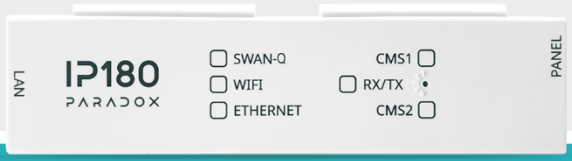
PARADOX

IP180

IP180 Internet Module



INSTALLATION MANUAL

V1.00.025

Thank you for choosing Paradox Security Systems products. The following manual describes the connections and programming for the IP180 Internet Module. For any comments or suggestions, send an email to manualsfeedback@paradox.com.

Introduction

The IP180 Internet Module provides access to Paradox systems. The IP180 has built-in Ethernet and Wi-Fi, (Wi-Fi Antenna kit may be purchased separately). The IP180 is based on MQTT technology and reports only to the IPC10 and VIPC20 converter, and the latest BabyWare and BlueEye application MQTT versions. IP180 uses an encrypted supervised connection with the IPC10/VIPC20, PC, and BlueEye, based on MQTT technology making it stable, fast, and reliable. The IP180 is remotely upgradable from InField and the BlueEye application. The IP180 supports all Paradox + panels and should operate with most Paradox panels produced after 2012.

THINGS YOU SHOULD KNOW, PLEASE READ:

- IP180 does not support “Combo” mode. A system with a combo connection cannot be upgraded to IP180 without upgrading the panel to + using two serial outputs.
- DHCP can be disabled in BlueEye via the installer menu and closed network through the web page.
- IP180 reports in Contact ID format only to the IPC10/VIPC20 (make sure the panel is set to Contact ID reporting).
- IP180 supports and supervises up to four IPC10/VIPC20 reporting converters (with EVO Panels and three converters with MG/SP panels).
- The VIPC20 requires an active internet connection and cannot operate in closed network configurations.
- IP180 supports only the BlueEye application, Insite GOLD will not connect to the IP180.
- When connected to a Paradox panel with two serial outputs, connect the IP180 to Serial-1 (main channel) and PCS265 V8 (MQTT version) to Serial-2 (another IP180 can be connected to Serial-2 as well). Do not mix MQTT reporting devices and Legacy reporting versions.

NOTE: Please make sure the reporting format is set to CID. The IPC10/VIPC20 can only receive CONTACT ID format.

Installation

IP180

The IP180 should be installed inside the panel metal box enclosure to be tamper-protected. Clip the IP180 to the top of the metal box, as shown in Figure 1.

Serial to the Panel

Connect the serial input of the IP180 to the Serial output of the Paradox panel. If it is Paradox + Series, connect it to Serial1 as it is the main reporting channel, as shown in Figure 5. If the panel is powered up, the RX/TX LED starts flashing; this indicates that the IP180 is powered and is communicating with the panel.

Internet Via Ethernet Cable

Connect the Ethernet plug to the RJ45 socket of IP180, as shown in Figure 5. On the RJ45 socket, the green and orange LEDs will light and Ethernet LED in front will light up followed by Swan-Q LED after up to 15 seconds. If you wish to add a Wi-Fi connection once connected to Swan via Ethernet, you can configure the Wi-Fi via the application.

Internet via Wi-Fi

Connect the Wi-Fi antenna, (the antenna kit may be sold separately). To use Wi-Fi, drill a ¼" hole on top or side of the metal box, pass the antenna extension wire through the hole, and secure the socket to the metal box. Secure the Wi-Fi antenna to the plug and connect the other side of the cable gently to the IP180; it uses a "push and click" mechanism, as shown in Figure 2.

To use the Wi-Fi network as the only internet connection (without Internet via the Ethernet cable). When no internet is available through Ethernet, the IP180 will open a Hotspot. Please open BlueEye and look for the Hotspot named by the IP180 Serial number, connect to the hotspot, and follow the instructions, refer to page 5 for more information.

Note: The Wi-Fi antenna is installed on the ***outside*** of the metal box. The antenna might not be included and may be purchased separately from your distributor.



