SimpLinx

SMX-IoT10 Cloud & Edge Computing

User's Guide

12/2020
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Legal Notices

Warning Notice System

The document contains alerts and information indications for the safety of you and your devices. The symbols and meanings used to draw your attention to these notifications are listed below.

Danger: Indicates the death or severe personal injury will result if proper precautions are not taken.

Warning: Indicates that death or severe personal injury may result if proper precautions are not taken.

Info: Indicates advice or **information**.

Qualified Personnel

It is assumed that what is described in this document will be applied by qualified personnel for the specific task.

Disclaimer

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency.

The information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Change Log

Version	Date	Description
V1.0	12/2020	Initial Release

Preface

Purpose of the Document

This document contains information about the following topics;

- SMX-IoT10 Product Information
- SMX-IoT10 Setup
- Use of SMX-IoT10

Required Level of Knowledge

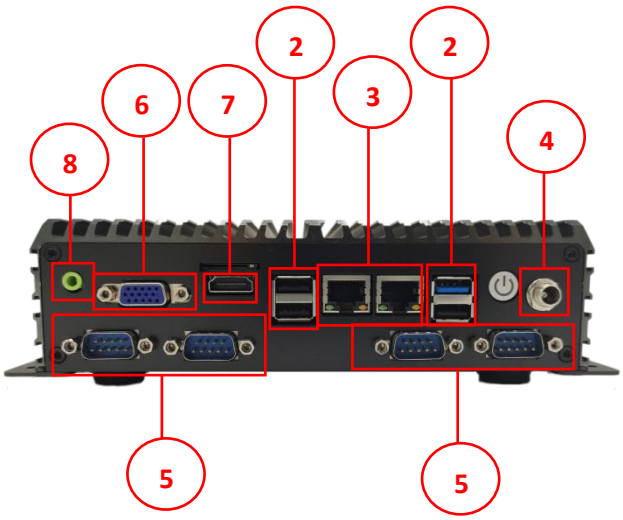
In order to fully understand and apply this document, it is necessary to have knowledge of IT, Automation and Electricity.

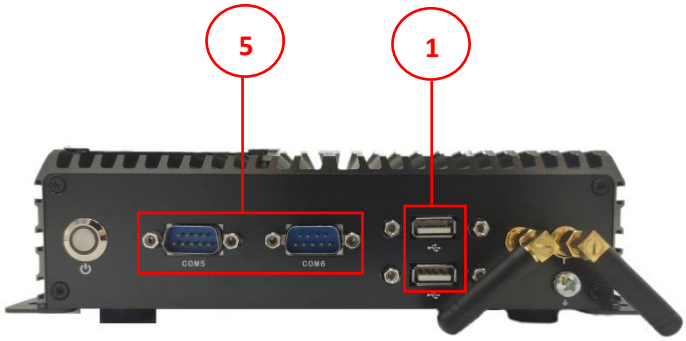
Contents

Legal Notices ..... - 1 -
Warning Notice System ..... - 1 -
Qualified Personnel ..... - 1 -
Disclaimer ..... - 1 -
Change Log ..... - 2 -
Preface ..... - 3 -
Purpose of the Document ..... - 3 -
Required Level of Knowledge ..... - 3 -
1. Product Description and Certificates ..... - 5 -
1.1. Properties ..... - 6 -
1.2. Approvals / CE ..... - 6 -
2. Physical Properties and Drawings ..... - 7 -
2.1. Drawings ..... - 8 -
3. Setup ..... - 9 -
3.1. Mounting ..... - 9 -
3.2. Removing ..... - 9 -
4. Electrical Connection ..... - 10 -
5. Device Connections ..... - 10 -
5.1. Ethernet Devices ..... - 10 -
5.2. Internet Connection Options ..... - 11 -
5.3. Ethernet Connection with PC (Service IP) (Optional) ..... - 11 -
Energizing your device ..... - 12 -
5.4. Making Basic Settings ..... - 12 -
6. Web Interface ..... - 13 -
6.1. Ethernet1 and Ethernet2 Pages ..... - 13 -
6.2. Wireless Settings Page ..... - 14 -
6.3. Advanced Settings Page ..... - 15 -
6.4. Import/Export Page ..... - 15 -
6.5. Change Password Page ..... - 16 -
6.6. Info Page ..... - 16 -

1. Product Description and Certificates

The SMX-IoT10 is a Cloud & Edge Computing device. It can collect, save and display data from the field devices which are desired to be monitored.





