "Network", click on Options...



d. In the "Options" window, click on the **IPv4 Settings** tab.



 e. In the "IPv4 Settings" tab, click the pull-down menu next to "method:" and select **Manual**.



f. Next to "Addresses", click Add and type 192.168.178.201 under "Address", then type 255.255.255.0 under "Netmask". Click Save....

#### Linux via Terminal

- a. Press Ctrl-Alt-T to open the terminal.
- b. Type the following command: nano /etc/network/interfaces
- c. Add/edit this into the existing file:

  "auto eth0

  iface eth0 inet static

  address 192.168.178.201

  gateway 192.168.178.1

  netmask 255.255.255.0

  dns-nameServers 8.8.8.8"
- d. Type the following command: /etc/init.d/networking restart
- e. Verify the changes in IP with the following command: ifconfig eth0
- Close the terminal.
- Open an Internet browser (i.e. Internet Explorer, Mozilla Firefox, Google Chrome, Safari, etc.)
- 4. In the Internet Address field of the browser, type the following address: 192.168.178.200
- Follow the on-screen setup steps to complete Server installation.
- 6. Use LineSite website to change the Server static IP to *192.168.1.10*.
- 7. Follow steps to assign computer static IP to 192.168.1.20.
- 8. Type in Server IP *192.168.1.10* into Internet Browser. Press **Enter**.
- 9. The LineSite Login/Home page should appear. Bookmark this page in your Internet browser.
- 10. Continue to
- Bookmark the Server's IP address for easy access. See Bookmark the Server IP Address, page 12.
- 12. The Server is installed.

## Appendix D

Instructions to manually pair Wireless Monitors, Repeaters, and Gateways.

### **Manually Pair Hardware**

To add hardware:

- 1. Click ADD OTHER HARDWARE.
- 2. Select the hardware.





Devices/Systems

Gateway

- 3. Click **Devices/Systems** to manually pair a Wireless Monitor or a Repeater.
  - a. Select driver type for device.
  - b. Select the Gateway the device is attached to.
  - The Communication Address will automatically display. Enter the Name of the Device / System.
  - d. Click the Add Hardware button.
- 4. For Gateways:
  - a. Select driver for device.
  - b. Enter the Network Address and Name of Gateway.
  - c. Click the **Add Hardware** button.
- After the hardware has been added, hover over the image of the new hardware image to display the Mac Address for the hardware. The Mac Address is located on the identification label on the hardware.

## Appendix E

#### Server Shutdown

Shut down server for safe power removal.

**NOTE:** Only users with superuser or system\_admin permissions can perform this procedure.

**NOTE:** No data can be collected while the server is powered down.

1. From any page, select the ShutDown option from the user options drop-down in the top right.



Follow the on-screen instructions to perform shutdown.

#### **Restore Server Software**

Restore original software on the server.

**NOTE:** All content and settings will remain on the server.

- 1. If the server is currently powered on, shut down the server (see Server Shutdown, page 38).
- 2. Unplug the power connector on the server.
- 3. Press and hold both red switches while reconnecting the power connector to the server.



 Continue to hold both red switches until the server starts up and all three server LEDs are flashing. **NOTE**: If the server starts up as normal (single solid greed LED), the switches were not held properly while reapplying power. Repeat this procedure from step 1.

- 5. Unplug and re-plug the power connector on the server (power cycle).
- 6. Once the server has booted, the top two LEDs will alternate until one of the switches is pressed to confirm/abort the software restore. To perform the software restore, press the left red switch:



To abort the software restore:



- If confirm was selected, the bottom two LEDs on the server will alternate until the restore is complete. If abort was selected, the bottom LED on the server will be solid.
- 8. Unplug and re-plug the power connector on the server (power cycle). Once the server boots, the software restore is complete.

## **Erase All Server Content and Settings**

Erase all content and settings from the server.

**NOTE:** Server software will not change in this process.

**NOTE:** Only users with superuser permissions can perform this procedure.

- Navigate to the factory reset page by appending "factory-reset" to the base url. (e.g. example.mylinesite.com/factory-reset)
- 2. Follow on-screen instructions to complete reset.

## **Technical Specifications**

	US	Metric
LineSite Server	!	<del>- !</del>
Power Supply Input	100-240 VAC, 0.5A MAX	
Power Supply Output	12 VDC, 1.25A MAX	
Internal Memory Storage Capacity (approx.)	8 hours/day: 50 InvisiPacs	
(Daily InvisiPac run-time and associated	16 hours/day: 35 InvisiPacs	
storage capacity)	24 hours/day: 25 InvisiPacs	
LineSite Gateway		
Power Supply Input	100-240 VAC, 0.5A MAX	
Power Supply Output	12 VDC, 1A MAX	
Wireless Range, US Model	150 ft	46 m
	FCC ID: MCQ-XBEEPRO2	
	IC: 1846A-XBEEPRO2	
Wireless Range, International Model	82 ft	25 m
	FCC ID: MCQ-PROS2B	
	IC: 1846A-PROS2B	
LineSite Repeater		
Power Supply Input	100-240 VAC, 0.5A MAX	
Power Supply Output	12 VDC, 1.25A MAX	
Wireless Range, US Model	150 ft	46 m
	FCC ID: MCQ-XBEEPRO2	
	IC: 1846A-XBEEPRO2	
Wireless Range, International Model	82 ft	25 m
	FCC ID: MCQ-PROS2B	
	IC: 1846A-PROS2B	
LineSite Wireless Monitor		
Wireless Range, US Model	150 ft.	46 m
	FCC ID: MCQ-XBEEPRO2	
	FCC ID: MCQ-XBEEPRO2	
Wireless Range, International Model	82 ft	25 m
	FCC ID: MCQ-PROS2B	
	IC: 1846A-PROS2B	

## **Graco Standard Warranty**

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

# THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

#### FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

## Graco Information Sealant and Adhesive Dispensing Equipment

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

To place an order, contact your Graco Distributor, go to www.graco.com, or call to identify the nearest distributor.

If calling from the USA: 1-800-746-1334

If calling from the outside USA: 0-1-330-966-3000

All written and visual data contained in this document reflects the latest product information available at the time of publication.

Graco reserves the right to make changes at any time without notice.

Original Instructions. This manual contains English. MM 334610

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

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