Figure 1



Figure 2

Open Network

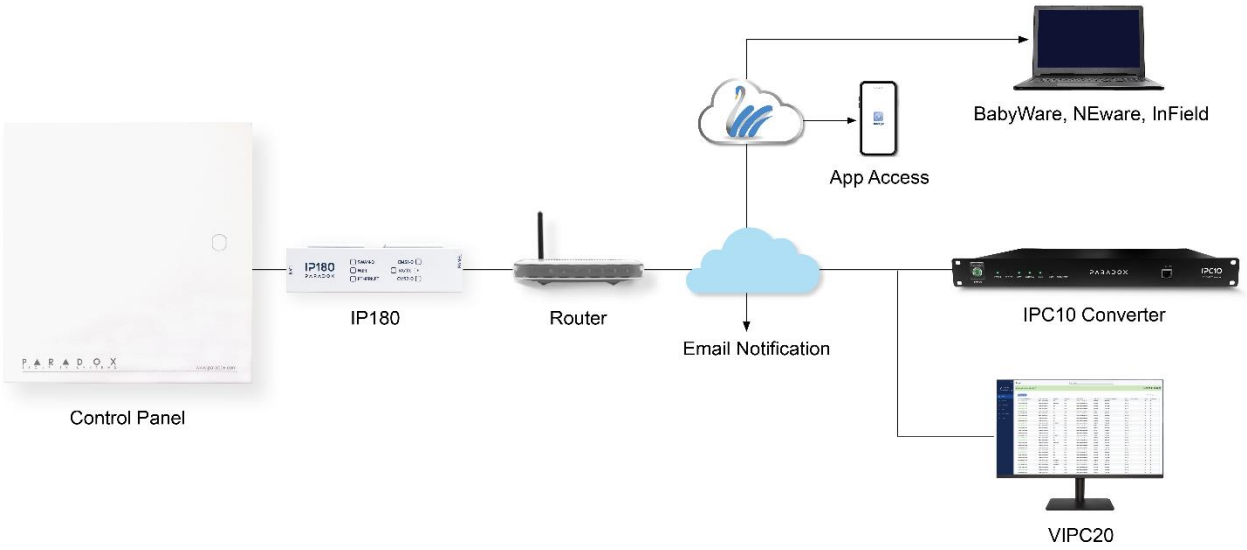


Figure 3

Closed Network

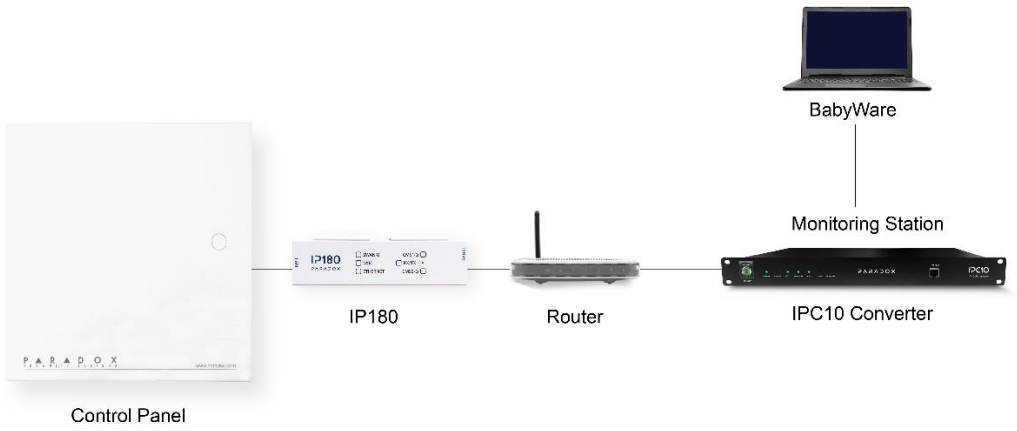


Figure 4

IP180 Overview

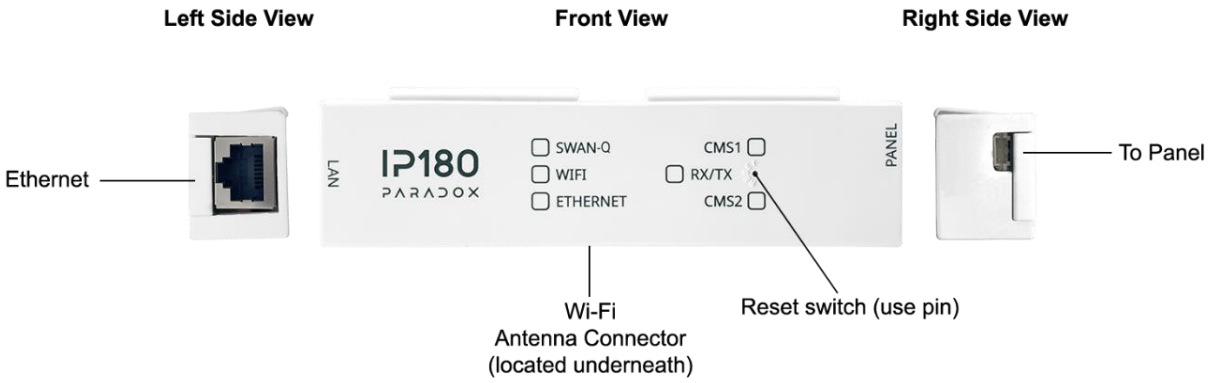


Figure 5

LED Indicators

LED	Description
SWAN-Q	ON - Connected to SWAN-Q (GREEN)
Wi-Fi	ON - Connected to Wi-Fi (GREEN)
Ethernet	ON - Connected to Ethernet (GREEN 100mbps Orange 10mbps,)
CMS1	ON - CMS Converter 1 (Main) configured successfully
CMS2	ON - CMS Converter 3 (Parallel) configured successfully
RX/TX	Flashing – Connected and exchanging data with panel

Connectivity - Port Settings