1- USB 2.0 ports
2- USB 3.0 ports
3- Ethernet2/Ethernet1
4- Power supply connection
5- RS-232 Serial Ports
6- VGA Output
7- HDMI Output
8- Audio Output

	SMX-IoT10
Processor	Intel®Celeron® J1900 4 Core 2.00Ghz
Ram	Celeron® 4GB
mSATA	64 GB
Wireless | Bluetooth	E802.11 b/g/n (Embedded) | Bluetooth BT4.1

1.1. Properties

- High degree of robustness.
- The SMX-IoT10 module is approved for indoor use only.
- Compact design.
- Ethernet and USB interfaces.
- Embedded Wireless and Bluetooth

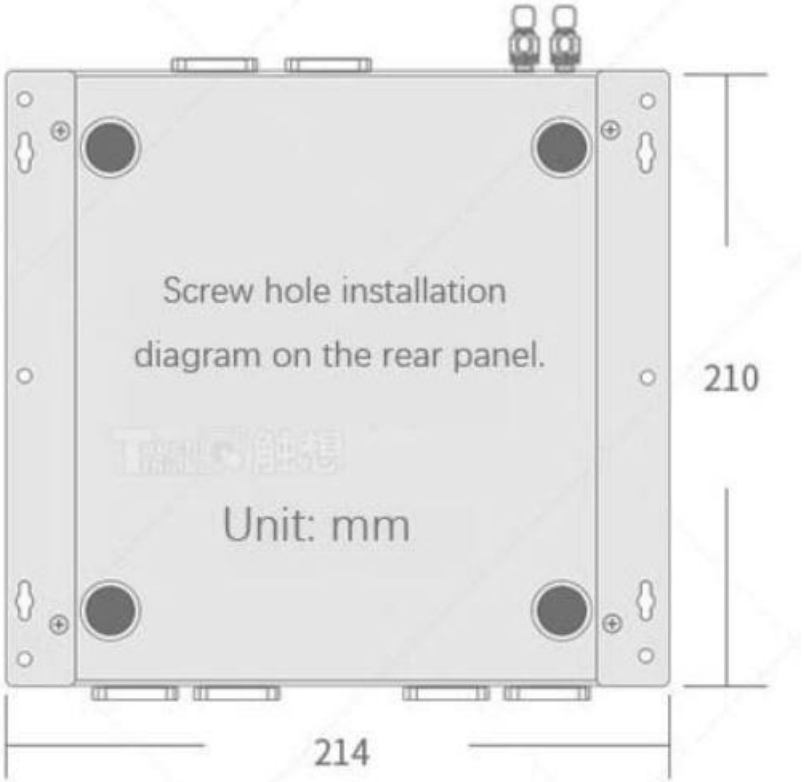
1.2. Approvals / CE

The SMX-IOT10 module has received approval from the CE standards.

2. Physical Properties and Drawings

Connection Slots	4x USB 3.0	Type A
	2x USB 2.0	Type A
	6x RS-232 Serial Port	
	2x Rj45 Ethernet	10/100/1000 Mbps
	1x VGA + 1x HDMI	
	1x Audio Output	
Mounting	Wall Mounted DIN Rail Mounted (Optional)	
Temperature	-10 °C to 60 °C	Work
	-20 °C to 60 °C	Storage
Dimensions (mm)	Width : 58,3 Height : 188,6 Depth : 200	
Weight (Kg)	1,9	

2.1. Drawings



3. Setup

3.1. Mounting

Wall Mounting

- The SMX-IoT10 can be mounted to wall from the screws which are placed on the back of the product.

DIN Rail Mounting (Optional)

- Bring the top of the device to the top edge of the standard profile rail and place the device on the rail track.
- Push the device towards the standard profile rail. You will hear the device sitting in place with the click sound.

3.2. Removing

Wall Mounting

- The SMX-IoT10 can be dismounted from the wall by screwing off the with the help of screwdriver.

