PARADOX IPC10 IP CMS Converter Installation Guide

Contents

PARADOX IPC10 IP CMS Converter

Specifications

- Model: IPC10
- Version: V1.01.000
- Hardware: ECO Z030
- Power Consumption: Max 8W
- Network Port: Ethernet port with POE support

Product Usage Instructions

Connection and Setup

Connect the IPC10 to your network using an Ethernet cable with POE support. Follow the steps below to configure the device:

1. Locate the IPC10's IP address using the command prompt on a Windows PC.
2. Access the web user interface by entering the IP address in a web browser with port 8080 (e.g., http://192.168.1.110:8080).
3. Set a password of at least six alphanumeric characters and keep it secure.

Factory Reset
To reset the IPC10 to factory default settings:

1. Press the reset button for at least 10 seconds until all LEDs start flashing.
2. Release the button, and the IPC10 will restart with factory default settings.

FAQ:
Q: How can I restore DHCP connection or reset the IPC10 to factory default?
A: To restore DHCP connection, press the reset button for up tothree seconds. For factory reset, press the reset button for at least 10 seconds until all LEDs start flashing.

V1.01.000, HW ECO Z030
For the latest and previous version manual updates, please refer to **paradox.com/Manuals/IPC10.pdf**.
Refer to the top of Page 2 for What's New in this version.
NOTE: Hardware ECO Y084 (first released IPC10 hardware) will run V1.01.000 except for keeping internal clock time in closed networks after a power cycle and no backup batteries.

Introduction

The IPC10 receives signals from Paradox systems/accounts encoded with Paradox IP protocol, records, converts them to known formats and sends them to central monitoring station (CMS) software. If CMS is down, a built-in 10,000 event buffer is available for temporary use until CMS is back online. The IPC10, based on MQTT technology, is continuously supervised, reliable, and fast. Reporting from the head unit to the CMS cycle is usually completed in less than 100ms. The IPC10 is designed with a very small 1U rack enclosure footprint, high account monitoring capacity of up to 5,000, single and only ethernet cable connection, very low power consumption of 6W, reliability, and redundancy with less than 5 minutes replacement time if needed to full operation. The IPC10 includes backup batteries for up to 20 hours of operation and will work in a closed network without internet with supported versions of reporting devices (IP180, IP150+MQ).

Main Features

- Up to 5,000 supervised accounts (20,10-, or 5-minutes supervision), 3,500 accounts at 90 seconds.
- 100ms reporting cycle from Head unit to CMS or from M wireless devices to CMS.
- Supports closed network operation (supporting devices: IP180 V 1.10.00, IP150+MQ V 6.10.00 and above, BabyWare version 5.06.40 and above, in Beta expected to be released June 1st/2024).
- Fully encrypted communications with AES 128-bit certificates.
- Fully supervised Connection to accounts.
- Simple and fast uptime with minimal programming (input Network configuration), auto, and seamless registration from Paradox M devices and legacy MQTT reporting devices.
- One single-wire Ethernet connection to IPC10, for data and POE; no other connections available or needed.
- Support all legacy Paradox systems with IP180 or upgraded IP150+MQ (version 6.0 and higher) or PCS265V8 (version 8.0 and higher).
- 5 minutes up and full monitoring running replacement. Only network configuration is needed for the replaced

receiver.

- Connect to CMS software via local Ethernet, supports Sur-Gard MLR2-DG, Ademco 685, or Ademco CID-TCP formats.
- Support many customizable report codes.
- 10,000 event internal buffer.
- Simple and minimal UI for programming or use when CMS is down.
- Low footprint (rack mount 1U) and low power consumption
- CMS receives offline and online status regardless of events.
- Fully remotely upgradable via local Ethernet.

NEW in version 1.01.000 (HW ECO Z030 and above)

- New hardware with built-in Lithium-Ion battery backup for up to 20 hours of operation, and battery shut-down illuminated switch if IPC0 needs to be shut down.
- Internal clock battery.
- Support closed networks operation (Supporting devices: IP180 V 1.10.00, IP150+MQ V 6.10.00 and above, BabyWare version 5.06.40 and above, in Beta testing, should be released June 1st, 2024)
- Events are always sorted by order received with receiver time.
- UI improvements and additional custom codes.
- Hardware ECO Z030 (first released hardware) will run V1.01.000 with the exception of keeping time in closed networks after complete power down and no backup batteries.