When connecting to most routers, the IP180 will automatically connect, and nothing needs to be configured. Should you have issues connecting, please make sure that the ISP, router/firewall is not blocking the following ports. They need to be permanently open (TCP/UDP, and inbound and outbound).

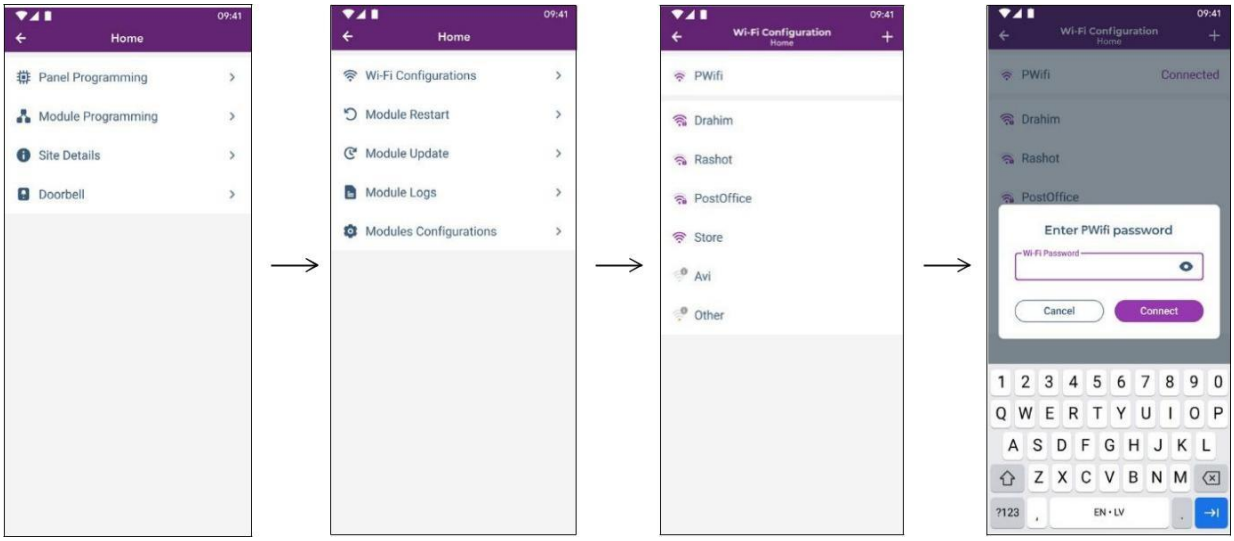
Port	Description (used for)
UDP 53	DNS
UDP 123	NTP
UDP 5683	COAP (back up)
TCP 8883	MQTT port SWAN and IPC10/VIPC20 converter
TCP 443	OTA (firmware upgrade + certificate download)
TCP Port 465, 587	Usually for email server, may differ depending on the email server used.

