

PARADOX

VIPC20

PC/Linux IP to CMS Converter

INSTALLATION MANUAL

Software Version: 1.1.8
Document Version: V1

Introduction

The VIPC20 PC/Linux IP to CMS converter enables Paradox security systems to convert and transmit critical alarm and event data to a Central Monitoring Station (CMS). It receives signals from Paradox M panels, converts them into a standard format, and sends them to the CMS for processing.

If the CMS is temporarily unavailable, the VIPC20 can store up to 80,000 events safely until the connection is restored. It uses MQTT technology, which allows for fast, secure, and reliable communication, typically delivering information from the M panel to the CMS in less than 100 milliseconds. Its architecture supports high-capacity signal handling and continuous supervision, making it well-suited for mission-critical monitoring environments.

NOTE: *The VIPC20 includes 5 default accounts that can be used without requiring a paid license.*

Quick Installation – Experienced Installers

1. Download the VIPC20 ISO file (*paradox.com* > *MQTT COMM DEVICES* > *VIPC20*).
2. **Install** it on your computer or set up a virtual machine.
3. **Boot** the software and note the IP address from the Firmware Boot screen.
4. **Access** the Web User Interface by entering the IP address and port in your browser.
5. **Purchase a license** through the Dealer Portal, then **activate** it using the license key in the Web UI.
6. **Configure** the M Series panel (and all other MQTT COMM devices) to report to VIPC20 using the **BlueEye** application.

Installing VIPC20 and Purchasing a License

You can install the VIPC20 on a physical computer or a virtual machine.
Supported Virtual Machine Platforms

- Windows - Oracle VirtualBox, Hyper-V, VMware
- macOS – VMware Fusion, VirtualBox, UTM
- Linux – Oracle VirtualBox, KVM, QEMU
- FreeBSD – Oracle VirtualBox, BHyve, QEMU

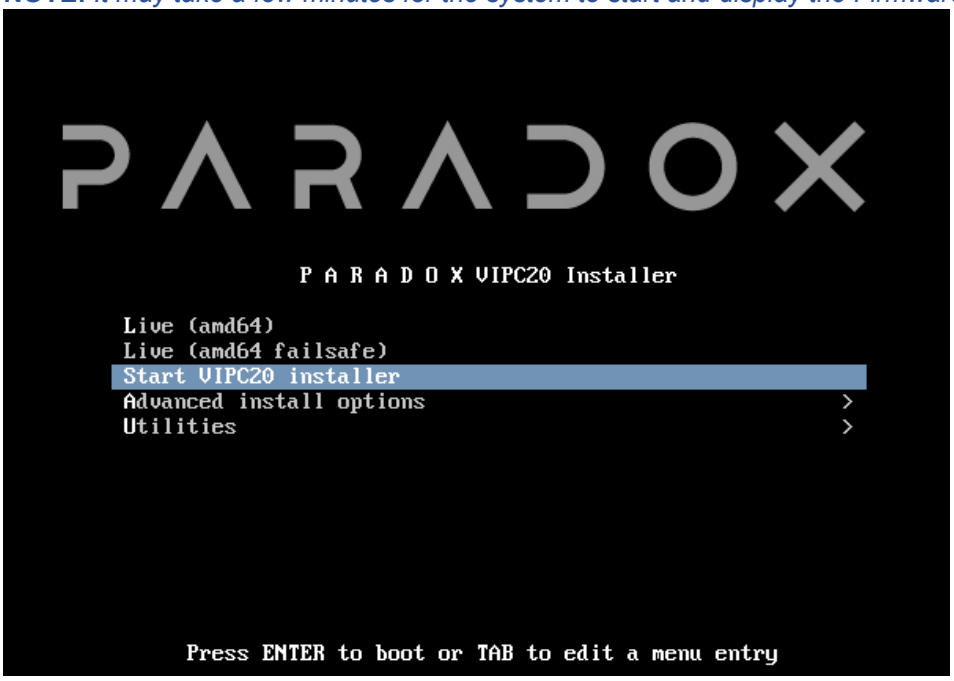
To install and configure VIPC20:

1. Download the ISO file.
    a. Download the VIPC20 ISO file from the location given here. (*paradox.com* > *MQTT COMM DEVICES* > *VIPC20*)
2. (Optional) Set up a virtual machine.
   If you are installing VIPC20 on a virtual machine, do the following:
    a. Create and name a new virtual machine.
    b. Select the VIPC20 ISO file as the installation media.
    c. Configure the virtual hardware with the following minimum requirements:

- Memory – 4 GB (4096 MB)
- Processor – 2 cores
- Disk size – 40 GB

d. Adjust network settings
- Change the network mode from **NAT** to **Bridged Adapter**.
- Select your local network adapter.

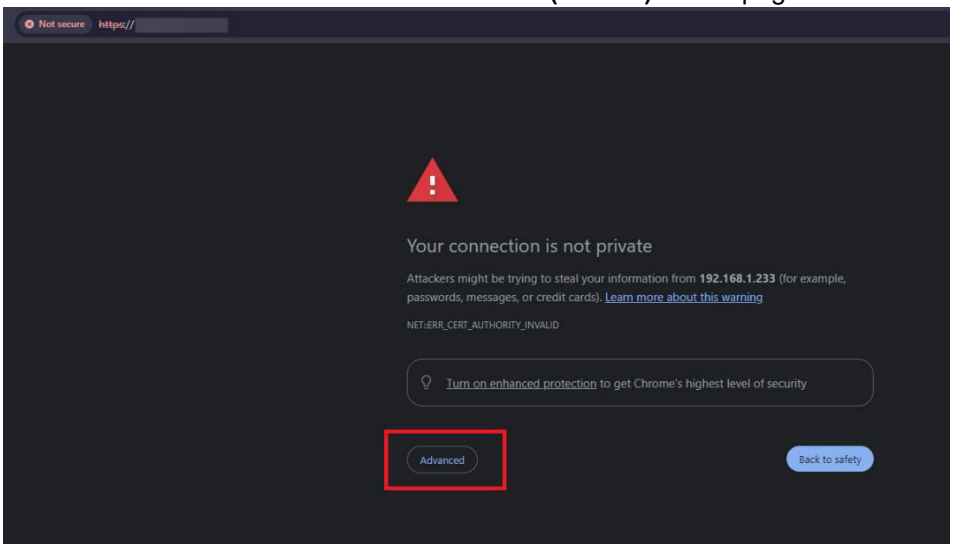
3. Start the installation
   a. Start the VIPC20 virtual machine or run the ISO file on your computer.
   b. On the **VIPC20 Installer Boot Menu**, use the arrow keys on the keyboard to select **Start VIPC20 Installer**, then press **Enter**.
   NOTE: *It may take a few minutes for the system to start and display the Firmware Boot screen.*

