



# **Startup Guide**

for Local Managers

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## About this guide

This guide describes the procedures for getting the Local Manager up and running in your environment. More detailed instructions can be located in other guides located on the Uplogix Support portal.



Information in this document is subject to change without notice. Please visit <u>support.uplogix.com</u> for the latest updates to Uplogix product documents.

## **Target audience**

This guide is for trained, qualified network support technicians responsible for installing and maintaining the Local Manager.

## **Typographical conventions**

The following conventions are used in this guide.

Sample text from the command line interface is presented in this font. Text that you enter is presented in this font. For example:

[admin@UplogixLM]# show who

admin ssh Mar 22 13:38 (192.0.2.101)

Keyboard characters are enclosed in angle brackets. For example, press <Enter>.

## **Package Contents**

## Unpacking the shipping box

Verify that you have received the following items:

#### Uplogix 500 Local Manager

- 1 power supply and cord
- 1 mounting bracket
- 1 DB-9 to RJ-45 serial adaptor
- Rack mounting bracket screws
- Four clear rubber bumpers

#### Uplogix 5000 Local Manager

- 2 US power cords (AC unit) or 2 Molex to 3-wire power cords (DC unit)
- 2 rack mounting brackets
- 1 DB-9 to RJ-45 adapter
- Rack mounting bracket screws

## **Hardware Installation & Connections**

## **Installing the Uplogix 500**

### Uplogix 500





#### Making the connections required for initial configuration

To complete initial setup, you must connect the Local Manager to a power source.

#### **Connecting power**

The Local Manager uses an external power supply, which is shipped with the device.



**Caution:** Use only the power supply shipped with the Local Manager 500. Using a different power supply will void your warranty and may damage the equipment.



Uplogix 500 power connection

Connect the power supply to the DC connector on the back of the device.

Connect the power cord to the power supply. Use either the provided power cord or one that is suitable for your location. The Local Manager uses a power cord with a standard IEC-320-C13 female cord end.



Connect the power cord to a power outlet. An amber light indicates that the unit has power applied. Power on the unit by pressing the power button. The system status LED (denoted with an 'i' label on the chassis) will blink while the Local Manager boots up and becomes a solid green light when the boot sequence is complete.

#### **Connecting a workstation**

To complete initial setup, you must connect your workstation to the Local Manager's RJ-45 console port.

- If your workstation has a DB-9 serial port, use the DB-9 to RJ-45 adaptor provided by Uplogix (see diagram below) and a straight-through Ethernet cable to connect to the console port.
- If your workstation does not have a DB-9 serial port, you will need to use a USB to DB-9 serial adaptor together with a straight-through Ethernet cable and the DB-9 adaptor provided by Uplogix to connect to the console port.



The default settings for the console port are 9600, 8, N, 1.

**Note**: The mini-USB console port will be supported in a future software release.

Following initial setup, you may choose to disconnect the console cable and manage the Local Manager via Ethernet.

#### **Connecting management Ethernet**

To manage the Local Manager and attached devices in-band through the network, connect Gigabit Ethernet port 0 (GE-0) on the front panel to your network using a straight-through Ethernet cable. Both GE-0 and GE-1 auto-negotiate their speed and duplex settings by default.



Connect power controller -

When connected, secondary management Ethernet port GE-1 acts as a standby redundant Ethernet management connection by default. GE-1 will become active if the GE-0 link drops. Therefore, it is important that GE-0 and GE-1 be connected to switch ports on the same network or VLAN.

If your management network is fiber based, connect to the SFP in the option slot. If GE-0 or GE-1 are connected to the network, they will take precedence over the fiber connection.

## Installing the Uplogix 5000 Local Manager

### Uplogix 5000





### Making the connections required for initial configuration

To complete initial setup, you must make this connect the Local Manager to a power source.

#### **Connecting power**

#### **AC Models**

Connect the power cord to the Local Manager. Use either the provided power cord or one that is suitable for your location. The Local Manager uses a power cord with a standard IEC-320-C13 female cord end.



Connect the power cord to a power outlet. A dimly lit keypad and dark display indicates that the unit has power applied. Power on the unit by pressing the middle keypad button.