Connection With Internet

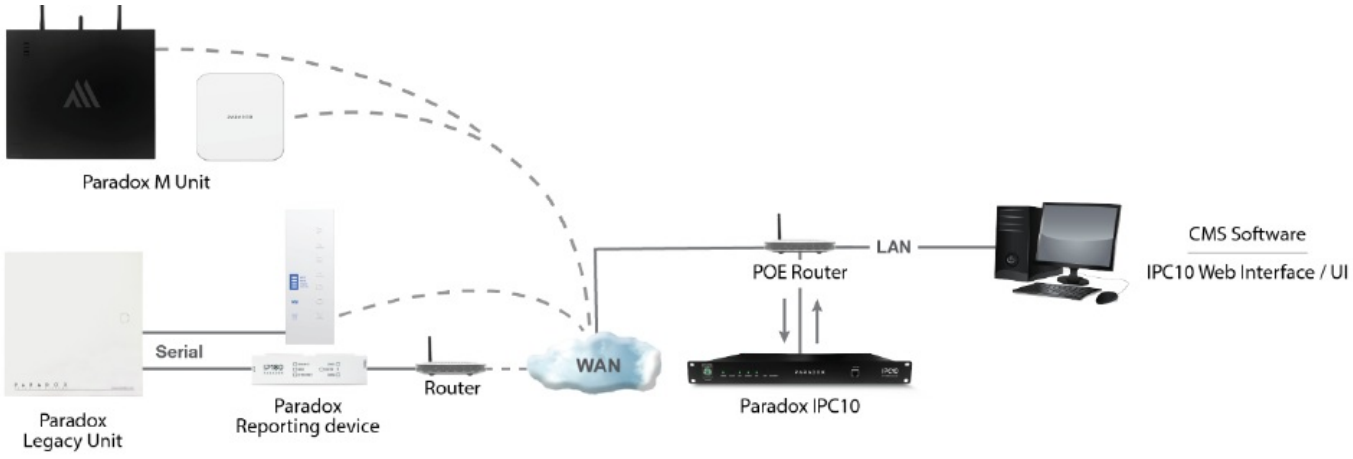
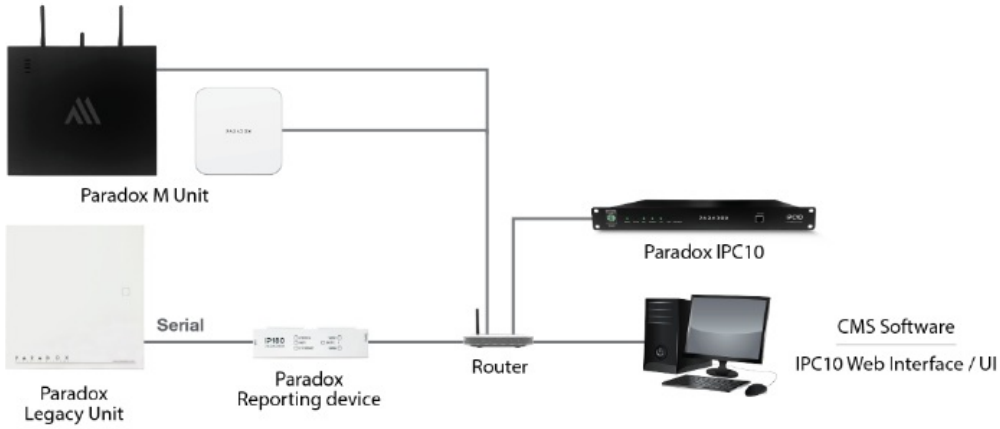
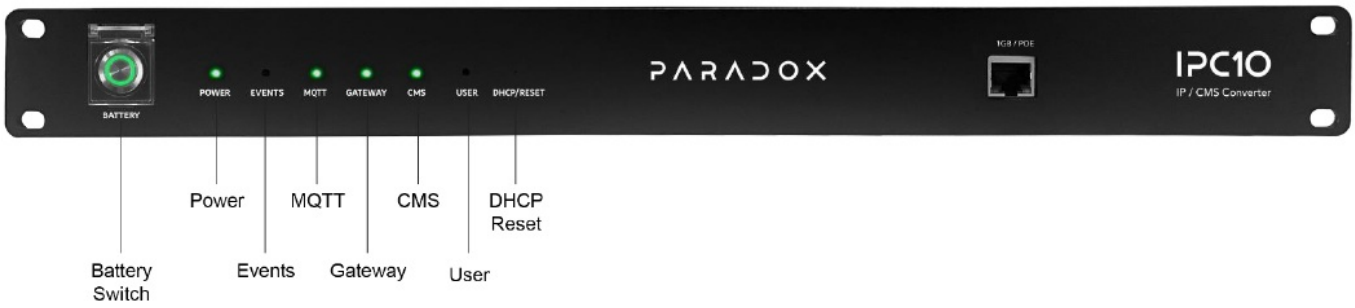


Figure 1

Connection in Closed Network



IPC10 Overview



LED Indicators

Button/LED	Description
Battery Switch	The battery switch must always be pressed (On) when IPC10 operates. The switch is used only to power down IPC10 in case of storage or transport. To power down, depress the switch and remove RJ45(POE). **Note**: If depressed when POE is connected, the Battery Switch LED flashes as a warning that no battery backup is connected or ON when the battery is fully charged for few a minutes.
Power	Green – Power ON (POE or Battery)
Events	Green, blinking when events are received from reporting devices
MQTT	Green – MQTT broker running
Gateway	Green – Valid gateway
CMS	Green – Connected to the CMS
	Amber blinking – Transmitting data to the CMS
User	Green – User connected to the IPC10 UI
DHCP/Factory default Reset	Used to restore DHCP connection or reset to factory default. Use a pin to gently press the reset button. For **DHCP restore**: Momentary press up to three seconds, DHCP status will be indicated by three flashes of all LEDs will clear the fixed IP address and restore factory network default settings. **Reset to Factory default** – Press for at least 10 seconds until all LEDs start flashing and depress. LEDs will shut down and the IPC10 will restart; all values will be set to factory default and **all data (including events) will be erased and DHCP will be activated**.

Location and Mounting
The IPC10 can be mounted on a 19” (48.3 cm) rack. Use appropriate mounting hardware to secure the unit to the rack.