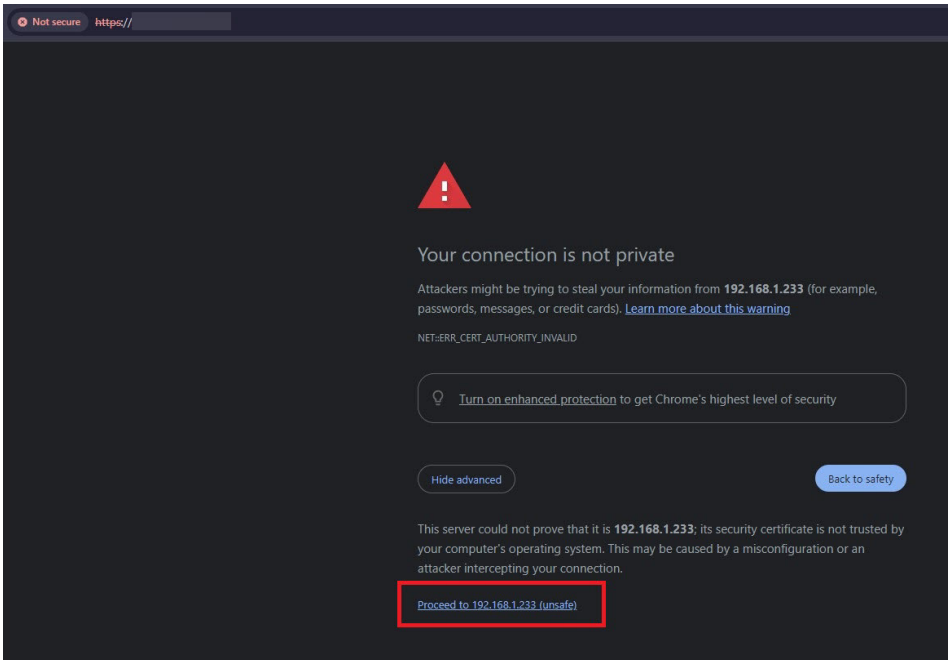


4. Obtain the VIPC20 IP Address.
   From the **Firmware Boot Screen**, note the VIPC20 IP address.

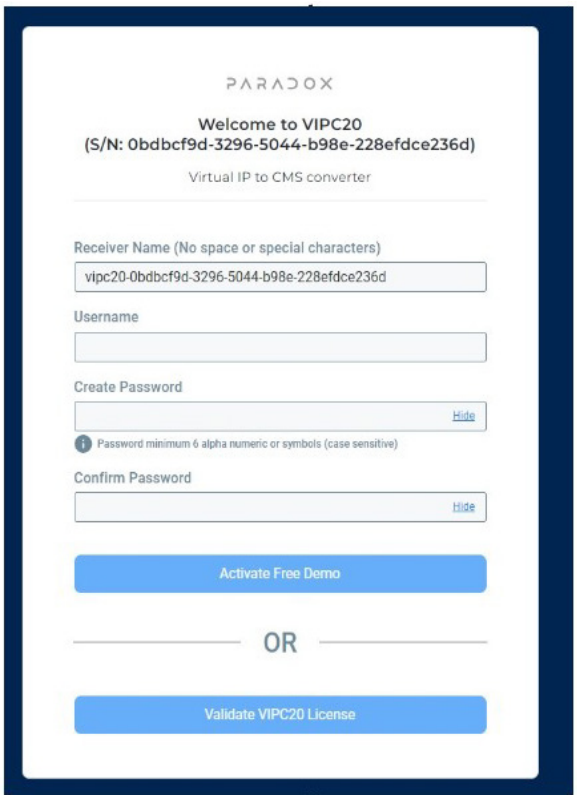


5. Access the **Web User Interface**.
   a. Open a web browser and enter the VIPC20 IP address in the URL field, followed by the port (for example, https://192.168.21.90:8080). You must use **https** in the URL to prevent connection interruptions.
   NOTE: *A security warning may appear stating that your connection is not private.*
   b. Click **Advanced** > **Proceed to 192.168.21.90 (unsafe)** on the page to continue.

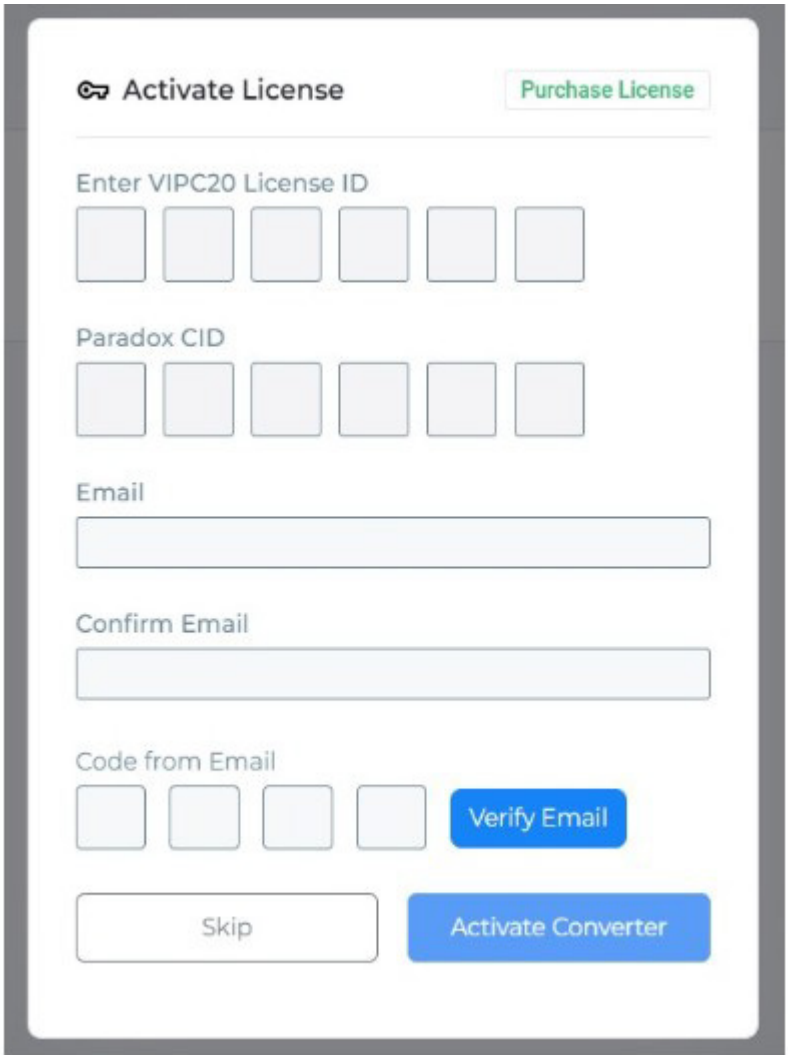




The login page is displayed.



c. The VIPC20 serial number is automatically populated in the **Receiver name** field.
d. Enter your username and password.
e. Do either of the following:
    - To try VIPC20 for free, click **Activate Free Demo** (only for 5 accounts) to log in to the Web User Interface. Click **Skip** on the **Activate License** window (see the following screenshot).
    - To purchase the license, click **Validate VIPC20 License** and proceed to **Step f**.

