

cMT-SVR-200

Wireless Network Settings Guide

Your industrial control solutions source

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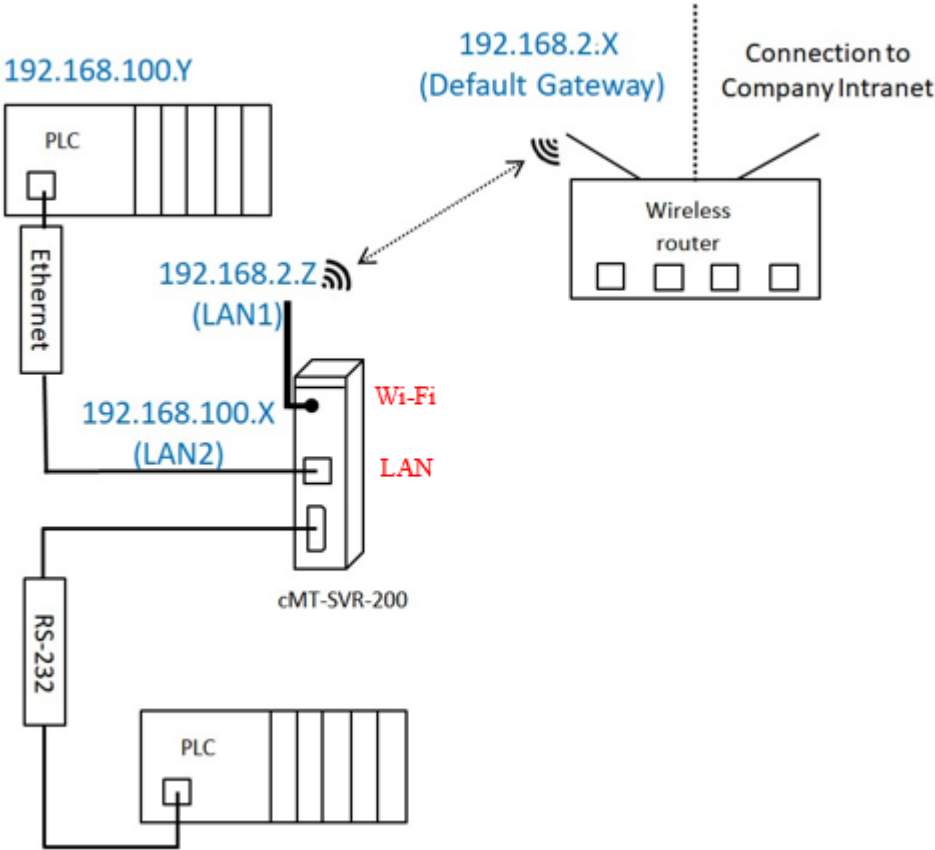
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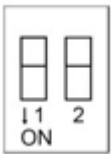
Chapter 1 – Introduction

A cMT-SVR-200 has wireless connectivity that allows users to connect to a local wireless access point via Wi-Fi. It supports the following frequency bands, IEEE802.11b, IEEE802.11g, and IEEE802.11n. The cMT-SVR-200 is equipped with one independent Ethernet port which isolates the device network from the company/factory network. Both Wi-Fi and the ethernet port (LAN) support WAN (Wide Area Network) connections, which allows the HMI to connect to a public network through a router.



By default, the IP address of Wi-Fi and the LAN port are assigned using DHCP. The IP addresses of WiFi and LAN must be configured to the different subnets.

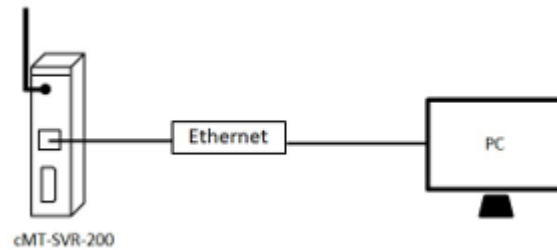
The cMT-SVR-200 is equipped with a set of DIP switches. Using the DIP switches triggers the corresponding functions. For example, the IP address will be reset to default IP when SW1 is turned ON and the HMI is cycled power. The small button near the DIP switches is used to reboot the HMI.