Hardware Installation
Connect the Ethernet cable from the router with POE (max 8W consumption) to the Ethernet port located in the front of the IPC10, refer to Figure 3.

Configuration

1. Note 1: In Legacy panel programming, only IP address, port, and supervision are needed, there is no need to enter the receiver password, it is not used.
2. Note 2: Please do not attempt to open the IPC10. Only distributors should open the IPC10. Damaged protection stickers will void service and warranty.
3. Note 3: IPC10 events will always be displayed in the order received, please set up the IPC10 time zone in Configuration> Other> Date Time> Time zone.

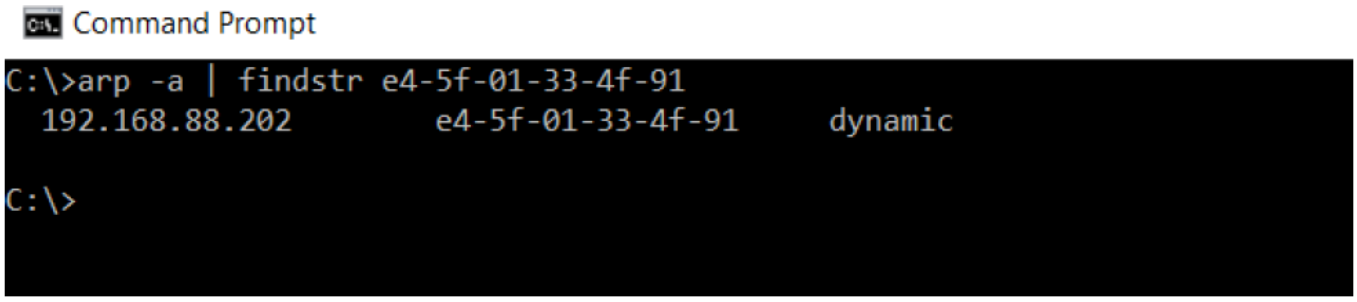
Locate the IPC10 on the network using an IP scanner or using CMD command.

How to Locate the Receiver’s IP address using an IP scanner:

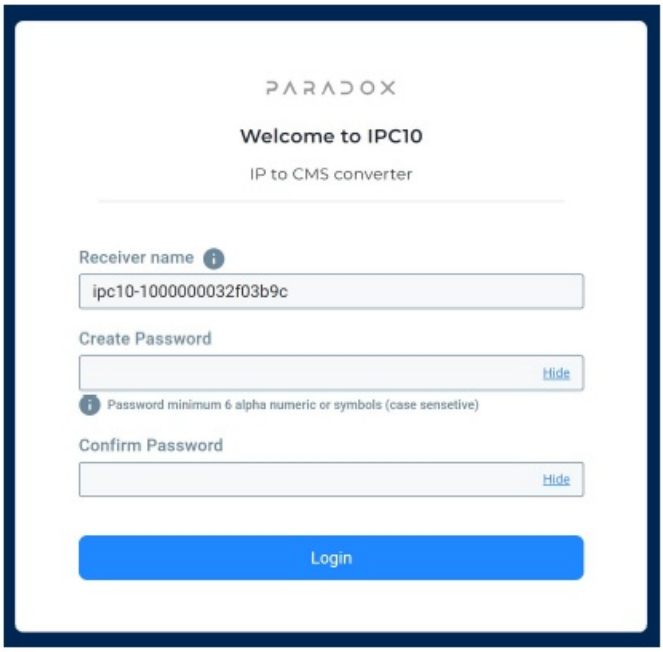
- Search for the IP address of the IPC10 using a standard IP scanner. It will appear as IPC10-SERIALNUMBER. The serial number will be printed on the label of the IPC10 in the back.

How to Locate the Receiver's IP address using the command prompt:

- Open Command Prompt (CMD) on a Windows PC in the same network as the IPC10. Enter the following command: arp -a | findstr receiver's mac address (printed on the label located on the back of the IPC10 unit).
- Example: arp -a | findstr e4-5f-01-33-4f-66
- The IP of the IPC10 receiver should be shown, see below.