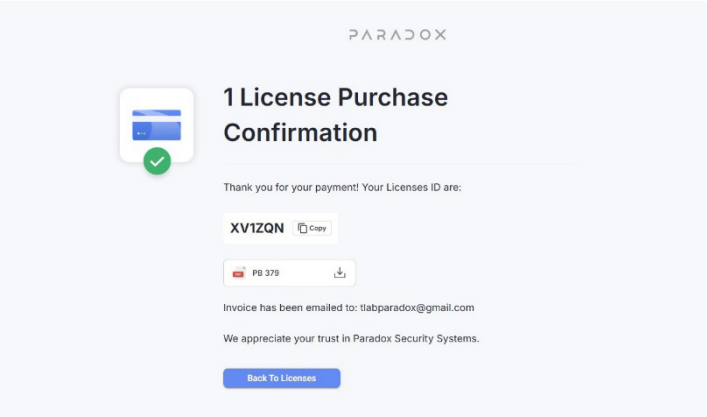


f. Click **Purchase License**.
The login page of the *Service Company Portal or Dealer Portal* is displayed.

g. Sign up or log in to the Dealer Portal. For details, see the *Dealer Portal user manual* (*Documentation* > *User Manuals* > *Dealer Portal User Manual V1*).

6. Purchase the license in the Dealer Portal.
   a. Click the **VIPC20** tab to view the VIPC20's license details.
   b. Click **Purchase License**.
   c. Select the product, license count, and click **Continue**.
   d. Enter the billing and payment details.
   e. Click **Complete Payment**.
   NOTE: *The Owner and Master can pay for the VIPC20 license.*

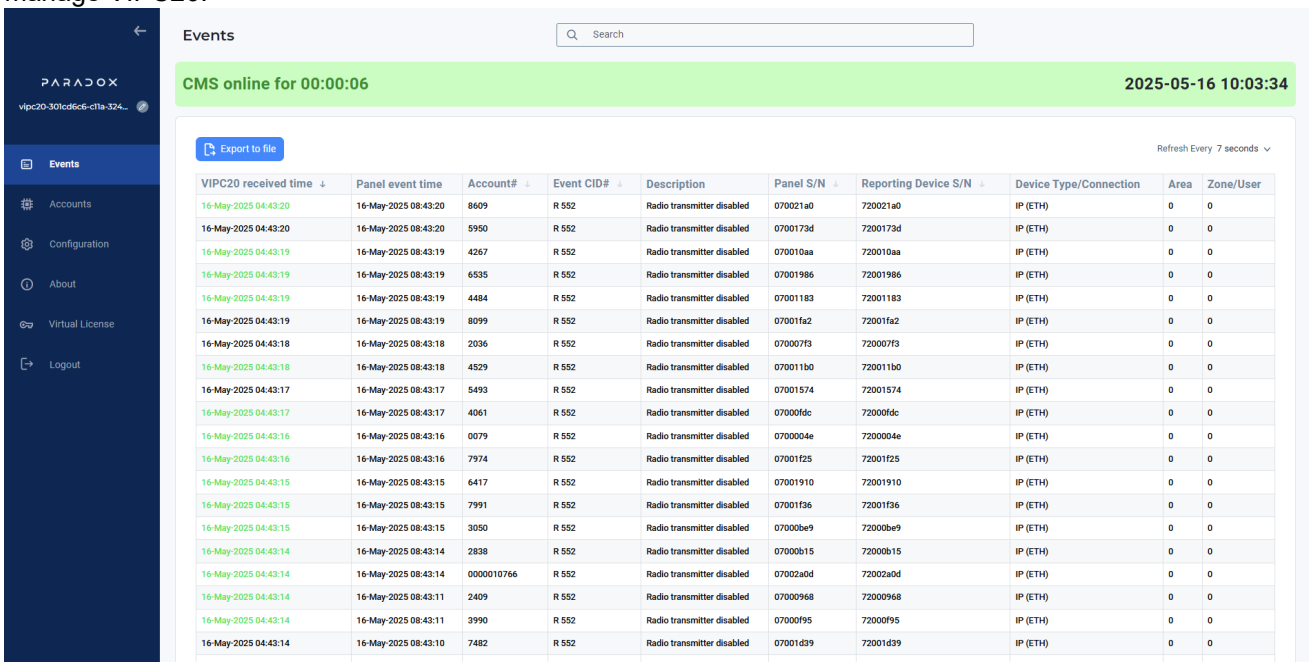
After completing the payment, a **License ID** is displayed. Copy it and return to the Web User Interface.



7. Activate the license in the Web user Interface.
   a. Paste the License ID in the **Activate License** window.
   b. Enter the Paradox CID and verify the email.
   c. Click **Activate Converter**.
   The license details are displayed in the **Virtual License** tab. You can also purchase additional licenses from this tab.

VIPC20 Web User Interface

The VIPC20 Web User Interface (Web UI) is a browser-based interface that allows you to configure, monitor, and manage VIPC20.



User Management

The VIPC20 supports three user roles: Owner, Master, and User. The following table outlines the roles along with their responsibilities.

Roles and Responsibilities

Roles	Responsibilities
Owner	The Owner:

	• Has full rights in the VIPC20 converter. • Can create or delete Masters and Users. • Is the only user with an associated email address, used for password recovery. • Can purchase and activate licenses. **First-Time Setup** On first time use of the VIPC20, factory reset, or after upgrading from a previous version, the Owner must: 1. Enter a username and email address, and confirm the email. 2. A verification code will be sent to the email. 3. Once verified, the email is used for password recovery via the Forgot Password feature. 4. The Owner logs in using their username and password.
Master	The Master: • Has almost the same permissions as the Owner. • Cannot delete the VIPC20 converter or perform firmware upgrades. • Can manage users and purchase licenses.
User	The User: 1. Has view-only access. 2. Can view event lists and accounts, but cannot make changes.

Managing Users
The Owners and Masters can manage Users from the **Configuration** tab.
For details, see the ***Receiver Users*** section in this manual.

Menu Options

The following table lists the menu options in the VIPC20 Web User Interface dashboard.

Menu Options

Menu Option	Description
Events	Displays all events. Events that are reported to the CMS are displayed in green, and non-reported yet are displayed in black. Priority alarm events (CID 1XX) will be reported with high priority. The system buffers up to 80,000 events on a first-in, first-out basis.
Accounts	View accounts or suspend them from CMS reporting. **NOTE:** *The accounts are reported to the CMS based on a panel account code length of either 4 or 10 digits.*
Configuration	Configure network settings and necessary fields such as IP, port, and time.
About	Displays VIPC20 system information and security profile details.
Virtual License	Displays the license details or option to purchase a VIPC20 license.
Logout	Logs you out of the application.