Note: Do not hold the middle keypad button down.

The display on the front panel will illuminate and display progress messages as the device boots. At the end of the boot sequence, it displays the message Uplogix status good.

#### **DC Model**

Available on the Uplogix 5000 only. The DC Local Manager uses a power cord with a Molex connector (part number: 39-01-4041) end and a three-wire split out.





**Caution:** Use the provided power cables to have an electrician connect the Local Manager to the DC power source

Connect the green yellow wire to earth ground, connect the brown wire to positive voltage and then connect the blue wire to power return. A dimly lit keypad and dark display indicates that the unit has power applied. Power on the unit by pressing the middle keypad button. The display on the front panel will illuminate and display progress messages as the device boots. At the end of the boot sequence, it displays the message Uplogix status good.

Description	Wire Color	Operating Voltage Range (Referenced to Earth Ground)	Operating Voltage Range (Referenced to Return)
Earth Ground	Green with Yellow Stripe	0 V	NA
Positive Voltage	Brown	0 – 60 V	24 – 60V
Return	Blue	-60 – 0 V	NA

#### Making the remaining connections

These connections are not required to complete the initial setup:

#### **Connecting a power controller**

Connect the power controller's serial port to port 1/6 on the Local Manager. A straight-through Ethernet cable is typically used for this connection. However, some power controllers require rolled or special cables. Consult your power controller documentation if a straight-through Ethernet cable does not work.

#### **Connecting management Ethernet**

To manage the Local Manager and attached devices in-band through the network, connect Gigabit Ethernet port 0 (GE-0) on the front panel to your network using a straight-through Ethernet cable. Both GE-0 and GE-1 auto-negotiate their speed and duplex settings by default.



When connected, secondary management Ethernet port GE-1 acts as a standby redundant Ethernet management connection by default. GE-1 will become active if the GE-0 link drops. Therefore, it is important that GE-0 and GE-1 be connected to switch ports on the same network or VLAN.

If your management network is fiber based, connect to the SFP in the option slot. If GE-0 or GE-1 are connected to the network, they will take precedence over the fiber connection.

#### **Connecting devices to be managed**

Connect the console ports of network devices to the serial ports on the Local Manager. A straight-through Ethernet cable works for most devices, but some devices may require a rolled cable or a cable with a non-standard pin-out. Consult your managed device's documentation for console port serial settings and pin-out information as necessary. Depending upon configuration of your Local Manager, optional Ethernet connections may also be available for managed devices.



**Note:** Ensure that RJ45 or RJ11 connectors used to connect devices to the Local Manager have a locking tab and that the connector is installed in the proper orientation.

#### **Connecting a workstation**

To complete initial setup, connect your workstation to the Local Manager's RJ-45 console port. If you wish to utilize the keypad to configure network settings on the Local Manager, skip this step.

- If your workstation has a DB-9 serial port, use the DB-9 to RJ-45 adaptor provided by Uplogix (see diagram below) and a straight-through Ethernet cable to connect to the console port.
- If your workstation does not have a DB-9 serial port, you will need to use a USB to DB-9 serial adaptor together with a straight-through Ethernet cable and the DB-9 adaptor provided by Uplogix to connect to the console port.



The default settings for the console port are 9600, 8, N, 1.

Following initial setup, you may choose to disconnect the console cable and manage the Local Manager via Ethernet.

## **Quick setup**

You may configure the Local Manager as a standalone network management tool or configure it to be managed by the Uplogix Control Center.

The Uplogix 500 and 5000 Local Managers can be initially provisioned via their console connections. The Uplogix 5000 Local Manager can alternatively be provisioned via the front panel keypad.



**Note:** Substitute appropriate IP addresses and other values for your deployment for those shown in the examples.

## Initial configuration using the keypad

The Local Manager is ready to provision when the front panel display begins to scroll information.

The keypad located on the front panel provides up, down, left, and right keys (labeled with arrows) as well as enter (i.e. the middle key) and back keys. The left and right arrows move the cursor left and right, respectively. The up and down arrows change numerical values.



When you use the keypad, no username/password is required.