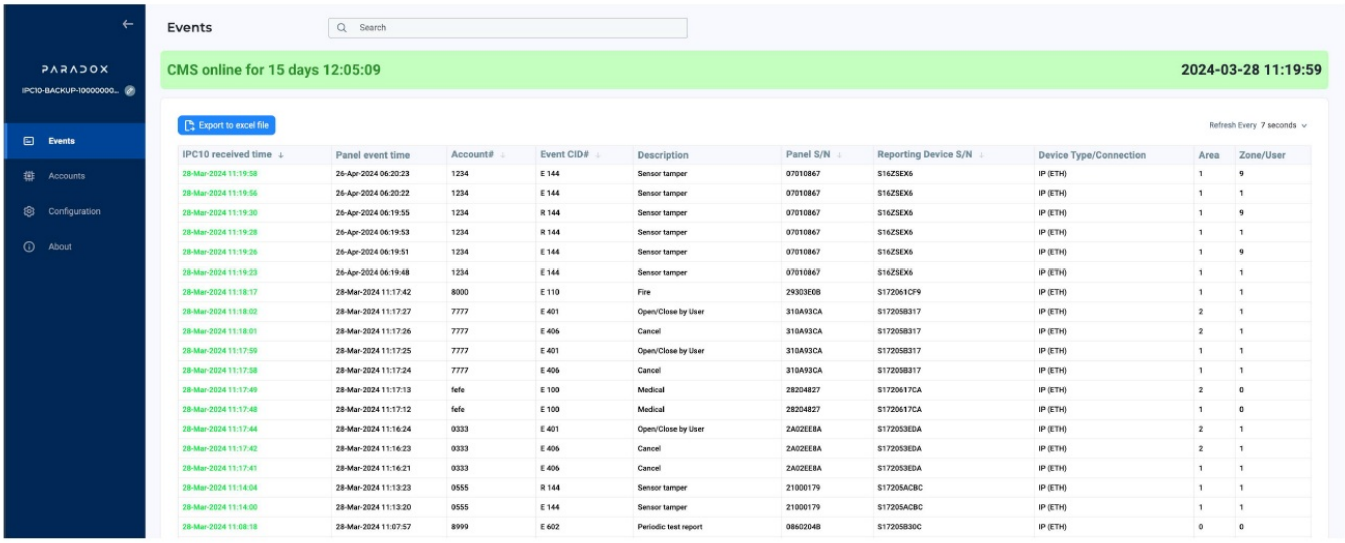
1. Enter the IPC10 IP address you found in a web browser, followed by port 8080 to access the web user interface (e.g., http://192.168.1.110:8080). The UI page will appear on your browser. The USER LED on the receiver will light up.
2. The IPC default name is IPC10-Serial number. This will be used to identify the IPC10 physically in case you have more than one IPC10 on the network. We suggest printing the name and sticking it on the front of the receiver. When multiple IPC10s are installed, you can also locate it with the user LED that will be ON when logged in.
3. Enter a password of a minimum of six alphanumeric (case-sensitive) characters. Confirm password. Keep the password in a safe place. If you lose the password, you must reset the receiver and reprogram it. all logs and events will be lost. Use a pin to press the reset button in the front of the IPC10, as shown in Fig-2. Press for more than 10 seconds to reset the IPC10.



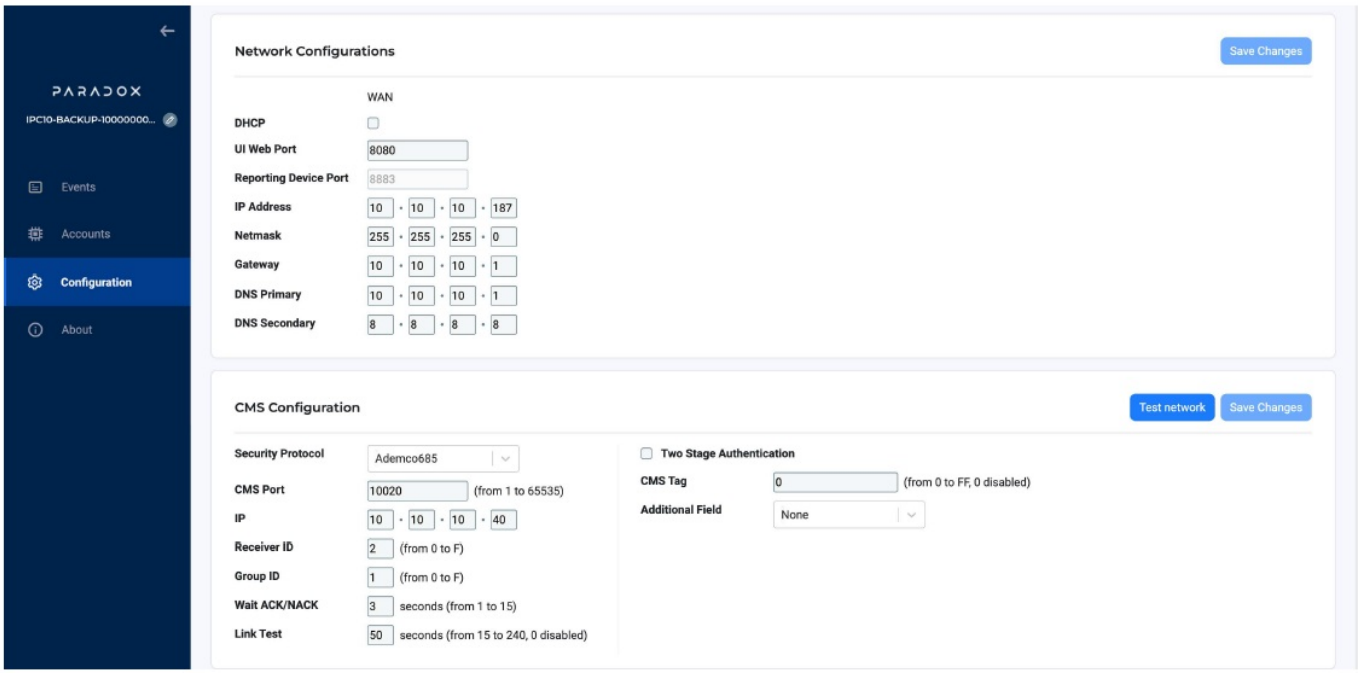
Main menu options

Events	Reported to CMS events time received are GREEN, and non-reported yet are Black.
	Up to 10,000 events will be buffered based on a first-in, first-out basis.
Accounts	View or suspend from CMS reporting accounts. **Note**: The account will be reported to CMS based on panel account code length 4 or 10 digits.
Configuration	Configuring network and necessary fields (IP, port, time, etc…)
About	Provides IPC10 information and security profiles.

