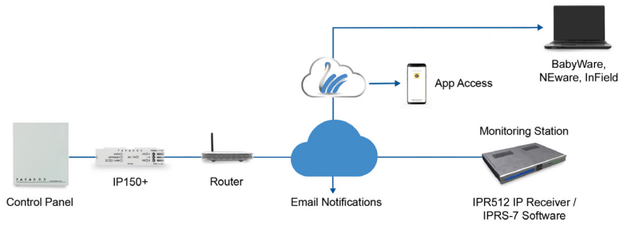
IP150+ Internet Module

Installation Manual
V5.05.008 and higher

Description

The IP150+ Internet Module provides access to Paradox systems. With the IP150+, connecting to a system is possible with the Insite GOLD application, PC software for programming, upgrade and monitoring, as well as reporting to the central station by connecting to Paradox receivers.

Figure 1 - IP Communication Overview



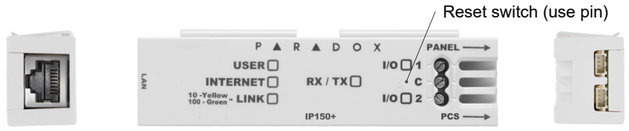
Before You Begin (Static Mode Only)

Make sure you have the following in order to configure your IP150+ Internet Module:

- Router
- 4-pin serial cable (included)
- CAT5 Ethernet cable (maximum 90m (295 ft.), not included)
- Insite Gold app
- Connect IP150+ to the serial port on your panel and Ethernet port of your router

Connecting and Installing the IP150+

Figure 2 - IP150+ Overview

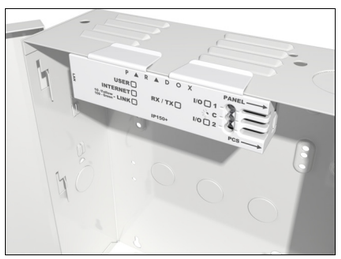


Left Side View | Front View | Right Side View

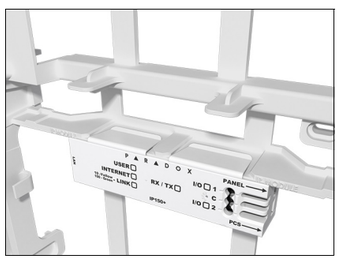
Installation

Figure 3 - Metal and Plastic Box Installation

Metal Box



Plastic Box



To connect and install the IP150+:

1) Connect the 4-pin serial cable between the panel's serial connector and the IP150+'s panel connector.
2) Connect the Ethernet cable between the router and the IP150+'s network connector.
3) The on-board LEDs will illuminate to indicate the IP150+'s status.
4) Clip the IP150+ to the top of the metal box or plastic box, as shown in Figure 3.

LED Indicators

LED	Description	
User	Green - On when a user is connected via Insite Gold/BabyWare/InField/NEware.	
Internet	Solid green	Internet present, polling to SWAN and received a connection identifier
	Flashing every 0.2 seconds	Internet present, polling to SWAN but did not receive a connection identifier
	Flashing every 0.5 seconds	Internet present, received a connection identifier but it is not polling to SWAN
	Flashing every 1 second	Internet present, not polling to SWAN and did not receive a connection identifier
	Off	No internet connection
Link	Solid Yellow = connected @ 10Mbps Solid Green = connected @ 100Mbps LED will flash according to data traffic Flashing Yellow/Green = No IP address / DHCP fail (check router)	
RX/TX	On when connected to panel Flashes when data is transmitted or received through/from panel Off when no connection to panel	
I/O 1*	On when activated	
I/O 2*	On when activated	
*** Only output configuration is available through Insite GOLD.**		

Reset IP150+ to Default Settings

To reset the IP150+ module to its default settings, ensure that the module is turned on and then insert a pin/straightened paper clip (or similar) into the pinhole located between the two I/O LEDs. Press down gently until you feel some resistance; hold it down for approximately five seconds. When the I/O and RX/TX LEDs start flashing, release it and then press it again (figure 2). The I/O and RX/TX LEDs will remain lit during the reset.

Note: If a panel has been replaced, the IP150+ will retain its settings and not reset to factory default values.