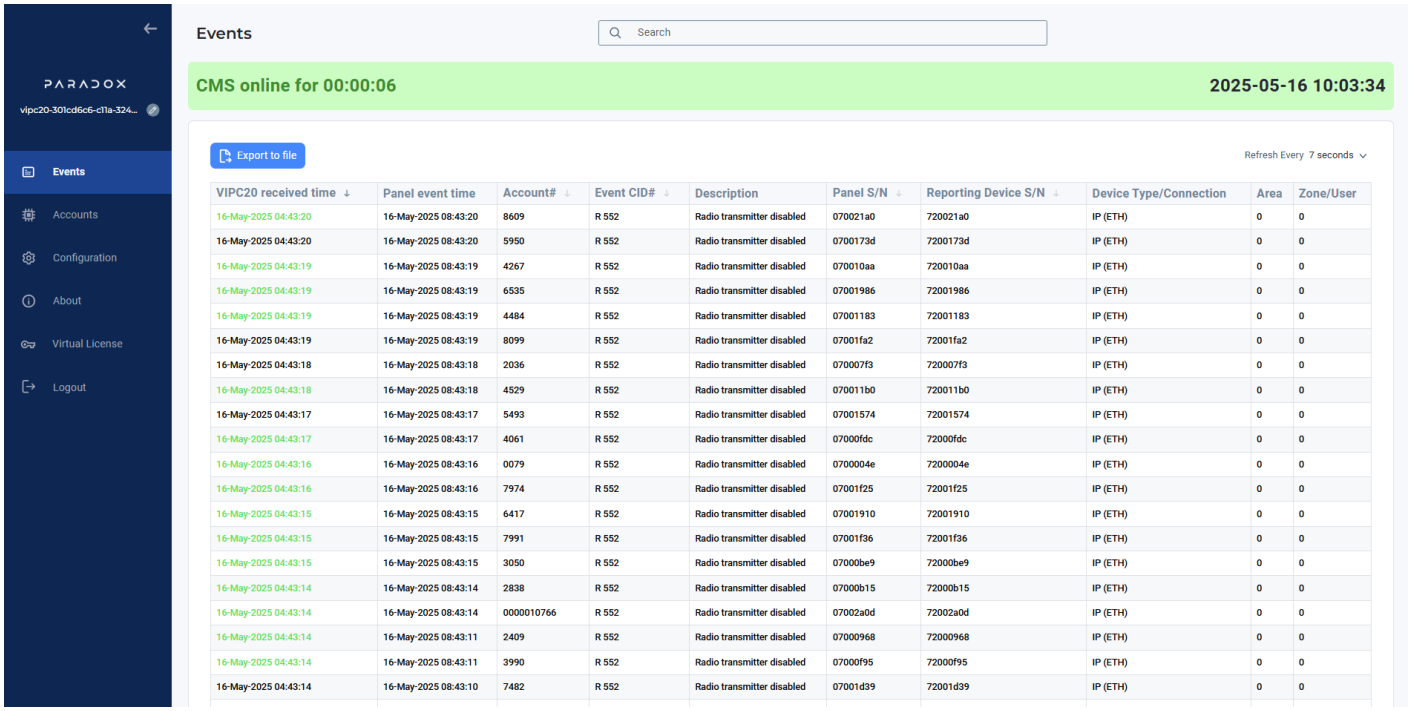
NOTE: *You can use the **Search** field at the top to find entries by panel serial number, device serial number, or account number.*

Events

The **Events** tab displays information related to events received from the accounts, such as date and time, account number, event CID number, description, panel serial number, reporting device, device type/connection, and zone/user. You can export the event data by using the **Export to file** button located at the top-left corner of the table.

NOTES

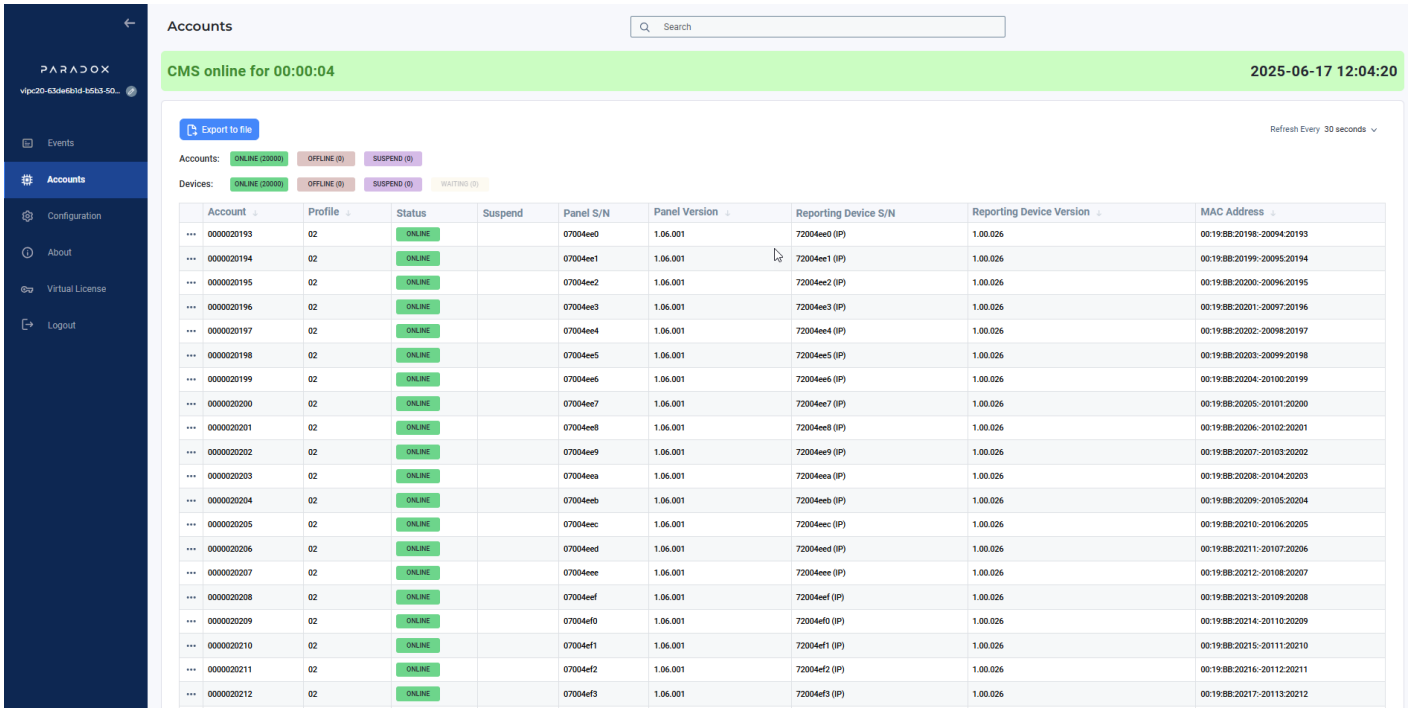
- *VIPC20 received time shown in green indicates that the events have already been reported to the CMS. Event times in black indicate that they have not yet been reported to the CMS.*
- *Events are erased during a power cycle but are retained during a firmware upgrade.*