Search: Enter panel or device serial number in the search field.



Configuration tab is used to program the IPC10, refer to the table below.

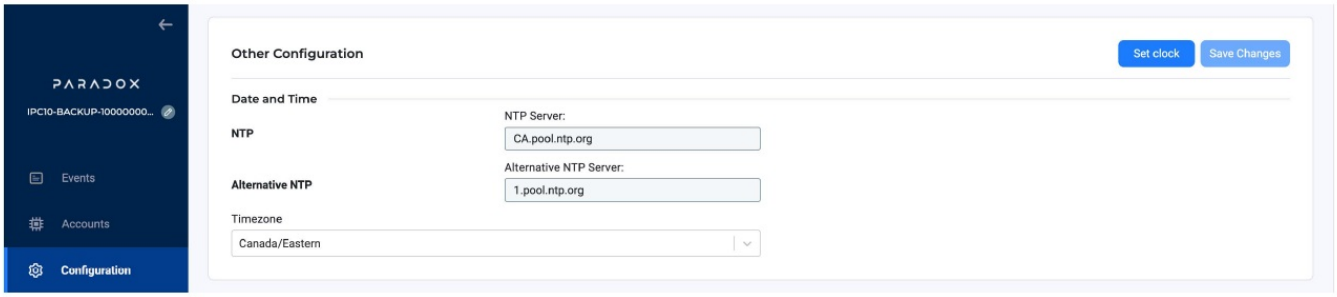


DHCP	DHCP is selected by default. The IP address will be assigned by the router. STATIC IP ADDRESS must be programmed at the CMS router by the IT manager based on the MAC address of the IPC10 that can be found on the About page. **NOTE:** If a wrong IP address is saved, you can restore the DHCP status by pressing momentarily on the DHCP/Reset button.
UI Web Port	The default port is set to 8080 and can be changed if needed. Defines the port number assigned for Web User Interface access. Port numbers can be between 1 to 65535.
Reporting Devices Port	Default MQTT access is 8883 – MUST be open.
IP Address	Defines the local converter network address set up by the CMS IT manager. The IP address programmed at the reporting device's end is forwarded internally at the CMS to the local IP address of the receiver. The remaining fields should be assigned by the DHCP (network, gateway, DNS primary and secondary) or programmed manually if the DHCP is off.
Netmask	To be assigned by the CMS IT manager or by the DHCP service.
Gateway	To be assigned by the CMS IT manager or by the DHCP service.
DNS Primary	To be assigned by the CMS IT manager or by the DHCP service.
DNS Secondary	To be assigned by the CMS IT manager or by the DHCP service.

CMS Output Configuration

CMS Output Protocol	Configure the output protocol used by the IPC10 Converter to the CMS software. Supported protocols are Sur-Gard MLR2-DG (default), Ademco CID-TCP, and Ademco 685.
IP	Defines the IP address assigned to the CMS Software.
Port	Defines the port number assigned to CMS Software. Port numbers can be between 1 to 65535.
Receiver ID	Defines the unique ID assigned to the IPC10. The Receiver ID can be between 0 and FF Sur-Gard
	MLR2 and 0 to F for Ademco 685 and Ademco CID-TCP.
Group ID	Allows to assign the converter to a group ID in the central station setup. Can be between 0 to FFF
	Sur-Gard MLR2 and 0 to F for Ademco 685 and Ademco CID-TCP.
Wait ACK/NACK	Defines the interval in seconds (1 to 15 seconds, default 3 seconds) which the IPC10 will wait for an acknowledgment from the CMS software, before sending the next event. If no ACK/NACK is received the IPC10 will retry sending the same event.
Link Test	Defines the interval in seconds (15 to 240 seconds, default is 30 seconds) at which the link test is sent to the CMS software (0= disable).
Test Network	Allows you to test the communication between the IPC10 receiver and the CMS software. Once the test is complete, a Testing CMS Network window will be displayed indicating the results of the test.
Two Stage Authentication	Defines if two-stage authentication is Enabled or Disabled.
CMS Tag	The default is set to 0. Add custom CMS tag if needed (1 or 2 Hex characters).
Additional Field	Additional information can be added to the event transmitted to the CMS like panel SN, device SN or
	MAC address (default is set to none).