For each setting, you can accept the default or existing setting by pressing the enter key.

1. Press the enter key on the keypad to access the menu. The > character appears to the left of the currently selected option. Press enter or the right arrow button to access the configuration screens.

>Configure

Restart

2. The Local Manager can use a DHCP server for network addressing. Brackets appear around the selected option. Use the left and right arrows to select your response and press enter to advance. If you are using DHCP, press the enter key and skip to Step 6. You can review the assigned IP address after configuration is complete by re-entering the configuration dialog.

Use DHCP?

[Yes] No

 If you choose not to use DHCP, enter the IP address that the Local Manager should use. Use the left and right arrows to move between digits of the IP address, and the up and down arrows to change individual digits. The > prompt points to the digit to be changed.

IP Address:

>000.000.000.000

When entering an IP address, built-in validation keeps the octet below 255 at all times. You may need to change the second digit before you can change the first digit.

For example, to change the number 180 to 240, you must change the second digit from 8 to 4 before you can change the first digit from 1 to 2. The validation will not allow an address 280, so the first character will toggle between 1 and 0 until you change the second character to keep the octet at or below 255.

4. Configure the Local Manager's subnet mask in the same manner:

Netmask:

>255.255.255.000

5. Specify a default route for network connectivity.

Default Route:

>000.000.000.000

6. Whether you use DHCP or a static IP address, the Local Manager next prompts you to select speed and duplex options for the management Ethernet connection.

Speed/Duplex

<auto>

Auto-negotiation is the default setting. If you choose not to use auto-negotiation, select speed and duplexing to match your network.

Speed/Duplex

<auto>

Use the right arrow key to view other speed/duplex options. They appear as 1000full, 100full, 10full, 100half and 10half.

This setting needs to match the speed and duplex setting on the switch port that is connected to your Local Manager.

7. If a Pulse server is to be used, enter the IP address here. Consult the *User Guide for Local Manager* for more information about Pulse functionality.

Pulse Server IP:

127.000.000.001

8. Enter an IP address for the Uplogix Control Center only if this unit is to be managed by an Uplogix Control Center. Otherwise, do not enter an IP address at this prompt. Press enter to skip to the next configuration item.

Server IP:

>127.000.000.001

If the Local Manager has already been associated with an Uplogix Control Center that uses a DNS name, this prompt is not displayed.

9. The Local Manager is now configured. Select Yes to save your changes.

Confirm Changes?

Yes [No]

If you have configured the Local Manager with a management IP address, you can now manage it remotely via an SSH session. Refer to <u>Remote access via the management IP</u> <u>connection</u> section of this guide.



**Note:** For security, you may disable the keypad after you finish the initial setup. Refer to <u>Locking the keypad and changing the admin password</u> section of this guide.

## Initial configuration via console connection

To configure the Local Manager via the console port, connect directly to the console port on the front of the device. This port is labeled CON. The configuration options available via the keypad are also available through the command line. These are described below.

Open a connection to the Local Manager using a terminal client on your computer. Supported terminal clients include:

- Windows HyperTerminal
- ZTerm (Macintosh OS X)
- Minicom (Unix/Linux)

The default console connection settings are 9600 baud, 8 data bits, 1 stop bit, no parity. For best results, set your terminal emulator to use ANSI encoding.



**Note:** The Local Manager does not use flow control. If you use HyperTerminal, you must disable flow control when configuring the session.

After you connect to the Local Manager, you will be prompted for a username and password. The default username is **admin** and the default password is **password**. Usernames and passwords are case-sensitive.

## **Configuring the Local Manager for your LAN**

The Local Manager is initially configured to use DHCP. You can use the show system ip command to display current management Ethernet network settings. To configure the Local Manager's network addressing, use the config system ip command.

The Local Manager displays the current settings, and presents a prompt asking whether you want to make changes.