SW1	SW2	Function
OFF	OFF	Normal mode
ON	OFF	Reset Ethernet IP settings
OFF	ON	Boot loader mode
ON	ON	Reset to factory default

Chapter 2 — Wi-Fi Setup via Web Interface

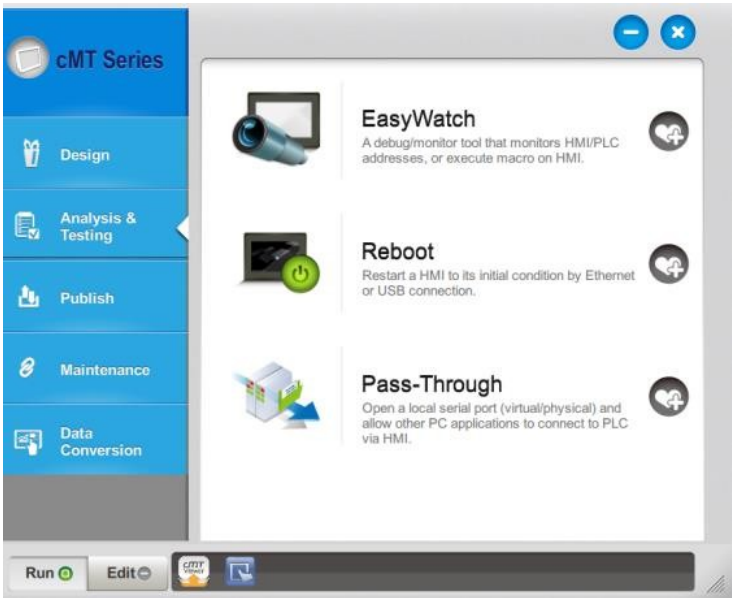
To configure the wireless connection of the cMT-SVR-200 HMI via a web browser, connect the cMT-SVR-200 to a PC with RJ-45 crossover Ethernet cable, as the diagram shown below.



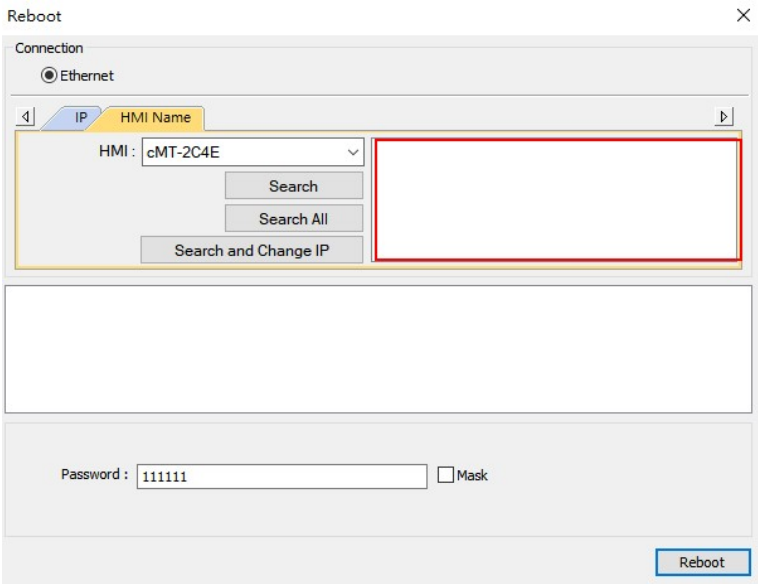
On the PC, right-click on Ethernet adapter of the PC and select **Properties**. You can set your PC to static IP mode from **Internet Protocol Version 4 TCP/IP V4 > General** tab. Select **Use the following IP address** and set up an IP address. This IP address must be unique and non-conflicting. If this is the HMI's initial setup, set the IP address to 169.254.0.X, where X is any number between 2 and 254, and set the submask to 255.255.255.0.

How to know the IP address of the cMT-SVR-200

Launch **Utility Manager** > Select **cMT Series**. Select **Analysis & Testing** > **Reboot**.