Connect IP180 over Wi-Fi

Wi-Fi configuration is also available from the Master Settings menu in BlueEye. There are two possibilities to connect over Wi-Fi, either with or without Ethernet.
Note: Wi-Fi is not available when the IP180 is in a closed network installation.

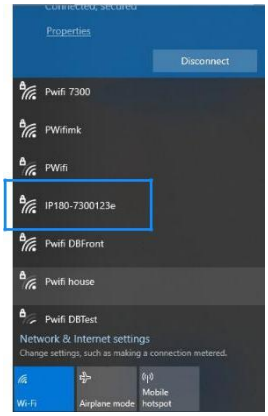
If internet connected via Ethernet cable:

1) Using the BlueEye app, connect to the site using the site token or panel serial number.
2) Either via the MASTER or INSTALLER menu, select settings, and then Wi-Fi configuration.
3) Select the Wi-Fi network you wish to connect to. Enter the password then press connect. A successful connection will be indicated by displaying CONNECTED.

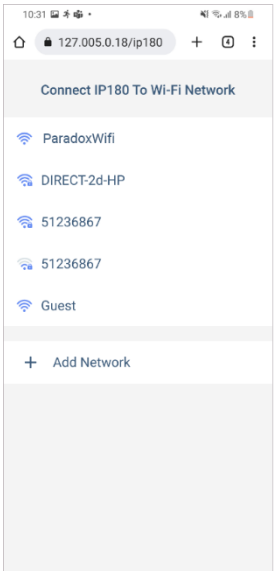


If internet via Ethernet is not connected:

1) Power up the IP180 connecting to the panel serial port. If the Internet is not available, the IP180 will activate the hotspot.
2) Using your device's Wi-Fi, search for the IP180 Wi-Fi hotspot that is identified by IP180-SERIAL NUMBER.
3) Connect to SSID name: IP180<SN>, see image below.



4) Go to a web browser on your device and enter 192.168.180.1. You will open the IP180 web page to configure the Wi-Fi network that you wish to connect to.



5) Select from the above list, the Wi-Fi network you wish to connect to and press it. Enter the password and press connect. If no password is needed (open network) leave it blank and press connect. You will lose connection from the web page and the IP180 will connect to the desired Wi-Fi network. If the connection was refused due to a wrong password or any other reason the hotspot will be opened again.
6) Exit and proceed to BlueEye to connect to the site.

Note: If Ethernet and Wi-Fi are connected, the IP180 will keep one connection active and not both. The module will use and stay with the last active connection type.