VIPC20 received time	Panel event time	Account#	Event CID#	Description	Panel S/N	Reporting Device S/N	Device Type/Connection	Area	Zone/User
16-May-2025 04:43:20	16-May-2025 08:43:20	8609	R 552	Radio transmitter disabled	070021a0	720021a0	IP (ETH)	0	0
16-May-2025 04:43:20	16-May-2025 08:43:20	5950	R 552	Radio transmitter disabled	0700173d	7200173d	IP (ETH)	0	0
16-May-2025 04:43:19	16-May-2025 08:43:19	4267	R 552	Radio transmitter disabled	070010aa	720010aa	IP (ETH)	0	0
16-May-2025 04:43:19	16-May-2025 08:43:19	6535	R 552	Radio transmitter disabled	07001986	72001986	IP (ETH)	0	0
16-May-2025 04:43:19	16-May-2025 08:43:19	4484	R 552	Radio transmitter disabled	07001183	72001183	IP (ETH)	0	0
16-May-2025 04:43:19	16-May-2025 08:43:19	8099	R 552	Radio transmitter disabled	07001fa2	72001fa2	IP (ETH)	0	0
16-May-2025 04:43:18	16-May-2025 08:43:18	2036	R 552	Radio transmitter disabled	070007f3	720007f3	IP (ETH)	0	0
16-May-2025 04:43:18	16-May-2025 08:43:18	4529	R 552	Radio transmitter disabled	070011b0	720011b0	IP (ETH)	0	0
16-May-2025 04:43:17	16-May-2025 08:43:17	5493	R 552	Radio transmitter disabled	07001574	72001574	IP (ETH)	0	0
16-May-2025 04:43:17	16-May-2025 08:43:17	4061	R 552	Radio transmitter disabled	07000fdc	72000fdc	IP (ETH)	0	0
16-May-2025 04:43:16	16-May-2025 08:43:16	0079	R 552	Radio transmitter disabled	0700004e	7200004e	IP (ETH)	0	0
16-May-2025 04:43:16	16-May-2025 08:43:16	7974	R 552	Radio transmitter disabled	07001f25	72001f25	IP (ETH)	0	0
16-May-2025 04:43:15	16-May-2025 08:43:15	6417	R 552	Radio transmitter disabled	07001910	72001910	IP (ETH)	0	0
16-May-2025 04:43:15	16-May-2025 08:43:15	7991	R 552	Radio transmitter disabled	07001f36	72001f36	IP (ETH)	0	0
16-May-2025 04:43:15	16-May-2025 08:43:15	3050	R 552	Radio transmitter disabled	07000be9	72000be9	IP (ETH)	0	0
16-May-2025 04:43:14	16-May-2025 08:43:14	2838	R 552	Radio transmitter disabled	07000b15	72000b15	IP (ETH)	0	0
16-May-2025 04:43:14	16-May-2025 08:43:14	0000010766	R 552	Radio transmitter disabled	07002a0d	72002a0d	IP (ETH)	0	0
16-May-2025 04:43:14	16-May-2025 08:43:11	2409	R 552	Radio transmitter disabled	07000968	72000968	IP (ETH)	0	0
16-May-2025 04:43:14	16-May-2025 08:43:11	3990	R 552	Radio transmitter disabled	07000f95	72000f95	IP (ETH)	0	0
16-May-2025 04:43:14	16-May-2025 08:43:10	7482	R 552	Radio transmitter disabled	07001d39	72001d39	IP (ETH)	0	0

Accounts

The **Accounts** tab allows you to monitor the status of the system accounts and manage their reporting behavior to the CMS. For example, you can suspend accounts that have not been paid. Accounts that remain offline for more than 30 days are automatically removed from the account list. However, they will reappear if they come back online. The VIPC20 supports up to 10-digit account numbers for future product compatibility.



To suspend an account:

1. Click on the three-dot menu option (left of the table) beside the desired account.
2. Select **Suspend Account**.
   The suspended accounts will no longer send events to CMS.

To unsuspend an account:

1. Click the three-dot menu again.
2. Select **Unsuspend Account** to resume event reporting.

The following table outlines the various statuses of the account.

Account Status

Status of Accounts	Description
Online	Indicates the number of accounts or devices that are currently connected and actively reporting to the CMS.
Offline	Indicates the number of accounts or devices that are currently disconnected or not reporting to the CMS.
Suspend	Shows the number of accounts or devices that have been manually suspended from reporting to the CMS.
Waiting	Appears for up to five minutes after the VIPC20 converter reboots, showing accounts/devices awaiting reconnection. After five minutes, all restored devices should display as ONLINE. Devices/accounts that are not restored will have an OFFLINE status, indicating that they are not reporting to the CMS.

Configuration

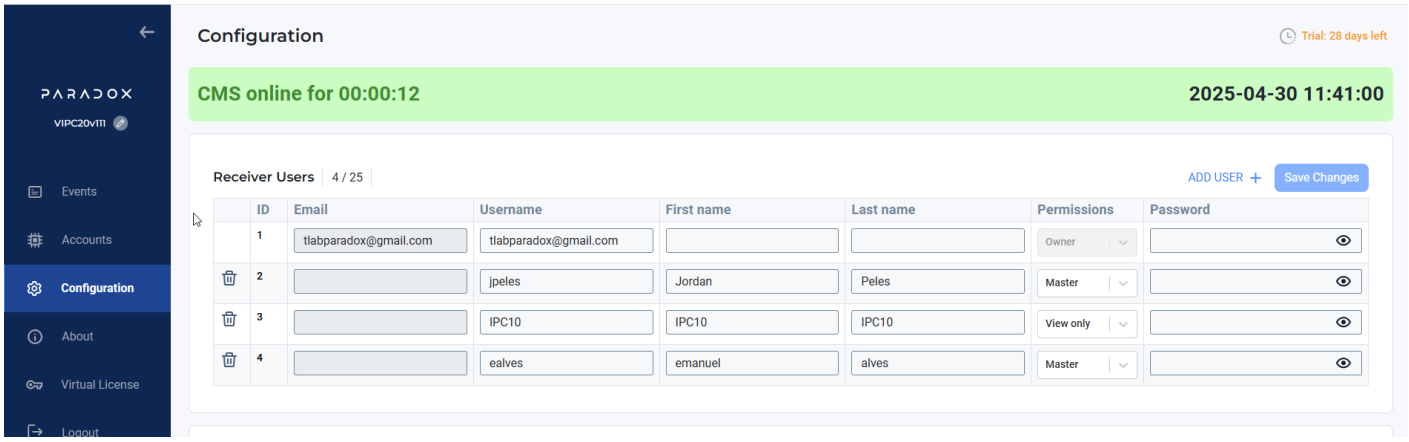
The **Configuration** tab is used to program and manage the settings of the VIPC20.
It includes the following sections:

- Receiver Users
- Network Configurations
- CMS Configuration
- Other Configuration
- Receiver Events

Receiver Users

The **Receiver Users** section allows management of user access. Up to 25 users can be added to the VIPC20.