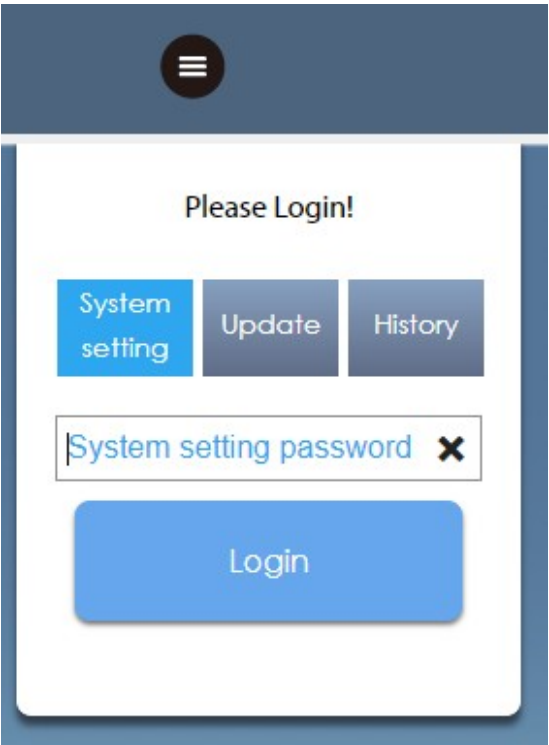


On the HMI Name tab, click on **Search All**. The IP address of the cMT-SVR-200 will be displayed on the right box. Then close this window.

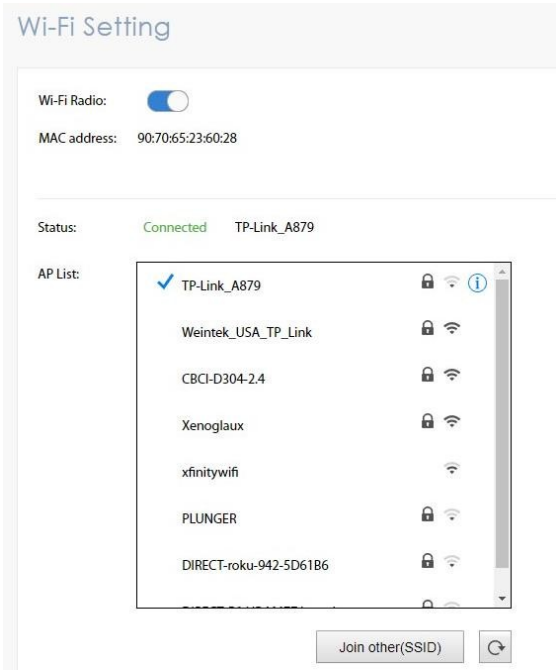


How to set up the wireless connection

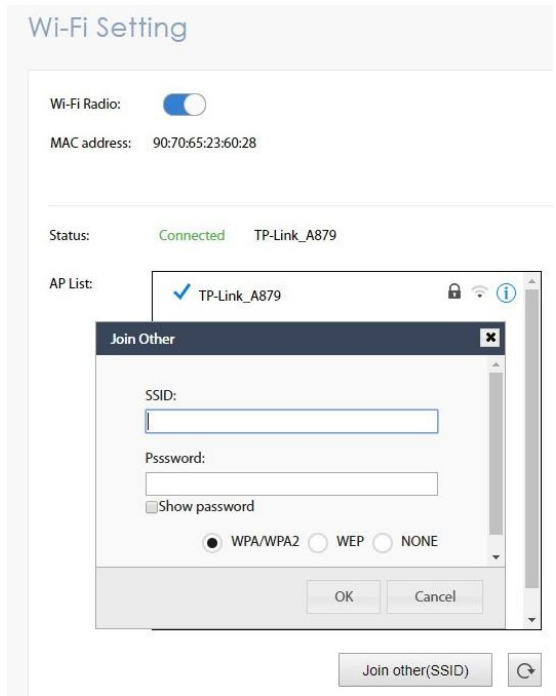
Open a web and enter the IP address of the cMT-SVR-200. Select **System setting** and enter its password. The default password is 111111.



On **Wi-Fi** tab, enable **Wi-Fi Radio**. Click on an access point from the AP List. The popup window will prompt you to enter its password. Once the wireless connection succeeds, the status will display "Connected."