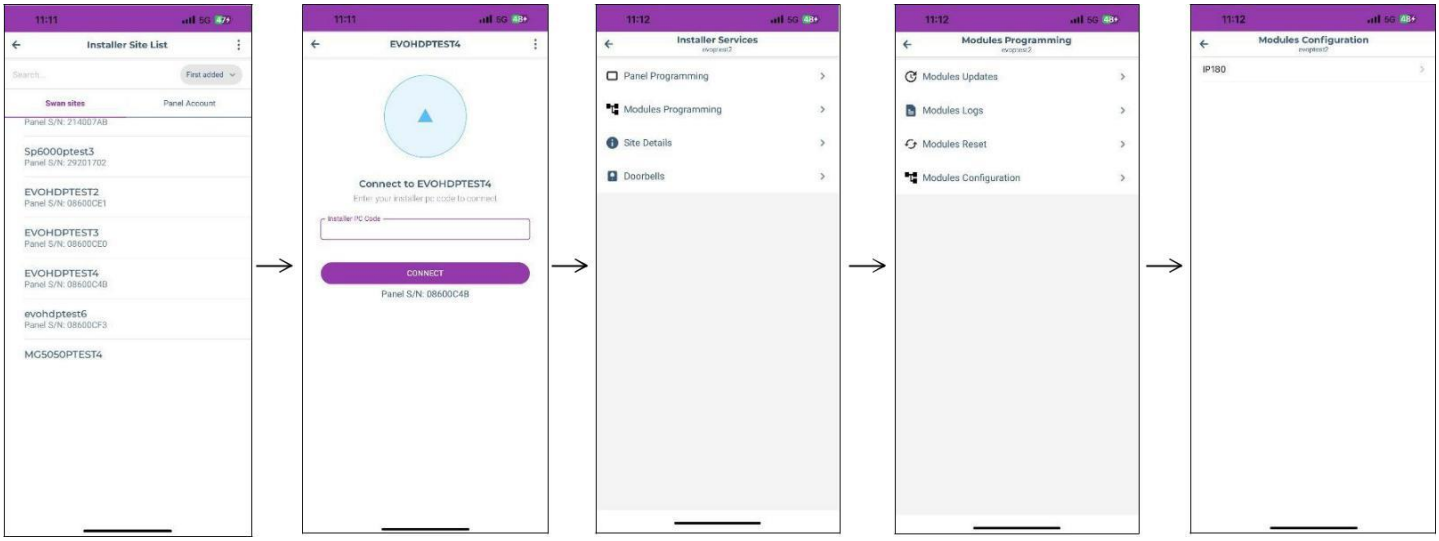
Creating a Site

1) Open the **BlueEye** app.
2) Select the **Menu**, and then select **Installer Menu**.
3) Press on the 3-dot menu and select **Create New Site.**
4) Enter the Panel SN, Site Name, and email address.
5) Tap on **Create New Site**.
6) Site is created.

Configuring the IP180 Using BlueEye

Configuring IP180 in a Connected Site

1) Open the **BlueEye** app.
2) Select the **Menu** and then **Installer Menu**; the Installer Site List screen will be displayed.
3) Select the Site.
4) Enter the Installer PC Code of the panel (same as the PC Password in BabyWare, default 0000).
5) Select the **Modules Programming** option from the Installer Services tab.
6) Select **Module Configuration**.
7) Select IP180.



CONFIGURATION:

Reporting to the IPC10/VIPC20 Converter in open networks (internet available)

To configure reporting, enter at the Paradox panel via keypad or BabyWare, the CMS Account number IP address(es) of the converter(s), IP Port, and the security profile (2-digit number) that indicates the supervision time. Up to four converters can be used to report with the IP180.

Security Profiles

Security profiles cannot be modified.

ID	Supervision
01	1200 seconds
02	600 seconds
03	300 seconds
04	90 seconds

Setting Up IP Reporting at the Keypad or BabyWare

1) **NOTE:** IP180 can only report CID format, make sure reporting is set to CID – (Ademco contact ID)
2) Contact ID: MG/SP: section **[810]** Enter value 4 (default)
   EVO/EVOHD+: section **[3070]**
   Enter value 5
3) Enter the IP reporting account numbers (one for each partition): MG/SP: section **[918]** / **[919]**
   EVO: section **[2976]** to **[2983]**
   EVOHD+: section **[2976]** Converter 1 Main
   Note: For EVOHD+ panels, Converter 2 Backup and Converter 3 Parallel, automatically assumes the account number of Converter 1 Main and cannot be modified.
4) Enter the monitoring station's IP address(es), IP port(s), and security profile(s). This information must be obtained from the monitoring station.

NOTE: **Converter password is not needed with IPC10/VIPC20 and there is no need for it to be programmed.**

MG/SP Sections			
IP Converter	**#1**	**#2**	**Backup**
IP Address 1	[929]	[936]	[943]
IP Port 1	[930]	[937]	[944]
IP Profile	[934]	[941]	[948]

EVO Sections				
IP Converter	**#1**	**#2**	**#3**	**#4**
IP Address 1	[2984] ↓	[2986] ↓	[2988] ↓	[2990] ↓
IP Port 1				
IP Profile				

MG/SP Sending IP Credentials to Converter			
IP Converter	**#1**	**#2**	**#3**
IP Address 1	[935]	[942]	[949]

EVO Sending IP Credentials to Converter				
IP Converter	**#1**	**#2**	**#3**	**#4**
IP Address 1	[2985]	[2987]	[2989]	[2991]

EVOHD+ sections			
IP Converter	**#1**	**#2**	**#3**
IP Address 1	[2984] ↓	[2986] ↓	[2988] ↓
IP Port 1		The IP profile for this converter is the same as the Main converter IP profile.	
IP Profile			