Enable/Disable DHCP Settings

Before you can enable/disable the DHCP settings you must first verify the status of your DHCP. Ensure that the module is turned on and then insert a pin/straightened paper clip (or similar) into the pinhole located between the two I/O LEDs. Press and depress quickly the reset switch. One blink of the Internet LED followed by one blink of the LINK LED indicates that DHCP is ON (default). One blink of the Link LED followed by one blink of the Internet LED indicates that DHCP is OFF.

To enable/disable the DHCP settings, press and depress the reset switch quickly and then immediately hold it down for approximately two seconds. If DHCP is enabled, then the Internet LED will blink once to indicate that DHCP settings are disabled. To enable DHCP repeat the procedure. The link LED will blink once to indicate that DHCP settings are enabled.

Firmware Version Fallback

To revert the IP150+ module to its previously installed firmware version, unplug the power cable from the panel and insert a pin/straightened paper clip (or similar object) into the pinhole located between the two I/O LEDs. Press down gently until you feel some resistance; plug in the power cable while holding the pin down for approximately five seconds and release it when the I/O 2 LED starts flashing (figure 2). The I/O LED will turn solid and start blinking (resetting to the backup version). Once complete, the IP150+ will reboot automatically to the previously installed firmware version.

IP Reporting

When using IP reporting, the IP150+ has the ability to poll the monitoring station. To enable IP reporting, the IP150+ must first be registered to the monitoring station's IP Receiver (IPR512) or to the IPRS-7 software. Telephone reporting can be used in conjunction with, or as a backup to IP reporting. Before registering the IP150+, the following information must be obtained from the monitoring station:

- Account number(s) - One account number for each partition used. IP/GPRS reporting uses a different set of account numbers than those used for dialer reporting.
- IP address(es) - (12-digit number e.g., for 195.4.8.250 you must enter 195.004.008.250). The IP address(es) indicate(s) which of the monitoring station's IP Receivers will be used for IP reporting.
- IP port(s) (5-digit number; for 4-digit numbers, enter 0 before the first digit). The IP port refers to the port used by the monitoring station's IP Receiver.
- Receiver password(s) (up to 32-digits). The receiver password is used to encrypt the IP150+ registration process.
- Security profile(s) (2-digit number). The security profile indicates how frequently the monitoring station is polled by the IP150+. Security profile numbers and polling frequency are defined by the monitoring station.

Setting Up IP Reporting

1) Ensure the panel's report code format is set to Ademco Contact ID:
   MG/SP: section **[810]**
   EVO: section **[3070]**
2) Enter the IP reporting account numbers (one for each partition):
   MG/SP: section **[918]** / **[919]**
   EVO: section **[2976]** to **[2983]**

   Please make sure that reporting codes are programmed in the panel, refer to the corresponding Programming Guide for more details.

   In the General IP Options section, set up IP line monitoring options and dialer options, and ensure IP reporting is enabled (refer to the following tables).

MG/SP: section [806]

IP Line Monitoring Options			
[5]	**[6]**		
Off	Off	Disabled	
Off	On	When disarmed: Trouble only When armed: Trouble only	
On	Off	When disarmed: Trouble only When armed: Audible alarm	
On	On	Silent alarm becomes audible alarm	
		OFF	**ON**
[7]	Use dialer reporting (telephone)	☐ As backup for IP/GPRS reporting	☐ In addition to IP reporting
[8]	IP/GPRS reporting	☐ Disabled	☐ Enabled

EVO: section [2975]

IP Line Monitoring Options			
[5]	**[6]**		
Off	Off	Disabled	
Off	On	When disarmed: Trouble only When armed: Audible alarm	
On	**Off**	When disarmed: Trouble only (default) When armed: Trouble only	
On	On	Silent alarm becomes audible alarm	
		OFF	ON
[7]	Use dialer reporting (telephone)	☐ As backup for IP/GPRS reporting	☐ In addition to IP reporting
[8]	IP/GPRS reporting	☐ Disabled	☐ Enabled

4) Enter the monitoring station's IP address(es), IP port(s), receiver password(s), and security profile(s) (information must be obtained from the monitoring station).

MG/SP Sections

IP Receiver	#1	#2	Backup
IP Address1	[929]	[936]	[943]
IP Port1	[930]	[937]	[944]
IP Address2	[931]	[938]	[945]
IP Port2	[932]	[939]	[946]
IP Password	[933]	[940]	[947]
IP Profile	[934]	[941]	[948]

EVO Sections

IP Receiver	#1	#2	#3	#4
IP Address1	[2984]	[2986]	[2988]	[2990]
IP Port1				
IP Address2				
IP Port2				
IP Password				
IP Profile				

NOTE: For Contact ID reporting, all report codes should be set to FF in order tor receive all events.

