

Introduction of CIM10

CIM10 serves as your gateway to seamless IoT edge connectivity and management. With its robust system monitoring, versatile network support, advanced security features, and seamless integration capabilities, CIM10 empowers you to unlock the full potential of your IoT ecosystem. From device integration to user application support, CIM10 offers a streamlined experience, ensuring scalability, flexibility, and security at every step.

Hardware Information

CIM10 is equipped with the following hardware specifications:

- 1Nos Ethernet Port
- 1Nos Power Port (12v to 24v DC)
- 1Nos Connector for the Modbus RS485, Digital Input 1 & 2, Analog Input 1 & 2, and Ground
- 1Nos USB Mini Port for the power and backend tasks
- 1Nos Micro HDMI Port
- 1Nos Micro SD Card Slot
- 1Nos SIM Card Slot
- 1Nos GPS Antenna Slot
- 1Nos GSM Antenna Slot
- 4Nos LEDs (GPS LED, Bluetooth LED, LTE /GPRS LED, Power LED)

Application Interface

CIM10 comes with an integrated web UI that can be accessed through its default IP address.

- Default IP: 192.168.1.100
- Default Subnet: 255.255.255.0
- Default Gateway: 192.168.1.1

Steps to Open WebUI

- Open any web browser like Google Chrome, Firefox, Microsoft Edge, etc., on your PC or laptop.
- Open a new tab and enter the default IP address of CIM10 (e.g., 192.168.1.100) into the address bar and press Enter.
Note: Ensure that your PC or laptop is in the same IP range.
- Once the webpage opens, it will prompt you to enter login credentials.
- Use the following credentials:
Username: iEdgeAdmin
Password: iEA@12345 or iEA#t6V)
Note: Do not include the double quotes.
- After successful login, the system status page will appear.

WebUI Features

- System Status
 - In the System Status, users can view CPU consumption, memory consumption, network interface, volume backup, device uptime, network transport, active network interface, latitude, longitude, RTC, and time zone configuration.
 - Users can configure NTP servers manually or automatically from the RTC and Time Zone settings. By default, the Primary NTP Server is set to "time.google.com," and the Secondary NTP Server is set to "time1.google.com." To use these default NTP servers, simply check the "Use NTP Default Server" box.
 - Users can export CPU consumption, memory consumption, network interface, and volume backup data in various formats such as PNG, JPEG, PDF, SVG, ASV, and XLS.
- Network
 - In the "Network" section, there are four options available:
 - Ethernet
 - In the Ethernet configuration, the following options are available:
 - Enable/Disable Interface
 - DHCP Server/Static IP Address
 - When DHCP Mode is selected, the CIM10 will automatically obtain an IP address from the DHCP server available on the LAN network. And when Static IP Address Mode is selected user need to set manual IP Address.
 - GSM / LTE
 - In the GSM / LTE configuration, the following options are available:
 - Enable/Disable Interface
 - Serial Port (Should be default)
 - APN Name (Which will different as per the used SIM)
 - Modem Name
 - There are two options are there in the "Modem name":
 - 2G and 4G
 - On the right-side GSM / LTE Status will be visible, there are below mentioned options are available:
 - IP Address
 - Gateway
 - Signal Strength
 - Registration
 - Status
 - Operator Name
 - IMEI
 - Port Forwarding
 - In this webUI section user will be able forward Ethernet port and GSM SIM card-related settings

- Firewall Settings
 - In this webUI section user will be able to configure and manage the Ethernet port and GSM SIM card-related settings
- Peripherals
 - In this webUI section user will be able to Digital Input, Analog Input and GPS.
- Device
 - In this webUI section user will be able to create the devices which need to communicate with the CIM10.
 - Here Modbus RTU, Modbus TCP, OPC UA, BACnet IP, PROFINET, Ethenet/IP, Vibit_BP Protocols are available for the communication.
- Tags
 - In this webUI section user will be able to access MQTT Topics of the individual tags for the specific devices.
- Integration
 - In this webUI section user will be able to assign and configure details for the MQTT Server / Broker. For the Transport there are 4 option are there, CIM Cloud, MQTT, AWS, and Asure.
- User Application
 - CIM10 supports Python SDK as the user can write the Python script / Custom Application by using Python SDK.
- Package Manager
 - In this webUI section user will be able see the current package versions as well user can update the packages.
- Service manager
 - In this webUI section user will be able to see status of the specific Services related Network, Peripheral, Device, Integration, and User Application. As well user can Enable / Disable services, can turn ON / OFF Debug logs, can Start / Restart / Stop services.
- Board Configuration
 - In this webUI section user will be able Enable /Disable specific service and service configuration settings. User can disable the specific Service / service configuration settings to decrease load.

CIM10 Analog Input Configuration steps

For Physical connection

CIM10 has onboard PERIPHERAL IO

Digital Input (2 Nos), 12/24V DC operated

Analog Input (2 Nos), 12-bit resolution, 0-10V / 4-20mA input

IO expansion: Yes, Modbus IO(External on Modbus RS-485)

CIM10 has 8 Pin Connector and from that 8 Pins 3pins AI-1, AI-2, GND will be used,

For example, Flow meter will have two wires for its 4-20mA analog output one wire will be for Signal and other will be for Ground,

so, on CIM10, signal wire from flow meter will be connected on AI-1 or AI-2 Pin and Ground wire will be connected on GND Pin

For Web page configuration

There will be below mentioned fields in the configuration page of CIM10

- Pin Number: to add Ai inputs for configuration
- Sampling rate (Sec): reads data on the configured frequency
- Destination: if the user wants data on the Cloud, then the user can select the desired cloud service (Configured in the integration section of CIM10)
- Name: The user can give the desired Analog input name
- Device ID: The user has to add the CIMCON Cloud Device ID
- Channel Type: The user will select Analog Input type Voltage or Current
- Engg. Scale Low: for current User will set 4, Voltage user will set 0
- Engg. Scale High: for current User will set 20, For Voltage user will set 10
- Scale Low: The user will set the desired low value for Scaling
- Scale High: The user will set the desired High value for Scaling

For example, the user has connected one Flow meter on an Analog input AI-1 pin and wants to configure it in CIM10, and 4-20mA will be scaled in 0-100 percent,

Then Below will be the Configuration settings in CIM10

- Pin Number: 1
- Sampling rate (Sec): 10
- Destination: CIMCON Cloud
- Name: Flow Meter
- Device ID: 1122334455667788

- Channel Type: Current
- Engg. Scale Low: 4
- Engg. Scale High: 20
- Scale Low: 0
- Scale High: 100