EVOHD+ Sending IP Credentials to Converter			
IP Converter	**#1**	**#2**	**#3**
IP Address 1	[2985]	[2987]	[2989]

Email Configuration (Only with Open Networks)

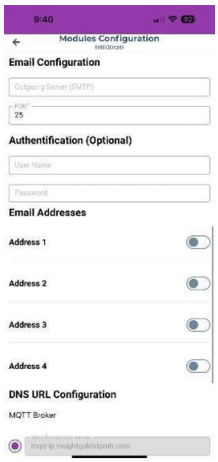
Configure the IP180's email server settings. Please note that emails are not supported in a closed network configuration.

Email Addresses

You can configure your IP180 to send email notifications to up to ***four*** email addresses to receive notification of system events.

To configure an email address:

1) In **BlueEye** app, Installer Menu, Module Configuration section**,** enable the Address toggle button.
2) Enter the Email address. Use the test button to verify that the recipient's address is correct.
3) Select the Areas and Event groups that generate email notifications.



NOTES:

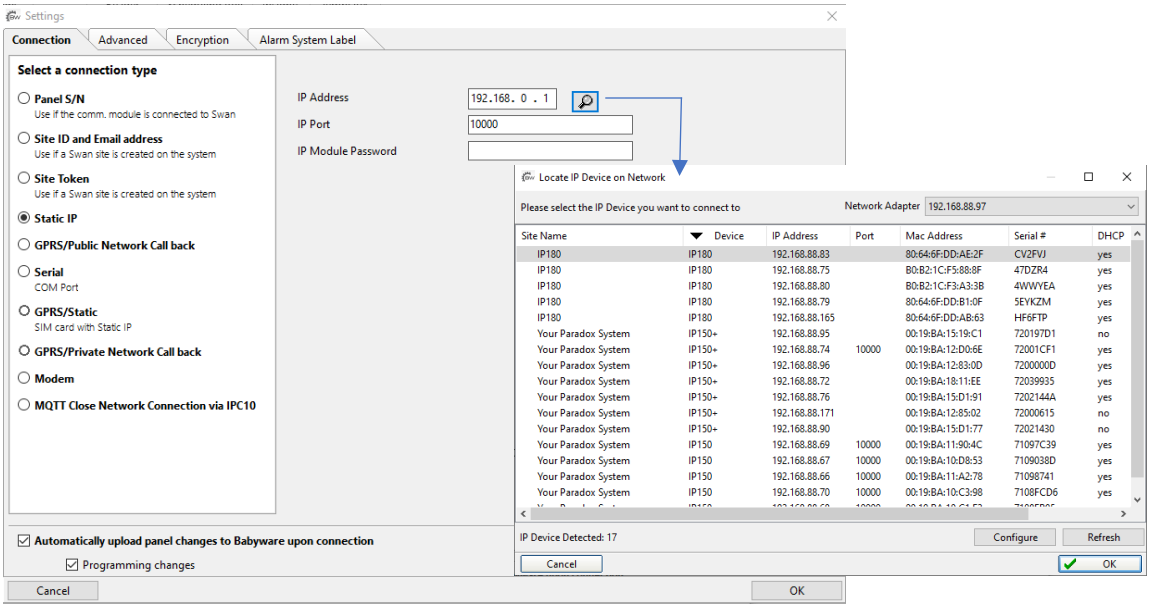
- Enter the username without the @domain.
- Sending emails is not supported in closed networks (custom SMTP not supported).

Reporting to the IPC10 Converter in closed networks (no internet)

NOTE: The VIPC20 requires an active internet connection and cannot operate in closed network configurations.