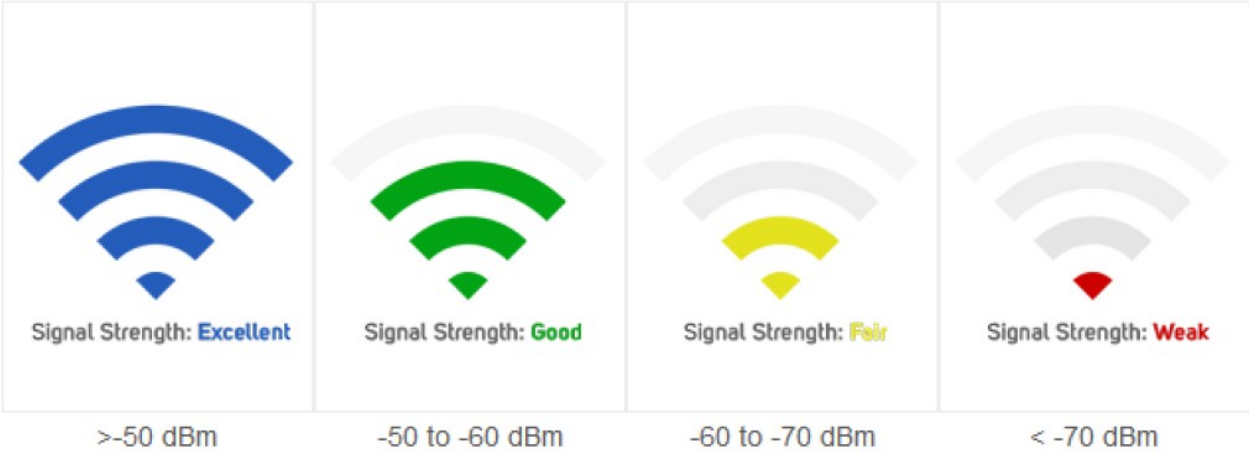


Join another SSID - You can manually connect the HMI to an access point that is not displayed on the AP list. Make sure the Wi-Fi signal is strong enough.



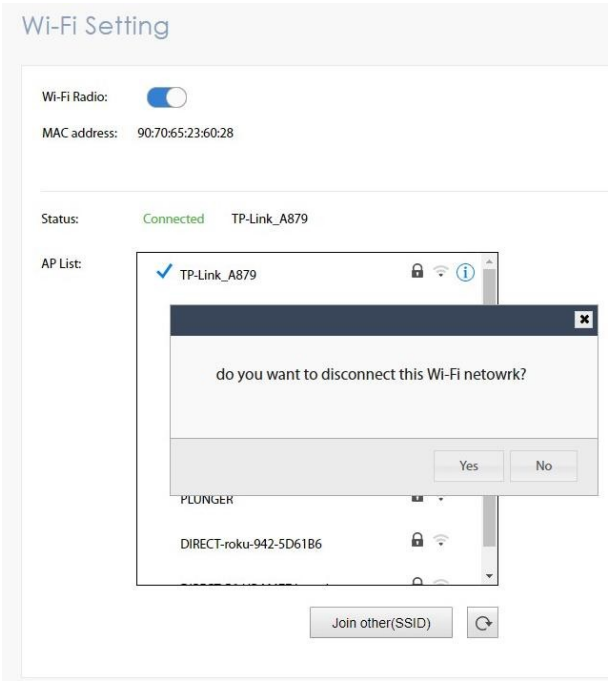
Name	Descriptions
Wi-Fi Radio	Turn Wi-Fi radio ON or OFF.
Status	It shows one of the statuses including Stopped, Connecting, Retrying, or Connected.
AP List	A list of currently available access points.
Refresh icon	It can refresh the Access Points list.
Join other (SSID)	It allows users to manually add an access point and connect with.
SSID	SSID name of the wireless access point to connect with.
Password	Enter the password. The password can either be visible or invisible when entering the password.
Connect/Disconnect	Connect or disconnect from a wireless router.

The signal strength is classified into four levels: Excellent, Good, Fair, and Weak, as shown below. (Using System register LW-11402(16bit))