DIN Rail Mounting (Optional)

- With the help of a screwdriver, pull down the locking spring from the bottom of the device.
- Separate the screwdriver from the rail line without separating it from its position, by pulling towards yourself

4. Electrical Connection

The SMX-IoT10 has DC 12V~24V power supply. Rated voltage, current, should be according to following table.

SMX-IoT10	
Rated Voltage	DC Minimum = **12V** DC Maximum = **24V**
Rated Current	**5A**

Faulty or incomplete connection may damage you, those around you, or devices.

See the relevant documents for detailed information and electrical drawings.

5. Device Connections

5.1. Ethernet Devices

SMX-IoT10 contains 2 Ethernet ports. Both Ethernet ports can be configured separately. To connect your Ethernet devices to the SMX-IoT, you must set up an IP in the IP range that you have given to the SMX-IoT.

✓ **Example**

If your SMX-IoT module is in the following settings

- IP: 192.168.168.254
- Subnet Mask: 255.255.255.0

In this case, you must provide an IP address for your devices in the range of [192.168.168.1 – 192.168.168.249] and [192.168.168.251 - 192.168.168.253]

After you adjust your field device's IP addresses, you can connect your devices to 2 Ethernet ports on the SMX-IoT10. You do not need to make any adjustments other than IP address.

Faulty or incomplete connection may damage you, those around you, or devices.

5.2. Internet Connection Options

The Internet can be supplied in 3 different ways to the SMX-IoT10 device.

- **WAN port**
  - ✓ Plug the ethernet cable with an Internet connection into your device's Ethernet1 port. DHCP or IP settings will be made in the next steps.
- **Phone USB Connection**
  - ✓ Plug your iPhone or Android phone into your device's USB port with a charging/data cable.
  - ✓ Turn on mobile access from phone settings.
  - ✓ After energizing your device and the "Power LED" is ON, you may need to turn the mobile access setting OFF and ON on your phone.
- **Wi-Fi Connection**
  - ✓ Wireless connection can be done with embedded Wi-Fi. There is no need for external Wireless module.

5.3. Ethernet Connection with PC (Service IP) (Optional)

There are two methods to access the device settings.

- Connection over Wi-Fi
- Physical connection from the service port with Ethernet Cable

If you connect to the PC via Wi-Fi and want to make settings over Wi-Fi, you can skip this step.

- Connect one end of the Ethernet Cable to the SMX-IOT10 Ethernet 1 port, and the other end to your PC's Ethernet port.
- Go to Ethernet Adapter settings on your PC
- Double-press on your adapter to go to the detail page
- Press the Properties button
- Double-press**" Internet Protocol Version 4 (TCP/IPv4)**" option
- Select "**Manual IP Adjustment**" from the page that opens and enter the following information
  - ✓ IP : 192.168.169.100
  - ✓ Subnet Mask: 255.255.255.0
- Close by confirming changes

Energizing your device

Plug in the power supply or adapter which is connected to the SMX-IOT10. Make sure that your field devices that you want to connect to the SMX-IoT10 are also turned on.

- If you are trying to provide internet to your device by phone you may need to turn the mobile access setting off and on after the **“Power LED”** lights up.
- If you want to use the IP option manually from WAN or if you want to provide internet with Wi-Fi, your device will connect to the internet after making your settings in the next section.

Faulty or incomplete connection may damage you, those around you, or devices.

See the relevant documents for detailed information and electrical drawings.

5.4. Making Basic Settings

If the device settings will be accessed via Wi-Fi;

- View the Wi-Fi networks around you with the Network Icon at the Bottom Right on your PC.
- The SMX-IOT10 device will be broadcasting Wi-Fi with serial code.
- From the list, select the network in the format "**SIX-XXXXX-XXXXX**" that matches your device's serial number and press "**Connect**"
- Enter wifi password

Predefined Wi-Fi login password is "**simplinx**"

If you have a wired connection on Ethernet1 ready;

- Open your browser
- On the Address bar, enter **" http://192.168.169.254:3000"** and press ENTER
- The login screen will open for the SimpLinx device settings.
- Enter your password and press ENTER

Predefined web login password is "**simplinx**"

If you have a Wi-Fi connection ready;

- Open your browser
- On the Address bar, enter **" http://172.16.159.1:3000"** and press ENTER
- The login screen will open for the SimpLinx device settings.
- Enter your password and press ENTER

Predefined web login password is "**simplinx**"

6. Web Interface

6.1. Ethernet1 and Ethernet2 Pages

On the Eth1 settings and Eth2 settings pages, you can define the IP address, network mask of your Ethernet1 and Ethernet2 ports of SMX-IoT10 separately. The network mask value you have entered will determine the IP range of your devices which you will connect to your SMX-IOT10 module.