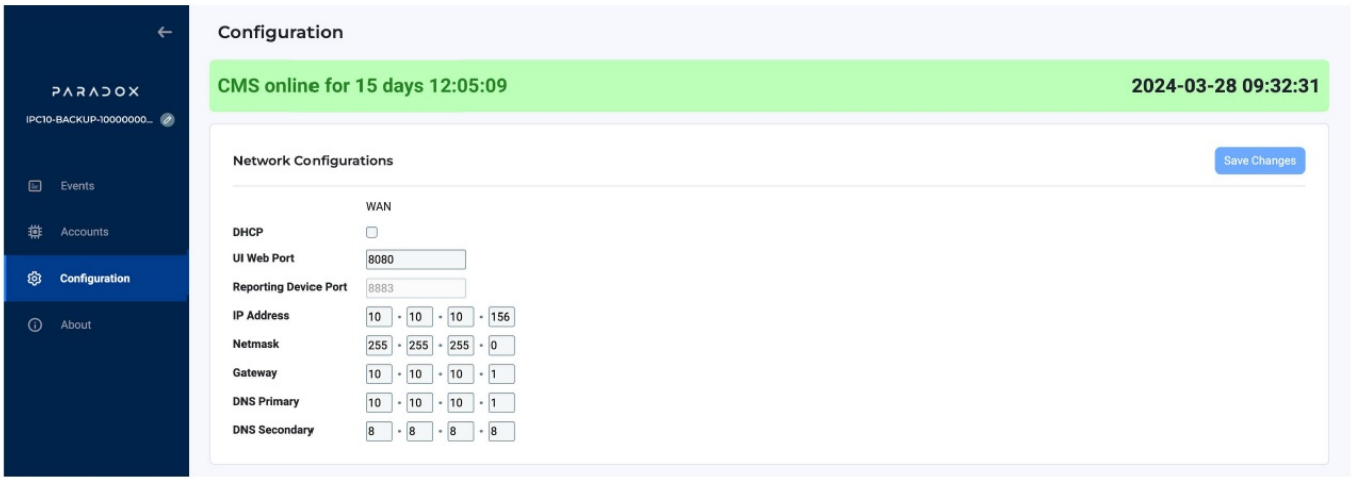
Other Configuration



Primary NTP	Main NTP server to use for the IPC10 database and time (functions only with the interne t).
Alternate NTP	Alternative NTP as a backup of the primary NTP server (functions only with the internet).
Time Zone	Select the time zone to match the IPC10 location.
Set Clock	In closed networks, in rare cases, the clock might need adjustments with the set time but ton. When the internet is available, time will be adjusted automatically and there is no point in setting the clock as it will be overridden by the auto-update.

IPC10 Events:
Internal events of IPC10 reported to CMS, can be customized by CMS.
Note: All changes will be defaulted in reset to default

Generate Logs button	Will generate and save a file **IPC10mainlogs(ser#)(Date).zip** on the P C in the downloads folder. Please email the file to **support@paradox.com** upon request.