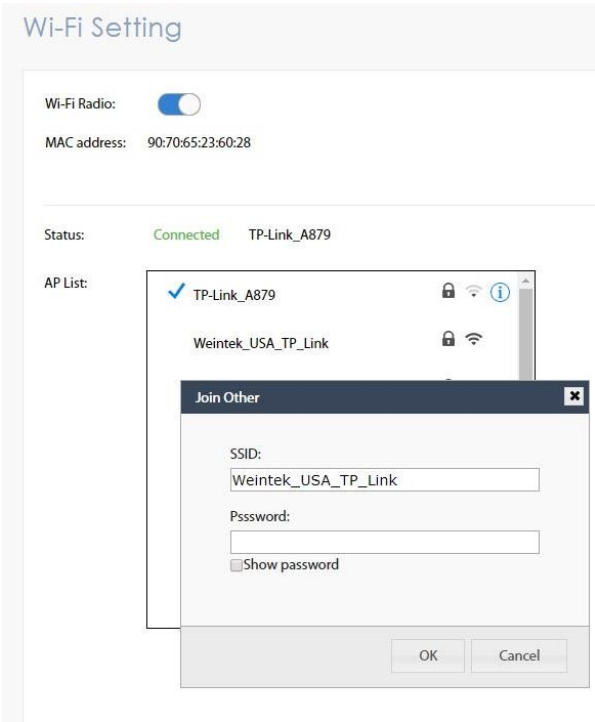


How to switch the access point to others

Click on the current wireless connection. Choose **Yes** on the popup window to disconnect the connection.



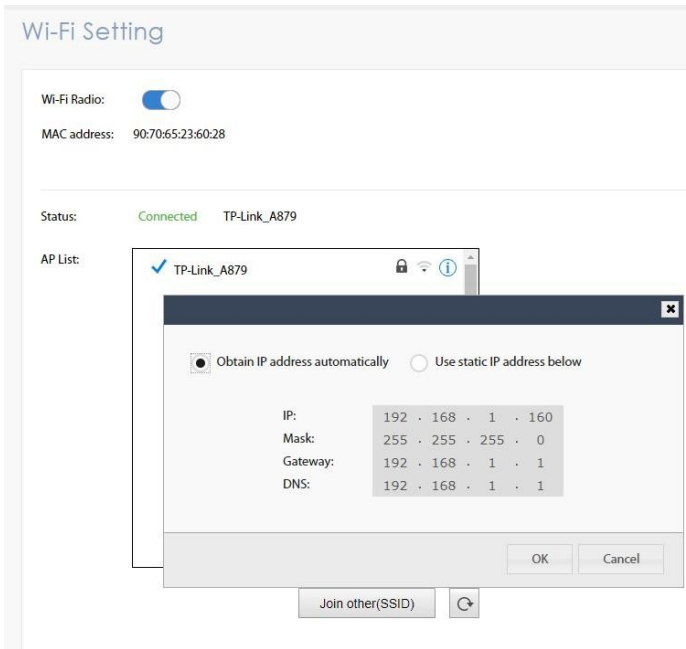
Select another access point and enter its password.



How to set to static IP

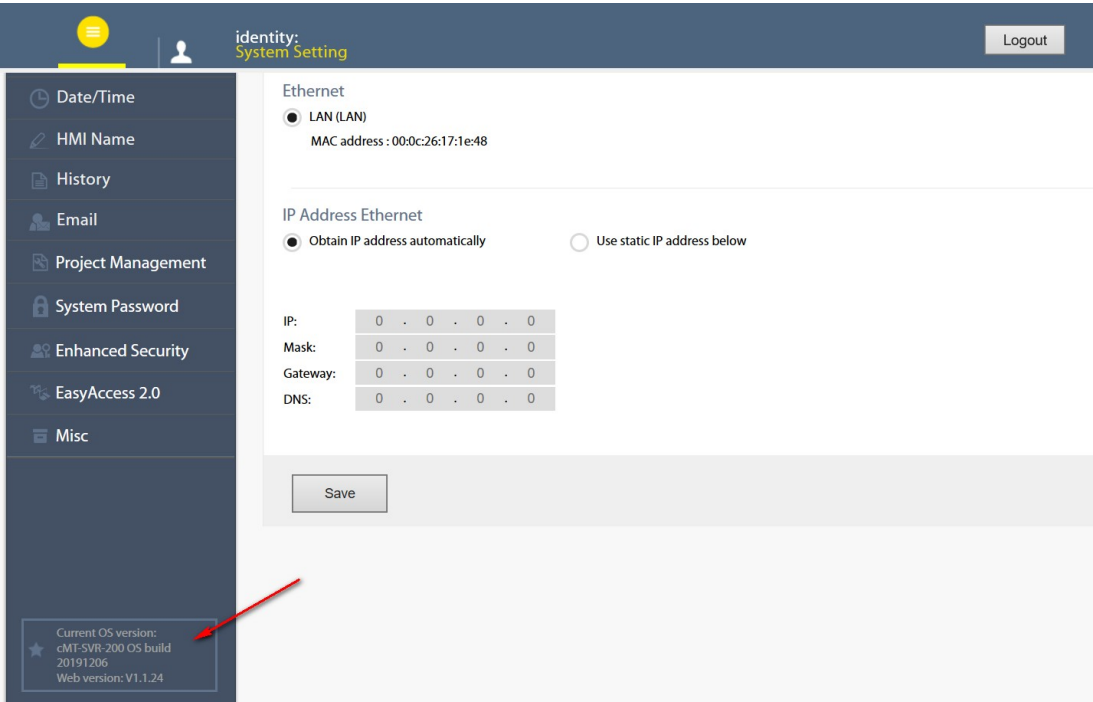
Setting a static IP is available. To use the static IP address, click the blue information icon.