[admin@UplogixLM]# config system ip --- Existing Values ---Use DHCP: Yes Management IP: 0.0.0.0 Host Name: UplogixLM Subnet Mask: 255.255.255.0 Broadcast Address: 0.0.0.255 Default Route: 0.0.0.0 Speed/duplex: auto: 1000full MAC Address: 00:0F:2C:00:CC:C6 Bonding Link: yes Primary Ethernet Link: yes (bonded) Auxiliary Ethernet Link: no (bonded) Change these? (y/n) [n]: y --- Enter New Values ---Use DHCP: (y/n) [y]: n Management IP: [0.0.0.0]: 198.51.100.4 Host Name: [UplogixLM]: Subnet Mask: [255.255.255.0]: Default Route: [0.0.0.0]: 198.51.100.254 speed/duplex: [auto:1000full]: DNS Server IP: []: Warning: Remote connections may be lost if you commit changes. Do you want to commit these changes? (y/n): y

The changes take effect after you commit them.

If you have configured the Local Manager with a management IP address, you can now manage it remotely via an SSH session. Refer to <u>Remote access via the management IP</u> <u>connection</u> section of this guide.

### **Configuring an optional Pulse server**

Specify a Pulse server using the config system pulse command.

```
[admin@UplogixLM]# config system pulse
--- Existing Values ---
Use Pulse: false
Pulse Server IP 1: 127.0.0.1
Pulse Server Port: 7
Enable Outband on Pulse Failure: no
Change these? (y/n) [n]: y
--- Enter New Values ---
Use Pulse (y/n) [n]: y
Pulse IP 1: [127.0.0.1]: 203.0.113.1
Pulse Port 1: [7]:
Pulse IP 2: [127.0.0.1]:
Pulse Port 2: [7]:
Pulse IP 3: [127.0.0.1]:
Pulse Port 3: [7]:
```

Enable Outband on Pulse Failure (y/n) [n]: n

Do you want to commit these changes? (y/n): y

The above example enables Pulse to one pulse server, but does not enable the automatic dialout PPP function. The Local Manager can use rules to generate alarms even when Pulse fails. For more information on Pulse and alarms, consult the *User Guide for Local Manager*.

### **Configure communication with the Uplogix Control Center**

Use the config system management command if you wish to manage the Local Manager with a Control Center. Uplogix recommends using the default values and setting the 'Hostname or IP:' field to contain the hostname or IP address of your Control Center.

```
[admin@UplogixLM]# config system management
--- Existing Values ---
Use Management Server: false
Hostname or IP: 127.0.0.1
Port: 8443
Heartbeat interval (seconds): 30
Heartbeat band: all
Always use minimal heartbeat: false
Last successful heartbeat: (not yet contacted)
Change these? (y/n) [n]: y
--- Enter New Values ---
Use Management Server (y/n) [n]: y
Hostname or IP [127.0.0.1]: 203.0.113.3
Port [8443]:
Heartbeat interval (seconds) [30]:
Heartbeat during [all]:
Do you want to commit these changes? (y/n): y
```

### **Configuring Power Control and Managed Device Ports**

#### **Power Control Ports**

Switched power controller peripherals are used to manage power to devices connected to the Local Manager. Like managed devices or external modems, they must be configured with the **config init** command. Enter the make, model, and login credentials for the power controller being used, and then enter the outlet mappings for the managed devices.

```
[admin@UplogixLM (powercontrol)]# conf init
description: Austin Rack 123 Power
make: Servertech
model:
os: SentryIPT
os version:
console username: admn
console password: ****
confirm password: ****
Serial Bit Rate [9600]:
Serial Data Bit [8]:
Serial Parity [none]:
Serial Stop Bit [1]:
Serial Flow Control [none]:
Do you want to commit these changes? (y/n): y
Testing login will take a few moments...
Login successful; credentials are valid.
Retrieving outlet names. Please wait...
Outlet names retrieved.
Would you like to add a new mapping? (y/n) [n]: y
```

Outlet: A1 Interface: port1/1 Would you like to add a new mapping? (y/n) [n]: y Outlet: A2 Interface: port1/2 Would you like to add a new mapping? (y/n) [n]: y Outlet: A3 Interface: port1/4 Would you like to add a new mapping? (y/n) [n]: n Scheduling default jobs Testing job rulesMonitor Job rulesMonitor was successful Job rulesMonitor was scheduled

[admin@UplogixLM (powercontrol)]#

For full documentation of configuring managed devices and power controllers, see the **Configuring Managed Devices and Power Control** section of the Local Manager User Guide, available on the Uplogix support website, <u>support.uplogix.com</u>.