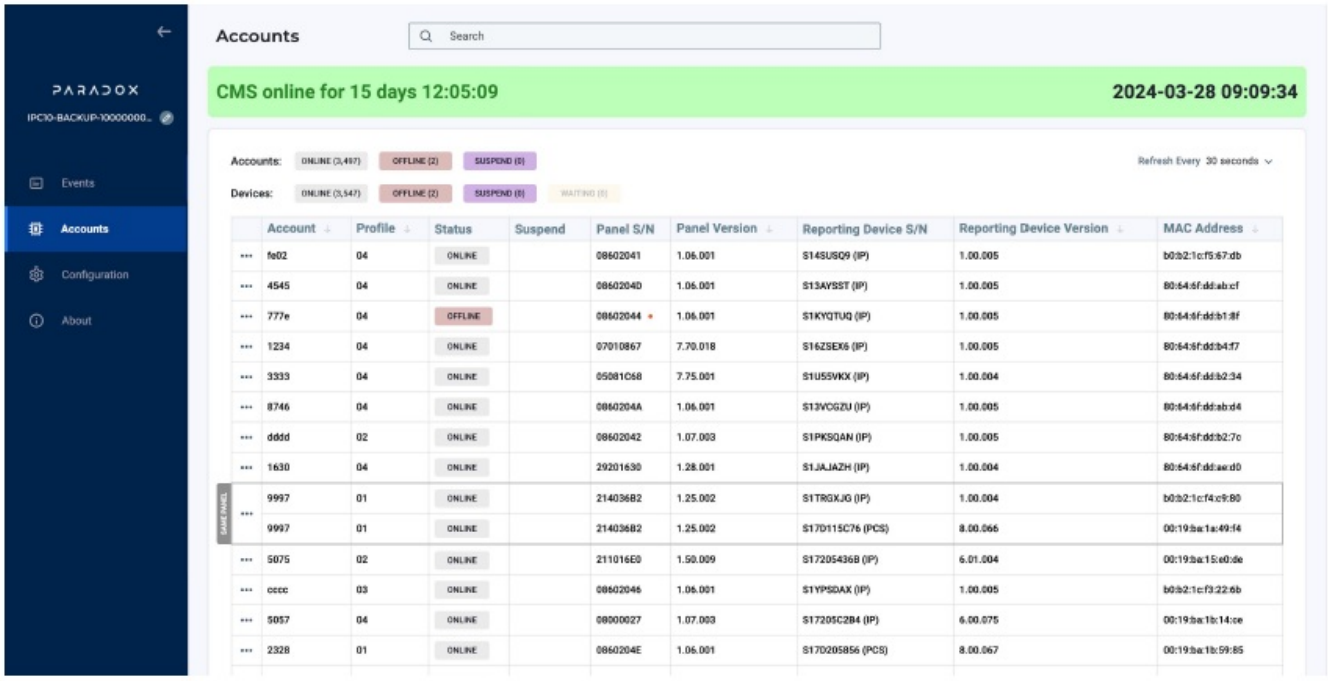


Account	Recommended to use the receiver serial number, this is the Account n umber
	that will identify the receiver to the CMS for Web login, power-up, and database
	status.
Web login	Sends a customized event to the CMS when a web login is attempted. Default value is 000.
IPC10 power up	Sends a customized event to the CMS when the IPC10 powers up. De fault value is 000.
700: Account database reached 75% (4000 accounts), (700 default code)	Sends an event to the monitoring station's automation software when t he account database account capacity has reached 75%. Default 700, can be modified by CMS.
Database is full	Sends an event to the CMS when the database is full (5000 accounts) when an attempt is made to register a new account. Default value is 0 00.
710: Good Will account disconnect f rom CMS (710)	This code will be sent indicating that reporting to this receiver was ter minated at the panel programming meaning the dealer chooses not to report to this receiver. The account will also be shown offline. reported with default code 710, code can be modified by CMS.
720: Auto delete account offline (72 0)	Offline accounts for more than 30 days will be deleted and reported wit h default code 720, code can be modified by CMS. If the account resu mes online, it will be restored.
552: Lost panel/ Restore panel (552)	If the panel is not communicating with the IP device, it will be displayed as Panel Lost in the Suspend column, and code E552 will be reported to the CMS. When restored, code R552 will be reported. This event ca nnot be modified.
IP unit lost (E551) / IP unit online res tore	If the IP Communicator is not polling to the IPC10, it will be displayed a s OFFLINE in the Status column and code E551 will be reported to C MS. When restored, code R551 will be reported. This event cannot be modified.
(R551)	
554: PCS off-Line/ Restore Code 554	PCS Offline and restore code (554). This event cannot be modified.
Time /Local time zone change (625)	Select the time zone of the receiver. This event cannot be modified.
New account registered to IPC10 (7 05)	When a new account reports for the first time to the IPC10, a code 705 (default value) will be sent to CMS.

Click Save changes. The IPC10 is ready for use at this stage.

Accounts

The Accounts tab allows you to view the status of the system's accounts and also provides the possibility to suspend accounts from reporting to CMS (if unpaid as an example). Offline accounts over 30 days will be deleted from the account list automatically. They will register if they become online. The IPC10 supports up to 10-digit accounts with future products.



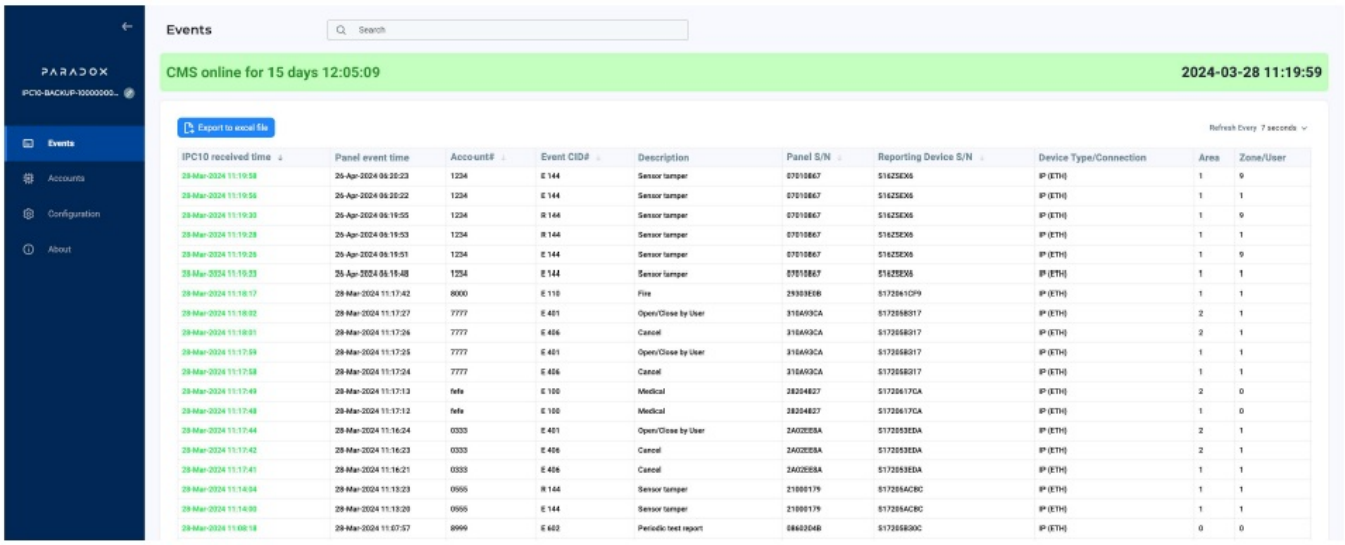
To suspend Account: Click on the 3-dot menu option (left of account) and select suspend account if desired. Suspended accounts will no longer send events to CMS, to unsuspend. Click again on the 3-dots and select unsuspend.

Online	Number of accounts or devices online.
Offline	Number of accounts or devices offline.
Suspend	Number of accounts or devices suspended. Press on the 3 dots on the left of the account to
	suspend, repeat to restore.
Waiting	This status will be displayed within five minutes after a reboot of the receiver displaying the ac counts/devices waiting for a restore connection. After five minutes, all should be ONLINE and all devices/accounts that have not been restored will have an OFFLINE status and reported to CMS as OFFLINE and the button will be grayed out.