5) Register the IP150+ module with the monitoring station. To register, enter the sections below and press **[ARM]**. The registration status is displayed as well as any registration errors.

MG/SP Registration

IP Receiver #	#1	#2	Backup
Register/Status	[935]	[942]	[949]

EVO Registration

IP Receiver #	#1	#2	#3	#4
Register/Status	[2985]	[2987]	[2989]	[2991]

NOTE: An IP150+ used with an MG/SP system will always poll using the partition 1 IP account number. When using an EVO system, the partition 1 IP account is used by default, but can be defined in section [3020]. All reported system events will originate from the partition selected in this section.

Remote Access (SWAN)

When using the IP150+ with SWAN, the SWAN connection is seamless. Please make sure that the ISP or router/firewall is not blocking the following ports that needs to be permanently open (whitelisted) for TCP and UDP:

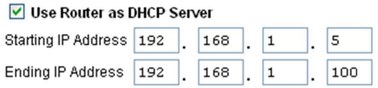
1) Port 10000 - Configurable SW port on IP150+ from Insite GOLD Installer Menu, used for NEware closed network, Locate IP in the network and firmware upgrading.
2) Ports 53, 443, 3478 and 5683 - used to communicate with the SWAN Server.

Remote Access (Static Public IP Mode Only)

In order to configure your system for remote access you will need access to your router. The following steps will guide you in setting up remote access so that the IP150+ module can function properly.

1) Ensure the router is connected properly as indicated in the router's instructions.
2) Access your router's configuration page. Refer to your router's manual for the exact procedure. In most cases, this is done by entering the router's static IP address in the address bar of your Web browser. For this instance, we will use 192.168.1.1 as an example for the router's IP address that may be indicated in the router's instructions or on a sticker on the router.
3) In the router's configuration page, check the DHCP settings (screen shot below may differ depending on type of router used).

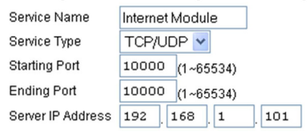
Figure 4 - DHCP Settings



If DHCP is enabled, verify that the IP address range leaves at least one IP address available outside of the range. The range shown in the above example would leave addresses 2 to 4 and 101 to 254 available (all the numbers in an IP address are between 1 and 254). Record one of the addresses outside the DHCP range as the one you will use for the IP150+. **If DHCP is disabled**, the IP150+ will use a random IP address. It is possible to change that address if needed using the Insite GOLD app.

4) In the router's configuration page, go to the Port Range Forwarding section (also known as "port mapping" or "port redirection"). If the module is used in a closed network and it does not need external accessing, no ports needs to be forwarded. If the module needs to be accessed from a different network, the software port (default 10000) needs to be forwarded.

Figure 5 - Port Range Forwarding



Connecting to a Site

Prior to configuring the IP150+ ensure to:

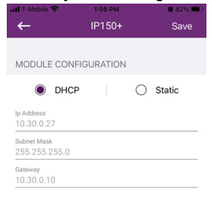
1) Create an account as an Installer on www.paradox.com. The account must be approved by the distributor in the country of installation.
2) Download the Insite Gold app available in iOS and Android, if previously not done.
3) Open the Insite GOLD app, once installed and select the **Menu** option on the top right-hand corner of the screen.
4) Login with the email and password associated to your www.paradox.com website account.
5) Add a Site to the app using the SWAN server. If the installation is not using the SWAN server to connect, the installer can add the installation in the Panel Accounts section.

Configuring the IP150+

1) Open the Insite GOLD app.
2) Select the **Menu** and then **Installer Menu**; the Installer Site List screen will be displayed.
3) Enter the Installer PC code programmed in the panel of the installation if connecting to a site using the SWAN servers service.
4) Select the **Modules Programming** option from the Installer Services tab.
5) Select **Module Configuration**.
6) Tap on the **CONFIG** button. At this point the Installer has access to the configuration of the IP150+ module. From this screen, the installer can scroll down to configure the Receivers as well as set email configurations.

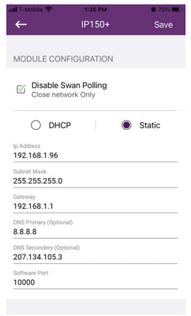
SWAN Sites - Module Configuration

Allows you to configure the IP150+ module's settings.