#### **Managed Device Ports**

The device ports for the Local Manager are initially configured as native. When a supported device is connected, the port must be initialized for the specific device in order to enable advanced management functionality. Run the command **config init** to select the device make and model, then enter the device's login credentials, baud rate, and IP address if available. The Local Manager will then attempt to login to the device and if successful will schedule the default jobs for that device.

```
[admin@UplogixLM (port1/1)]# config init
--- Enter New Values ---
description: HWlabSwitch
make [native]: cisco
model:
os: ios
os version:
management IP: 192.0.2.12
console username: uplogixAutomatedAccount
console password: ********
confirm password: *******
enable username: uplogixAutomatedAccount
enable password: *******
confirm password: *******
secondary console username:
secondary console password:
secondary enable username:
secondary enable password:
Serial Bit Rate [9600]:
Serial Data Bit [8]:
Serial Parity [none]:
Serial Stop Bit [1]:
Serial Flow Control [none]:
Do you want to commit these changes? (y/n): y
Testing login will take a few moments...
```

Once the initial configuration is complete, minor device changes may be recommended to facilitate the timely and efficient collection of data from the device, such as increased console port speed and optimized logging. For more information see the *Local Manager User Guide* or the Configuration Guide for the device being configured.

## **Out of Band**

There are a variety of out of band options used by for the Local Manager. This section will cover the initial connections required for each type.

In most cases the modem option card will be pre-installed in the Local Manager option slot. If it is not, refer to the *Local Manager Install Guide* for installation instructions.

## **Initial Connections**

#### **Secondary Ethernet**

As described in the sections above, the Local Manager can be configured to use its secondary Ethernet interface, labeled GE-1, as an out of band path. Refer to the *Feature Guide – Secondary Ethernet* for instructions on how to set up this out of band method.

### **Embedded modems**

An embedded modem is one that can be inserted into the Local Manager Option Slot.

#### Analog

The V.92 analog modem requires a single cable between the modem and either the local PBX or POTS interface. This RJ11 cable is a basic phone line cable.

#### Cellular

The cellular modem requires one external cable between the antenna and SMA connector. If your Local Manager is ordered with a cellular modem you will also be sent an external high gain magnetic mount antenna. For more information on cellular modem configuration, refer to the *Configuration Guide – Multitech Cellular Modems*.

#### GSM

When installing a Local Manager with a GSM based cellular modem you will need to remove the modem to insert your own SIM card.

#### **CDMA**

Local Managers with CDMA based cellular modem need not be removed for service activation. The modem IMEI can be determined through the Local Manager CLI. From the modem menu of the CLI issue the **pull tech** command to collect modem details. Once complete the **show tech** command can be used to view the modem details. The first item returned is the IMEI.

#### **External modems**

#### DB9

#### LEO-I

The LEO-I kit consists of two pieces, an Above Deck Unit (ADU) and Below Deck Unit (BDU). A DB9 to RJ45 adapter (supplied with the LEO-I kit) will be connected to the Local Manager DB9 modem card and a straight Ethernet cable is used between the RJ45 to DB9 adapter and the DBU. For more information on LEO-I kit installation and configuration, refer to the *Installation Guide – LEO-I Kit*.

#### Analog modem

Most external analog modems can be connected to the Local Manager DB9 modem card. This connection is made with a DB9 to DB9 cable, generally provided with your external modem. Exactly like the embedded analog modem, the external analog modem will need a connection (over RJ11 cable) to an analog service provider.

#### USB

#### Cellular

An external USB cellular modem is connected to the Local Manager using a Standard-A plug to Standard-B plug USB cable. This cable is generally provided with your cellular modem. Depending on your modem type you may need to insert a SIM card.

## Reference

The following section is intended to serve as a quick reference for using the Local Manager Command Line Interface.