Events

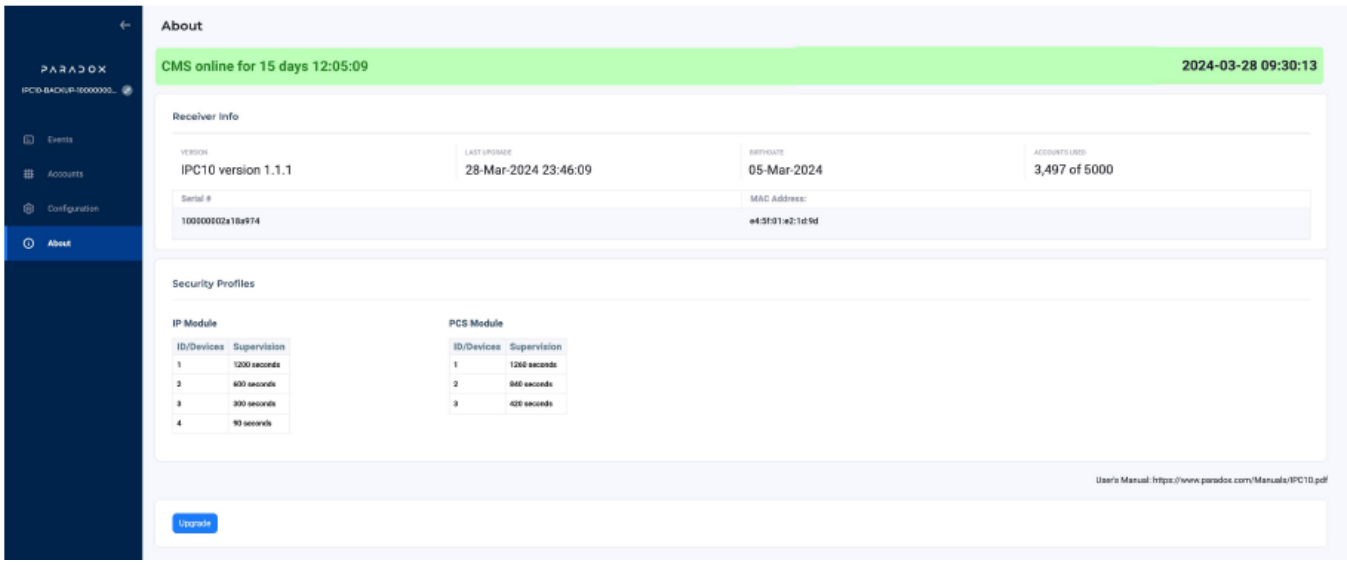
The Events tab displays the information related to events received from the accounts, such as date and time, account number, event CID number, description, panel serial numbers, reporting device, device type/connection, and zone/user. This page includes an option to export the event data to an Excel file.

Note1: “Events time received” in green means that they are already sent to the CMS. Events in black are not reported yet to CMS. Note 2: Events will be erased on the power cycle, events are kept during firmware upgrade.



About

The About tab allows you to view the IPC10 converter system information including firmware versions and upgrade the IPC10's firmware. It also displays the Security Profiles that provide the supervised time of the monitored accounts. the IPC10 will report a supervision loss of the monitoring station's automation software after this time. The IPC10 can handle up to 5,000 accounts using profile 01, and up to 3500 accounts using profile 04 or any combination.



Upgrade the IPC10

1. .Click on the Upgrade icon.
2. Browse for the upgrade firmware file that was downloaded from the Paradox website and saved to your PC/Network location.
3. Click Upgrade. The upgrade process will then begin.

Reset IPC10 to DHCP (Fig 3)

1. Insert a pin in the Reset switch.
2. Press and release the reset button momentarily (less than 3 seconds). It will ignore the IP address and switch to DHCP and restorefactory network settings Including port 8080. DHCP status will be indicated by three flashes of LEDs.

Reset IPC10 to Factory Defaults

1. Insert a pin in the Reset switch.
2. Press and hold the reset switch for more than 10 seconds until the LEDs start flashing and depress. LEDs will shut down and the IPC10 willrestart.
3. Connect the IPC10 web page and configure the converter (page 3).

IPC10 Replacement
If an IPC10 module needs to be replaced, Configure the new IPC10 by following steps 1-6 (pages 3-6).
Note: The network configuration and output protocol configuration of the replaced IPC10 should be the same as the replaced IPC10 that was removed.
Once configured, all accounts will appear and report with the new IPC10.

Specifications

Compatibility	M head units, legacy panels manufactured after 2012 using IP180, PCS265V8 (LT E), IP150+MQ FW 6.0 or higher.
Input Voltage	Power over Ethernet (POE): 44-57 VDC, 8W, max, Class 2 device
Account Capacity	5,000 normal or long supervision, 3,000 for high supervision
Supervision	Long: 20 minutes, 10 minutes, Default: 5 minutes, Short: 90 seconds
Supervision Message	Account Offline online status reported to CMS.
Internal battery backup	Up to 20 hours backup, Lithium-Ion
Operating Temperature	0°C to +40°C (+32°F to +104°F)
Replacement Recovery ti me	Auto recovery IPC10 replacement within 5 minutes. All accounts should be restor ed.
Encryption Type	AES 128-bit
Communication Protocol	CID via Sur-Gard MLR2-DG or Ademco
Certifications	CE
Warranty	5 years from production date
Dimensions	Fits 19” rack 1U, 48.26 x 20.3 x 4.2 cm (19 x 8 x 1.65 in)

Documents / Resources

	**PARADOX IPC10 IP CMS Converter** [pdf] Installation Guide IPC10, IPC10 IP CMS Converter, IP CMS Converter, CMS Converter, Converter

References

- **Paradox - Headquarters**
- **User Manual**