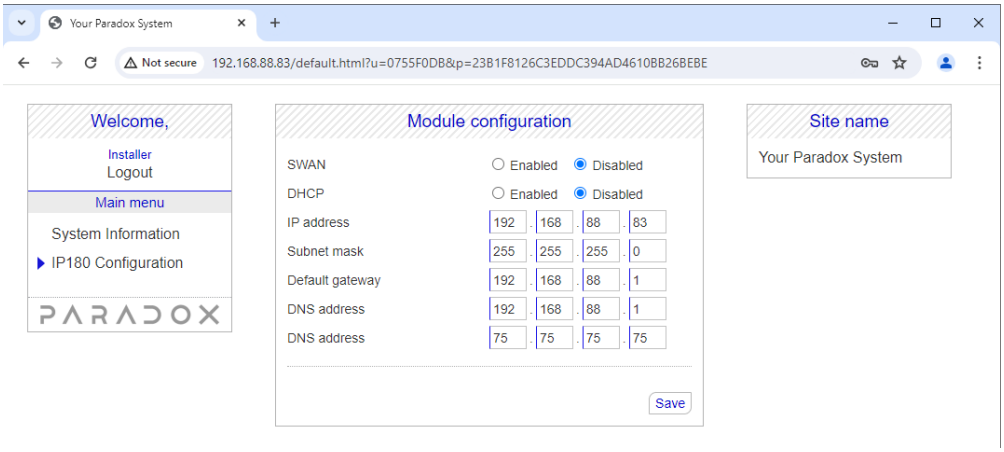
Reporting in a closed network requires IPC10 V1.01.000 or later version, and BabyWare V5.6.40 or later for connection/configuration. The below will be valid only if the Internet is not available on the connected network.

When IP180 is connected to the network without internet access, it will enable web page access. With a PC connected to the same local network of the IPC10 and the devices, use BabyWare, select Static IP connection type, and use the scan feature to find the IP of the IP180 modules. A list of Paradox IP devices will appear (IP180 and IP150+, IP150 with supported versions) with their IP addresses and their serial numbers.



Enter the IP address of the device you wish to configure in a web browser. Enter the Installer PC Code of the panel (same as the PC Password in BabyWare, default 0000).

From the web interface once connected to the web page, Disable Swan connection as shown below and disable DHCP if needed. If DHCP disabled and unable to connect with the device, reset to default will enable DHCP.



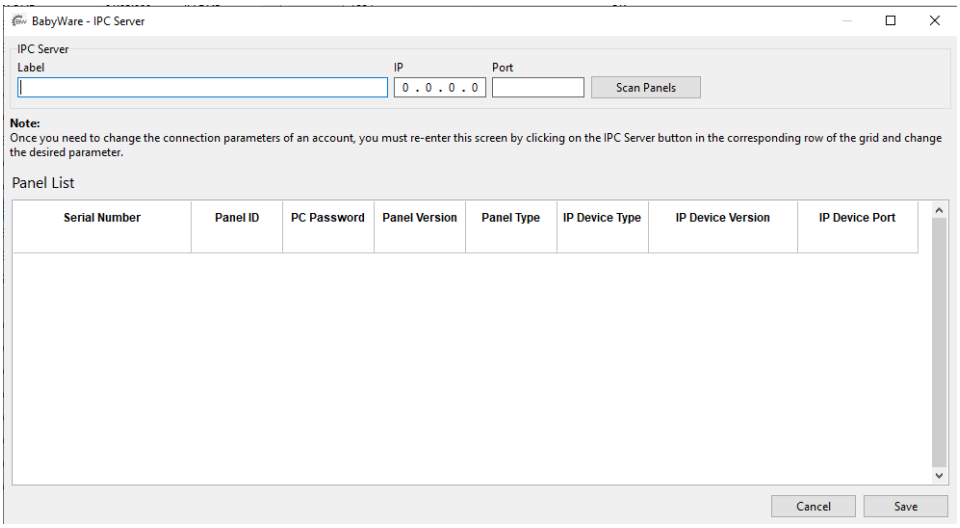
To configure reporting, enter panel programming via keypad or BabyWare (serial port). Enter the CMS account number, IP address(es) of the converter(s), port, and security profiles (2-digit number), that indicate the supervision time.
Up to four converters can be used to report with the IP180.

After the reporting configuration is finalized (panel registered to an IPC10), a panel connection with BabyWare can be established following one of the next procedures.