### **CLI Structure**

Resources separate the various functions of the Local Manager. There are four categories of resources in the Local Manager Command Line Interface:

System: Local Manager specific settings, top level resource

**Port x/y**: Device management

Modem: Out of band configuration

Power Control: Power Controller Management

## **General Commands**

- ? Help is context sensitive, You can use the ? command from any resource to view available commands. Use ? after a command for syntax and usage information.
- exit Takes you back one level. For example, if you were in Port 1/1 and wanted to return to the System resource, use this command. This command will not log you out of the Local Manager
- show Displays device data collected and resource settings. Most config commands can be used as a show command. Example: config system ip allows you to change the Local Manager's networking settings where as show system ip will simply display the current IP settings.

#### System Resource Commands

logout – Logs your user account out of the CLI.

- config system ip Starts the Local Manager network configuration wizard.
- config system management Allows you to configure the Local Manager to use an Uplogix Control Center (UCC) for system management.
- config system secondary Allows you to set and configure the function of the AUX Ethernet
   port
- config system pulse Allows you to configure the Local Manager to use a pulse server for network status and configure the Local Manager to bring up its Out of band (OOB) connection when pulse fails.

#### **Port Resource Commands**

- config init Used to configure an advanced driver on the Local Manager. Ensure that you
  have console connectivity and any console or enable passwords before running config
  init.
- terminal Opens a terminal session to a managed device, depending on what resource you are currently in. All user input is redirected to the managed device, but can be escaped using the tilde (~) key.
- commands When in an active terminal session in to a managed device you can issue commands prefaced by the tilde (~) character to access Uplogix Local Manager functions. 
   **CENTER** will terminate the session and return you to the Local Manager CLI. 
  ~h will show you a list of all available tilde commands.
- pull Used to pull various configuration and operating system files from managed devices. You will need to specify what you are pulling, for instance: pull startup-config or pull running-config.
- push Pushes down locally stored configuration and operating system files to managed devices. Push works similarly to the pull command; you will need to specify the type of file you wish to push down.
- config settings Allows you to change a variety of settings unique to that specific port, such as primary and secondary methods of file transfer (to be used in push/pull operations) and terminal session timeout delay.
- **copy** Allows you to move locally stored files between ports and to/from the Local Manager and a remote file system.
- show directory Displays files stored on the Local Manager and associated with the current port resource.
- show schedule Shows all scheduled jobs that were setup during the config init process, such as pull running-config and pull remotestate.
- power on/off/cycle Requires a mapped power controller outlet, allows you to remove and reapply power as needed to managed devices.

## **Modem Resource Commands**

- config init Allows you to specify the make and model of the modem to be used.
- config answer Opens an editor to configure modem behavior. Use ? to see available commands.
- config ppp Configures Point-to-Point Protocol (PPP) server information.
- Config vpn Configures Virtual Private Network (VPN) server information.
- ppp on/off Manually turns on or off the OOB connection
- ppp cycle Instigates a onetime PPP cycle. Can be either for a set duration or until one OOB heartbeat has occurred.

## **Power Control Resource Commands**

config init - Configures the Local Manager to use a specific power controller.

config outlet - Begins the outlet mapping wizard, allowing you to associate power controller outlets with Local Manager ports.

power <port #/#> on/off/cycle - Manually applies or cycles power to a specified port.

## Support and regulatory information

## **Getting technical support**

The Uplogix technical support web site allows you to open and review support requests, browse the knowledge base and download software updates. You must have a user account to view this site.

#### **Requesting an account**

To create an account, send an email to <a href="mailto:support@uplogix.com">support@uplogix.com</a> with the subject line "create account". Include this information:

- organization name
- account user's email address
- user's general contact information

#### **Requesting support**

Uplogix provides 24x7x365 support. If you need to contact Uplogix customer support, please provide this information:

- Product model
- Serial number and software version (use the show version command from the command line or use the arrow keys on the front panel to scroll through the information on the display)

Phone: 512-857-7070

Fax: 512-857-7002

URL: support.uplogix.com

#### Providing comments about this guide

Did you find the information you needed?

Was it accurate?

Did it help you?

Please contact our publications staff at <a href="mailto:support@uplogix.com">support@uplogix.com</a> to notify us of any issues with this guide's accuracy, completeness, or clarity.

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