Choose **Use static IP address below** and enter the IP address, mask, gateway IP, and DNS.



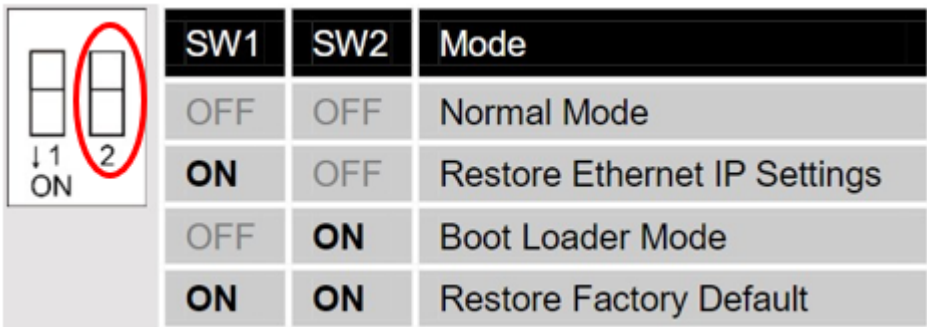
Chapter 3 — Hotspot

This feature is available in OS version **20191206** or greater. You can find the current OS version on the web interface once you log on.



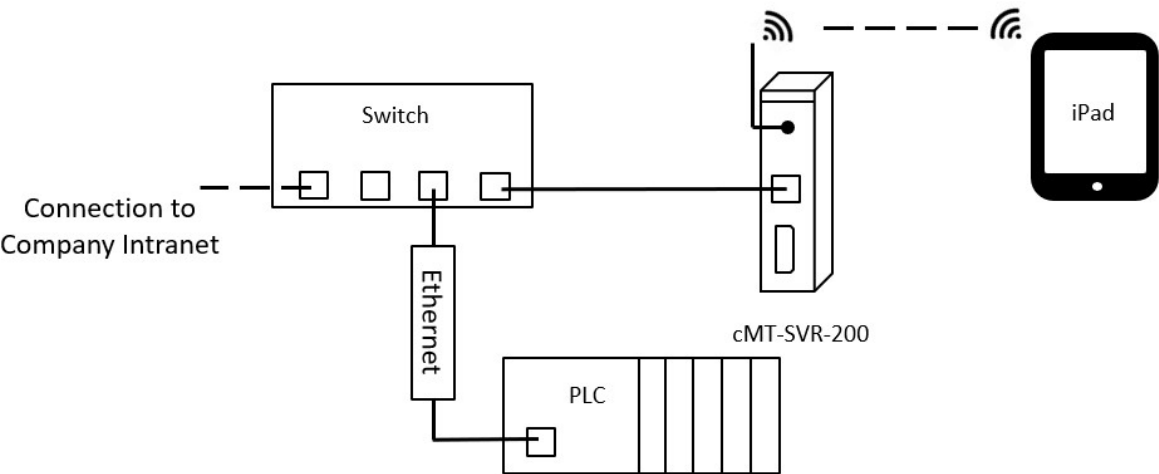
If the OS version is lower than 20191206, follow the steps to upgrade the OS of cMT-SVR-200.

- 1. Copy the MTfirmware.bin file to root folder of SD card.
- 2. Flip DIP Switch 2 of cMT-SVR-200 to ON position.