Option 1

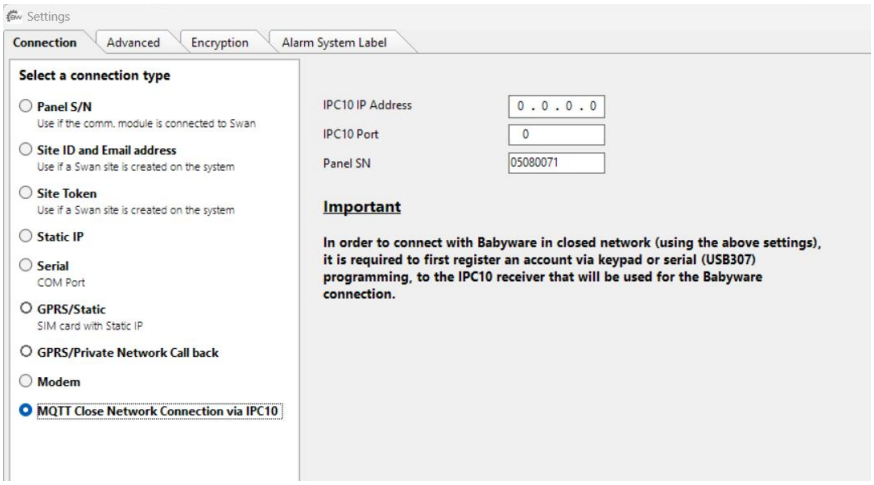
To connect with BabyWare follow the below steps:

1. Open the Account page and select the IPC server option.
2. Enter the label of the IPC10 converter, the IP of the IPC10, and the port (8883 default).
3. Select the Scan Panel option and follow the messages on the screen.
4. From the list of the IPC Server Group, you can now connect to the panel of your choice.



Option 2

1. Open the Account page and add an account.
2. Select the Connection option.
3. Select the option MQTT Close Network Connection via IPC10.
4. Enter the IPC10 IP address, port and panel serial number.
5. Select OK and add the panel ID, PC password, and connect to the panel.



NOTE: Configuring the reporting with BabyWare will require serial port connection, with a 307USB.

Firmware Upgrade

Firmware upgrades available only in networks with Internet access.

1) Firmware upgrading is available from the BlueEye app using the installer Menu, (or Infield software).
2) Select the site from the SWAN-Q sites list.
3) Enter the Installer PC code in the field and press **Connect**.
4) Select **Modules Programming**.
5) Select **Modules Updates**.
6) Select the **IP180**.
7) The list of firmware available will appear, select the firmware to use.

Reset IP180 to Default Settings

To reset the IP180 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 CMS LEDs. Press down gently until you feel some resistance; hold it down for approximately five seconds. When the RX/TX LEDs start flashing quickly, release it and then press it down again for two seconds. Wait for all LEDs to turn OFF and then back ON.

Technical Specifications

The following table provides the technical specifications for the IP180 Internet Module.

Specification	Description
Ethernet	100 Mbps/10Mbps
Wi-Fi	2.4 GHz, B, G, N
Panel Compatibility	Paradox control panels produced after 2012
Upgrade	Remotely via InField or BlueEye app
IP Converter	IPC10/VIPC20 up to 4 supervised converters simultaneously direct supervised encrypted independent connections
Encryption	AES 128-bit
IPC10/VIPC20 to CMS Output Format	MLR2-DG, Ademco 685, or Ademco CID-TCP
Current Consumption	100 mA
Current Consumption by Connection Type	Ethernet Standby: 72 mA Ethernet Upgrade: 77 mA Wi-Fi Standby: 43 mA Wi-Fi Upgrade 67 mA
Operating Temperature	-20°C to +50°C
Input Voltage	10V to 16.5 Vdc, supplied by the Paradox panel serial port
Enclosure Dimensions	10.9 x 2.7 x 2.2 cm (4.3 x 1.1 x 0.9 in)
Approvals	CE, EN 50136-1, EN 50136-2 SP5, EN 50131-10 Grade 3, Class II Certification Body : Applica Test & Certification

Encryption Standard and Security Measures

The IP180 Internet Module implements AES-256 encryption to ensure secure communication and data protection. AES-256 provides a high level of cryptographic security, mitigating the risks of unauthorized data access and tampering. Additionally, AES-128 encryption is supported for backward compatibility when necessary.

For data transport security, the module supports a variety of TLS cipher suites (e.g., TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA), enabling robust and flexible encryption negotiation between the module and connected devices.

The AES encryption used in the IP180 Internet Module adheres to widely accepted cryptographic standards, ensuring secure communication and protection against unauthorized data access and modification.

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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