✓ **Example 1 (Predefined)**

- IP: 192.168.168.254
- Subnet Mask: 255.255.255.0
- In this case, you can use all IP addresses in the range of [192.168.168.1 – 192.168.168.249] and [192.168.168.251 - 192.168.168.253] for field devices.

✓ **Example 2**

- IP: 192.168.0.1
- Subnet Mask: 255.255.255.0
- In this case, you can use all IP addresses in the range [192.168.0.3 - 192.168.0.254] for your field devices.

✓ **Example 3**

- IP: 10.0.0.1
- Subnet Mask: 255.255.255.0
- In this case, you can use all IP addresses in the range [10.0.0.3 - 10.0.0.254] for your field devices.

Network ranges of both Ethernet1 and Ethernet2 must be different from each other!

If you change the settings, you must restart the device for the new settings to take effect.

6.2. Wireless Settings Page

You can access Wireless Client and Wireless Hotspot settings from this page.

There are two options for WAN connection;

For Wireless Client;

- With DHCP, the device receives all configuration(Including IP address) (Recommended)
- If you turn off DHCP, you can provide IP, Network Mask and Gateway and DNS configurations manually.

If you change these settings, you must restart the device for the new settings to take effect.

For Wireless Hotspot connection;

- With the Wireless Hotspot setting, you can enable your device to broadcast Wi-Fi. By checking the “Hotspot Active” option and entering your Hotspot Password you want to set, you can enable your device to broadcast Wi-Fi with its serial number.

Wireless Client and Wireless Hotspot cannot be used at the same time!

If you change these settings, you must restart the device for the new settings to take effect.

The Hotspot SSID is the same as your device's serial number.

6.3. Advanced Settings Page

You can modify these settings;, Remote IO Password Reset, Reset Device Settings, and Reset Remote IO Database.

- **By using the Remote IO Password Reset** setting, you can reset your Remote IO password to the factory setting.

With the Remote IO Password Reset setting, your passwords will be completely wiped out. This operation cannot be undone.

- **By using the Reset Device Settings** setting, you can reset your device settings to factory settings.

The Reset Device Settings will completely delete your device settings. This operation cannot be undone.

- **By using the Reset Remote IO Database** setting, you can reset/delete the Remote IO database.

The Reset Remote IO Database setting will completely delete your Remote IO database. This operation cannot be undone.

If you change these settings, you must restart the device for the new settings to take effect.

6.4. Import/Export Page

You can download your devices configuration files and import it from this page. Downloaded configuration files can be used in two different ways.

- **With USB Disk;**
  - ✓ Put the downloaded file on a USB disk.
  - ✓ Insert the USB disk with configuration file to any USB port of the device. The settings will be transferred automatically.

✓ When the process is completed in a few seconds, the device turns off and on and is ready for use with new settings.

✓ If your device does not turn off and on automatically, your settings are not loaded. Check the configuration file!

- **With Web Interface;**

  ✓ Click the Browse button from the Import Settings section.

  ✓ Select the configuration file on the screen that opens.

  ✓ Click the Import button.

  ✓ Restart the device for the new settings to take effect.

6.5. Change Password Page

On the Change Password page, you can change the password you use to login your device's configuration pages.

If you change these settings, you must restart the device for the new settings to take effect.

6.6. Info Page

You can view the following information on the status page;

- Serial Number of Your Device
- OS Version
- RemoteIO Version
- Up Time (in Minutes)
- Date and Time information of your device
- IP, MASK and MAC information of the Ethernet1 and Ethernet2 interface
- If the WLAN is plugged in and connected to a network WLAN type, IP, MASK and MAC information of the interface

CE

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