- Only the Owner has the right to add, delete, or modify user accounts in the VIPC20.
- The Master user can view all user accounts except for the Owner's information.

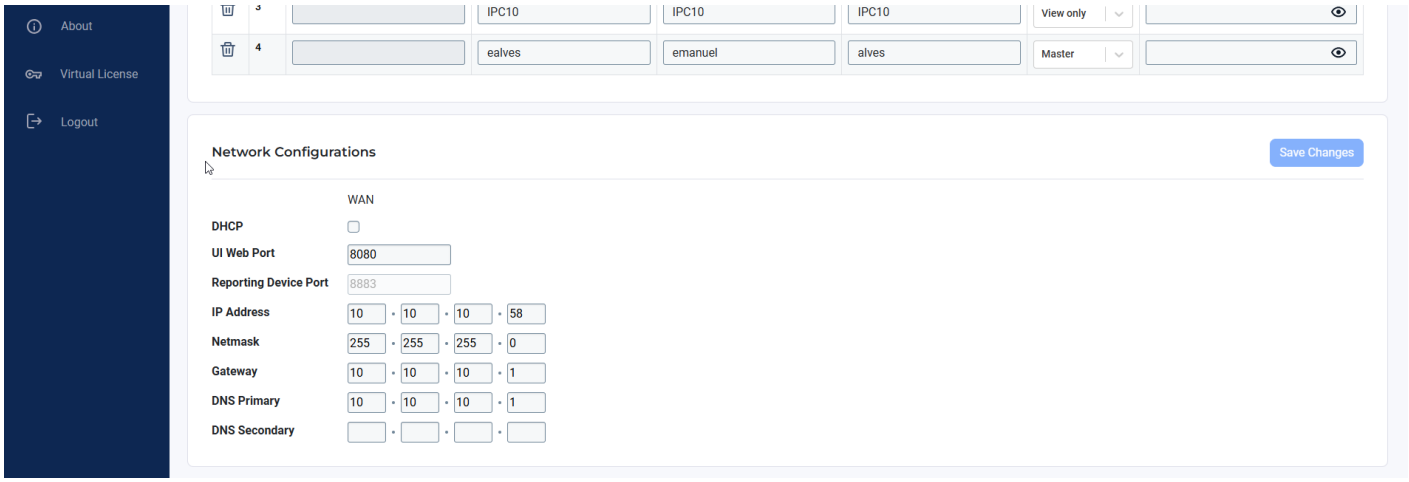


To add/delete a user:

1. Click the **ADD USER** button at the top right of the **Receiver Users** table.
2. Enter the details for the new user and click **Save Changes**.
3. To delete a user, click the delete button located on the left side of the user's row in the table.

Network Configurations

The **Network Configuration** section allows you to configure the network parameters for device connectivity and communication.



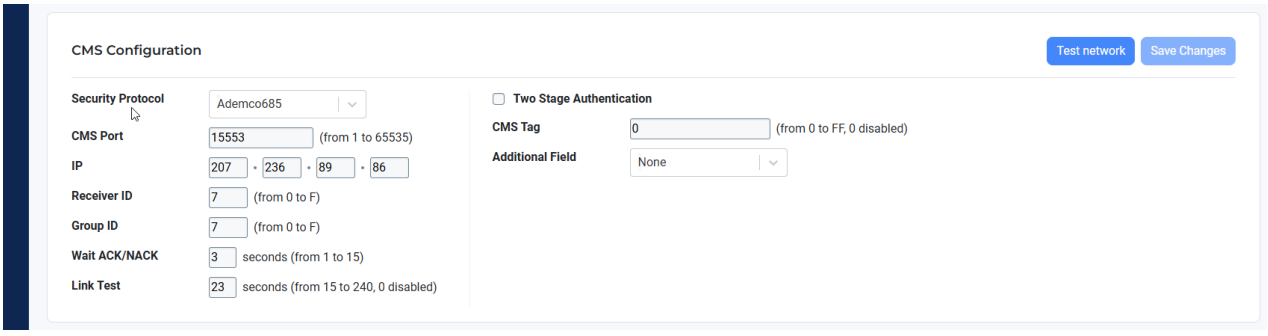
The following table lists the options under the **Network Configuration** section, along with their descriptions.

Network Configuration Options

Field Name	Description
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 VIPC20 that can be found on the **About** page.
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 – it 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 VIPC20 converter. 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 Configuration

The **CMS Configuration** section is used to set up parameters required for communication with the Central Monitoring Station.



The following table lists the options under the **CMS Configuration** section, along with their descriptions.

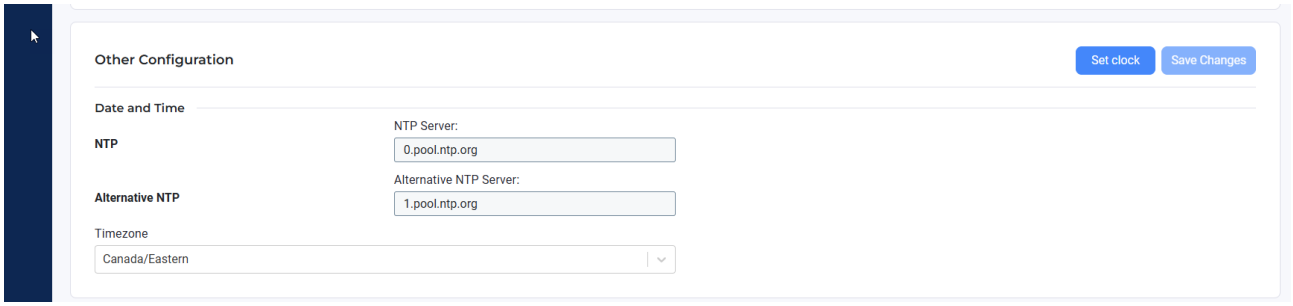
CMS Configuration Options

Field Name	Description
CMS Output Protocol	Configures the output protocol used by the VIPC20 for communication with 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 the CMS software. Port numbers range from 1 to 65535.
Receiver ID	Assigns a unique ID to the VIPC20 converter. • Range: **0 to FF** for **Sur-Gard MLR2-DG** • Range: **0 to F** for **Ademco CID-TCP** and **Ademco 685**
Group ID	Assigns the converter to a specific group within the CMS configuration. • Range: **0 to FFF** for **Sur-Gard MLR2-DG** • Range: **0 to F** for **Ademco CID-TCP** and **Ademco 685**
Wait ACK/NACK	Defines the interval in seconds (1 to 15 seconds, default 3 seconds) the VIPC20 waits for an acknowledgment (ACK) or negative acknowledgment (NACK) from the CMS software, before sending the next event. If no ACK/NACK is received, the VIPC20 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 signals are sent to the CMS software (0= disable).
Test Network	Allows you to test the communication between the VIPC20 converter and the CMS software. Upon completion, a **Testing CMS Network** window displays the results.
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, such as panel SN, device SN, or MAC address. The default is set to **None**.