Panel Accounts (Non-SWAN Sites) - Module Configuration

Before you can configure your module, you will need to add a Panel Account using the serial number of the panel for panel accounts.For static IP installations, enable static IP, then configure the local and public IP addresses and port numbers.



Once the panel account has been added, repeat steps 1 - 6 to configure the IP150+ module's settings.

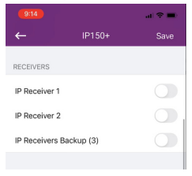
DISABLE SWAN POLLING: When the Disable SWAN polling option is set to enabled (only for a closed network), it disables access to your system through the SWAN server. To access your system, you will need to use the static IP address function in the app. When disabled, the Access tab is enabled and push notifications can be received.

NOTE: When SWAN Polling is disabled, only the PGM and Security tabs are available. The Access tab is only available when SWAN polling in enabled.Push notification are not available without a swan subscription.

DHCP: If the IP150+ is connected to a server using a static IP address, the DHCP protocol is not necessary.

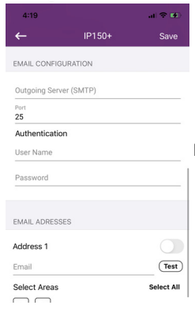
Receiver Configuration

Allows you to configure the module for IP Reporting.



Email Configuration

Configure the IP150+'s email server settings.



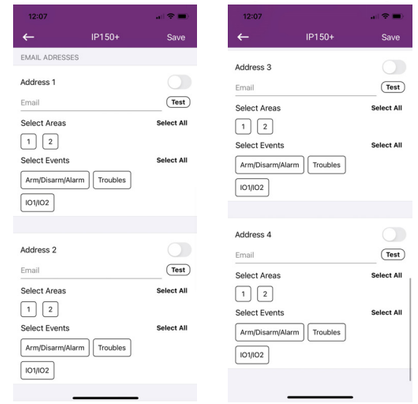
NOTE: Enter the user name without the @domain.

Email Addresses

You can configure your IP150+ to send email notifications to up to ***four*** email addresses to receive notification of system events.

To configure an email address:

1) Enable the Address toggle button.
2) Enter the Email address. Use the test button to verify that the recipient address is correct.
3) Select the Areas and Event groups which will generate email notifications.

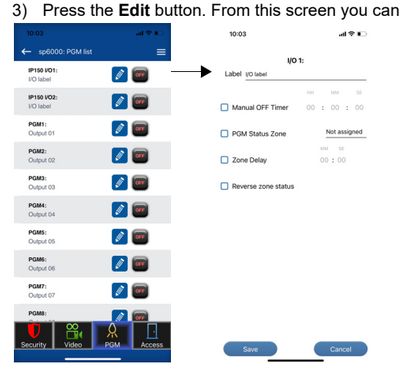


Output Configuration

Output triggering allows you to receive email notifications sent to selected recipients, refer to the Email Configuration section for setup.

To configure outputs:

1) Select the **PGM** tab.
2) Select the I**P150+ Output** to configure.
3) Press the **Edit** button. From this screen you can define labels, timers, and more.



Technical Specifications

The following table provides a listing of the technical specifications for the IP150+ Internet Module.

Specification	Description
Panel Compatibility	Any Digiplex EVO panel (V2.02 for IP reporting) Any Spectra SP series panel (V3.42 for IP reporting) Any MG5000 / MG5050 panel (V4.0 for IP reporting) MG5075 panel (V1.01) For full Insite GOLD features and best compatibility, please upgrade the panel firmware to the latest version. **NOTE:** EVO48 is not fully supported in Insite GOLD
Encryption	MD5, RC4, and AES-256
Current Consumption	100mA
Input Voltage	13.8 Vdc, supplied by the panel serial port
Enclosure Dimensions	10.9cm x 2.7cm x 2.2cm (4.3in x 1.1in x 0.9in)
Approvals	CE, EN 50136-1, EN 50136-2 SP5, EN 50131-10 Grade 3, Class II

For latest manual updates, please refer to paradox.com.

Warranty

For complete warranty information on this product, please refer to the Limited Warranty Statement found on the Web site www.paradox.com/Terms. or contact your local distributor. Specifications may change without prior notice.

Patents

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