Other Configuration

The **Other Configuration** section allows setting the primary and alternate NTP servers for time synchronization, selecting the device's time zone, and enabling automatic clock updates via NTP.



The following table lists the options under the **Other Configuration** section along with their descriptions.

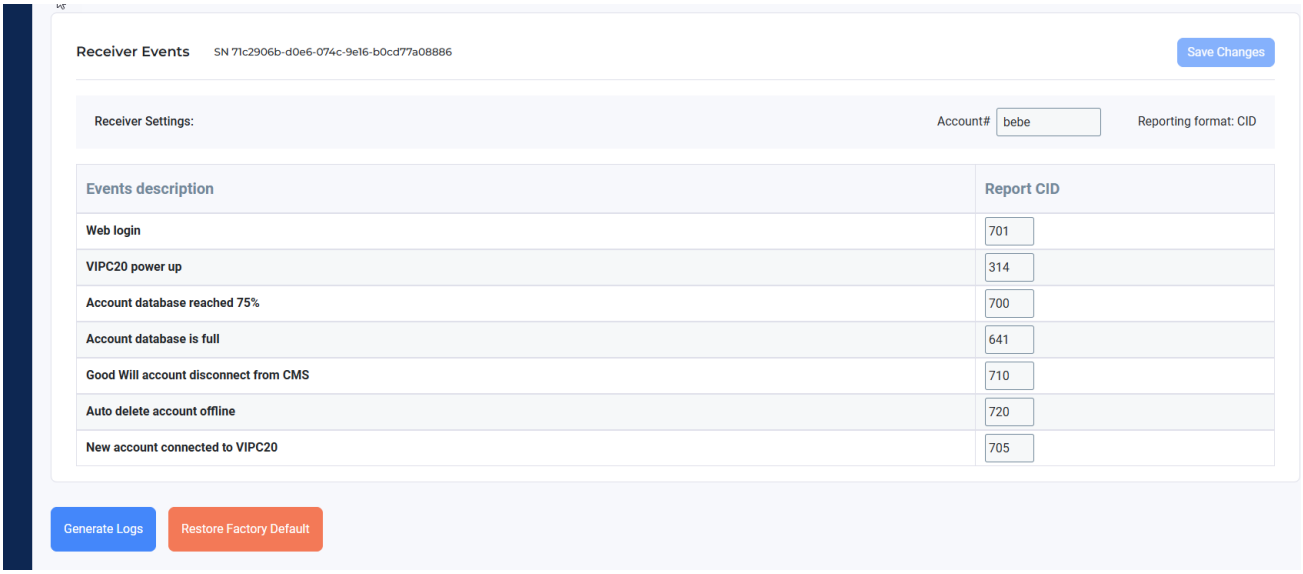
Other Configuration

Field Name	Description

NTP	The main NTP server used to synchronize the VIPC20's database and system time. This requires an active internet connection.
Alternate NTP	A secondary NTP server that serves as a backup to the primary NTP server. This requires an active internet connection.
Time Zone	Selects the appropriate time zone based on the location of the VIPC20.
Set Clock	The clock synchronizes automatically with the NTP server, overriding any manual settings.

Receiver Events

The internal events generated by VIPC20 are reported to the CMS and can be customized by the CMS software, where applicable.



The following table lists the options under the **Receiver Events** section along with their descriptions.

Receiver Events

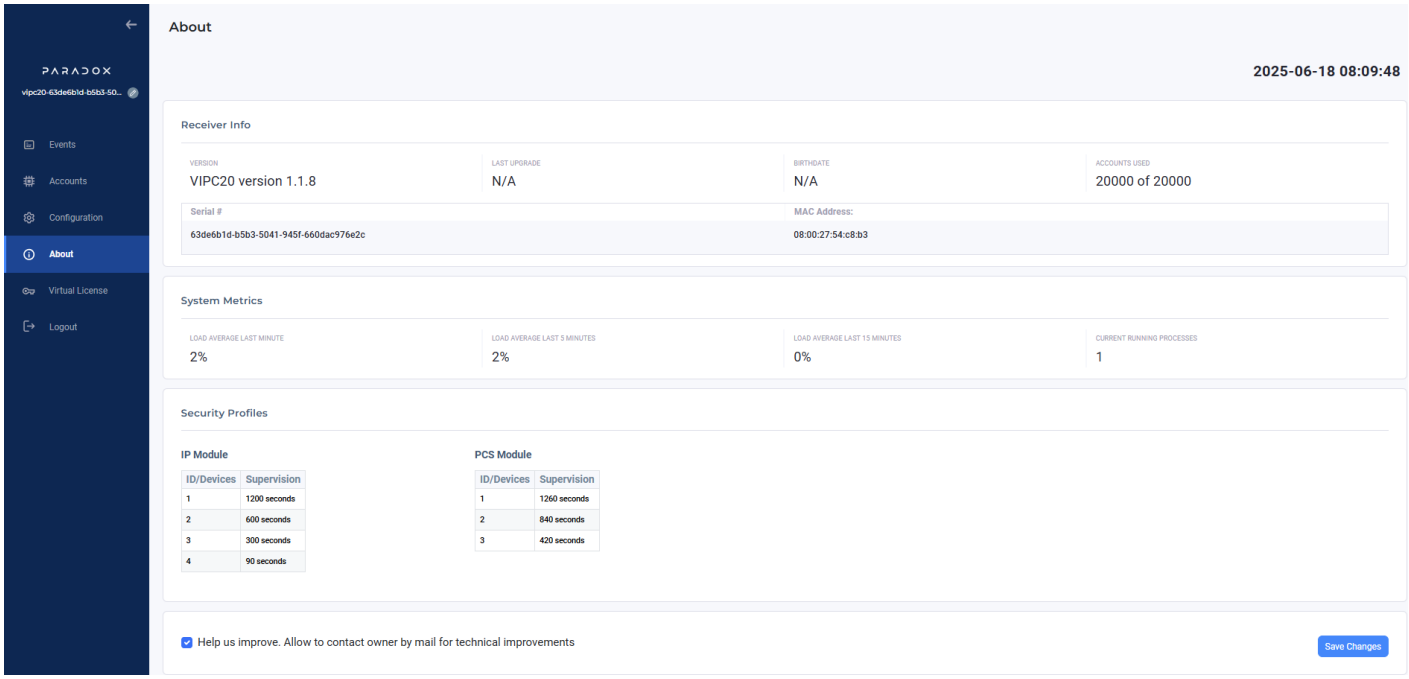
Field Name	Description
Account	It is recommended to use the VIPC20's serial number as the account identifier. This number is used to identify the VIPC20 to the CMS for events such as web login, power-up, and database status.
Web login	Sends a customized event to the CMS when a web login attempt is made. The default value is 000.
700: Account database reached 75% (15,000 accounts), (700 default code)	Sends an event to the CMS when the account database reaches 75% of its capacity. The event code (default: **700**) can be modified by the CMS.

Account database is full	Sends an event to the CMS when the database is full (20,000 accounts) and a new account attempts to register. The default value is 000.
710: Good Will account disconnects from CMS (710)	This code is sent to indicate that the panel has stopped reporting to the VIPC20 as per the dealer's programming. The account is shown as offline and reported with the default code 710. The code can be modified by the CMS.
720: Auto delete account offline (720)	Sends an event when an account has remained offline for more than 30 days and is automatically deleted. If the account comes back online, it is automatically restored. The default code can be modified by the CMS.
552: Lost panel/ Restore panel (552)	If the panel stops communicating with the IP device, it is displayed as Panel Lost in the Suspend column, and code E552 is sent to the CMS. When restored, code R552 is reported. This event code cannot be modified.
IP unit lost (E551) / IP unit online restore (R551)	If the IP Communicator stops polling the VIPC20, it is displayed as OFFLINE in the Status column and code E551 is sent to the CMS. When restored, code R551 is reported. This event cannot be modified.
554: PCS offline/ Restore code 554	Indicates PCS offline and restore code (554). This event code cannot be modified.
Time /Local time zone change (625)	Triggers when the converter's time zone is changed. Code 625 is sent. This event code cannot be modified.
New account registered to VIPC20 (705)	When a new account reports to the VIPC20 for the first time, code 705 (default value) is sent to the CMS.
Generate Logs button	Generates and saves a file named **VIPC20mainlogs(ser#)(Date).zip** in the Downloads folder of the PC. Send this file to **support@paradox.com** when requested.
Restore Factory Default	Pressing the **Restore Factory Default** button resets all changes to their default settings, as well as deleting the license.

About

The **About** tab provides system information related to VIPC20, including the current firmware version and upgrade options. It also displays the configured **Security Profiles**, which define the supervision time for monitored accounts.

Once the specified supervision time elapses, the VIPC20 will report a supervision loss to the monitoring station's automation software. The VIPC20 can handle up to 20,000 accounts using profile 01, and up to 10,000 accounts using profile 04 or any combination of the two. In addition, the About tab includes **System Metrics**, which helps monitor and assess the system's performance over time.



Help Us Improve

The Owner can select this option upon first-time login or in the **About** page by the Owner or Master. Only statistics like the number of accounts, processor load pics, and average load are sent periodically. No specific data of any kind is sent about the device. This will help us to monitor the performance and capabilities of the VIPC20VIPC20 in the future.

Upgrading Firmware

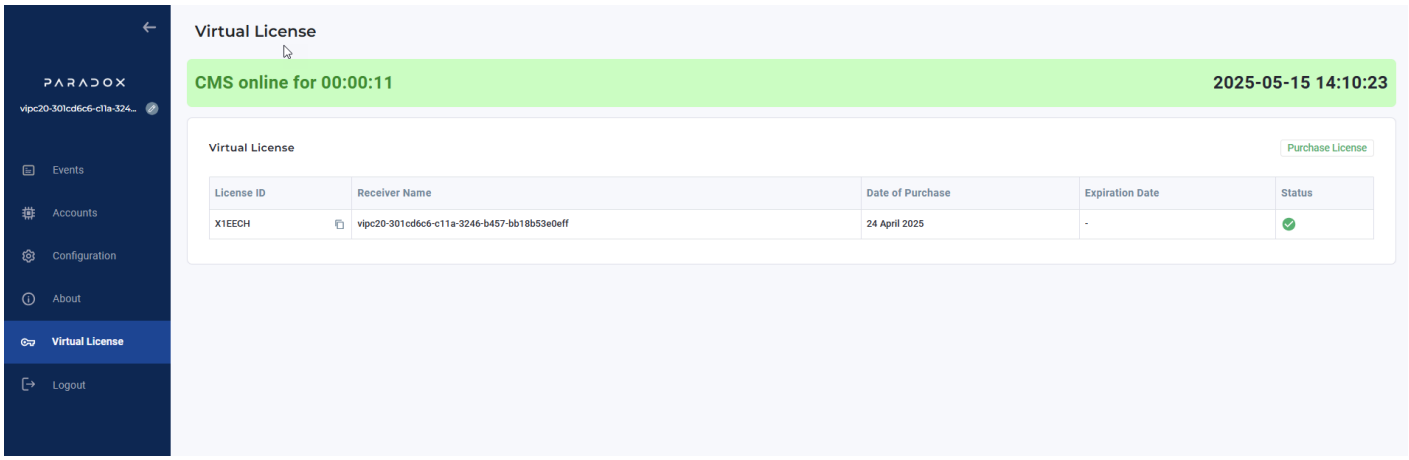
NOTE: *Only an Owner can upgrade the firmware.*

To upgrade the firmware:

1. In the VIPC20 Web User Interface > **About** > **Upgrade** (at the bottom of the screen).
2. If an upgrade is available, click **Upgrade** when prompted.
3. Click **Check for new versions** and select the latest version from the drop-down list.
4. Click **Upgrade**.

Virtual License

The **Virtual License** tab allows you to purchase additional licenses for the VIPC20. For detailed instructions on purchasing the license through this tab, go to **Step 5 (f)** in the *Installing VIPC20 and Purchasing a License* section of this manual.



Configuring M Series Panels to report to VIPC20 using BlueEye

To configure the reporting settings of the M series panels to VIPC20:

1. When in the **Firmware** tab, tap **CMS**.
2. Tap the VIPC20 converter you want to configure.
3. In the **IP Address** field, enter the IP address of VIPC20.
4. In the **Port** field, enter the appropriate port number.
5. In the **Account Number** field, enter the account number.
6. Select the **Supervision** time to set the reporting interval (default is 10 minutes).
7. Tap **Save**.

Technical Specifications

The following table lists the technical specifications of VIPC20, along with their descriptions.
NOTE: *The specifications are subject to change without prior notice.*

Specification	Description
Compatibility	M head units, legacy panels manufactured after 2012 using IP180, PCS265V8 (LTE), IP150+MQ, IP150 MQTT FW 6.0 or higher.
Account Capacity	20,000 for normal or long supervision, 10,000 for high supervision
Supervision	Long: 20 minutes, 10 minutes, Default: 5 minutes, Short: 90 seconds
Supervision Message	Account Offline online status reported to CMS.
Replacement Recovery Time	Auto recovery VIPC20 replacement within five minutes. All accounts should be restored.
Encryption Type	AES 128-bit
Communication Protocol	CID via Sur-Gard MLR2-DG or Ademco

Patents

US, Canadian, and international patents may apply. Paradox is a trademark or registered trademark of Paradox Security Systems (Bahamas) Ltd.
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