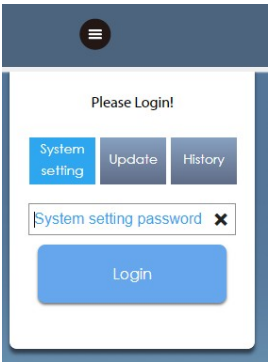
- 3. To monitor the update progress, run HyperTerminal software on your PC and set the parameters to 115200, 8, N, 1. Connect your computer with cMT-SVR-200 via COM1 RS-232 port.
- 4. Insert the SD card to cMT-SVR-200 and reboot to update the OS image. The update succeeds when HyperTerminal displays "Starting Kernel" about two minutes after reboot.
- 5. Power off cMT-SVR-200 and then flip DIP Switch 2 of cMT-SVR-200 back to OFF position.

This feature allows other Wi-Fi devices to connect to cMT-SVR-200 without a separate Wi-Fi router. A Wi-Fi device, such as a tablet, can launch cMT-Viewer applications to monitor the project of the cMT-SVR-200. The company/factory network can connect to the ethernet port of cMT-SVR-200 to gain internet access.

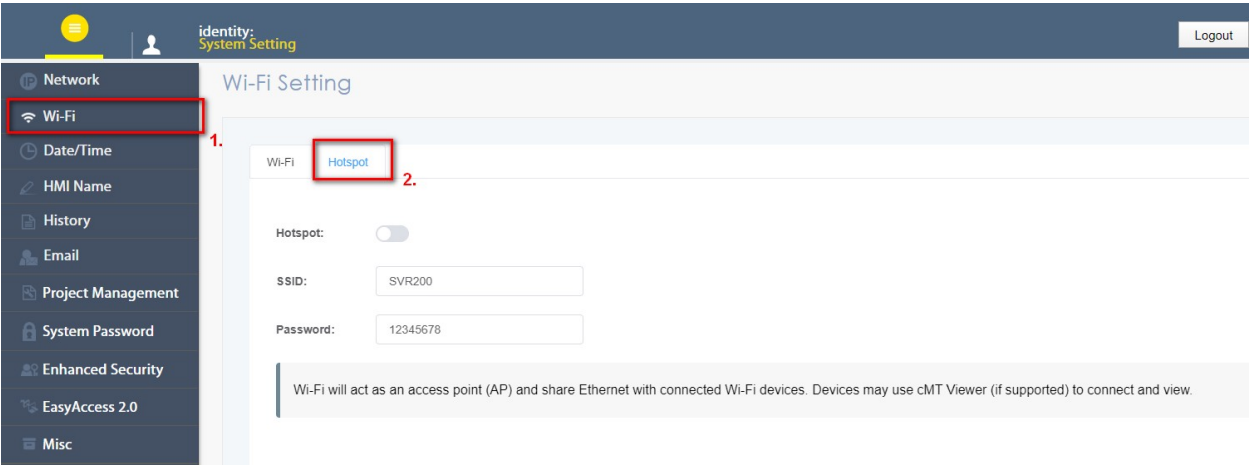


How to Set up Hotspot

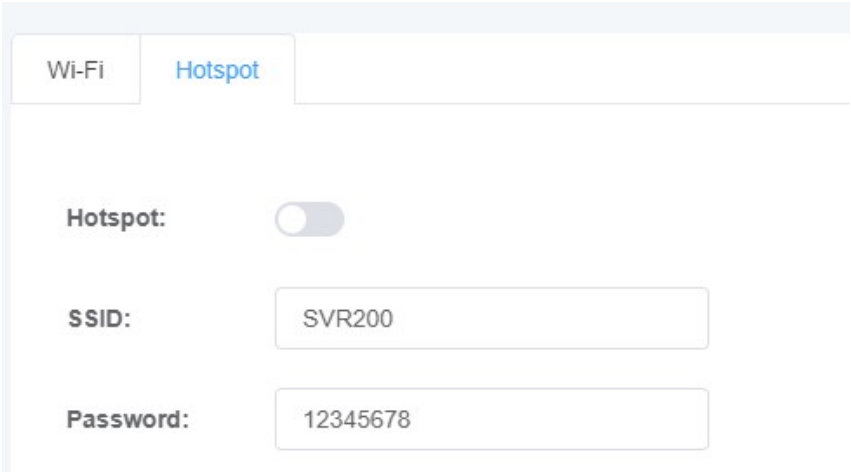
Open a web browser and enter the IP address of the cMT-SVR-200. Select **System setting** and enter its password. The default password is 111111.



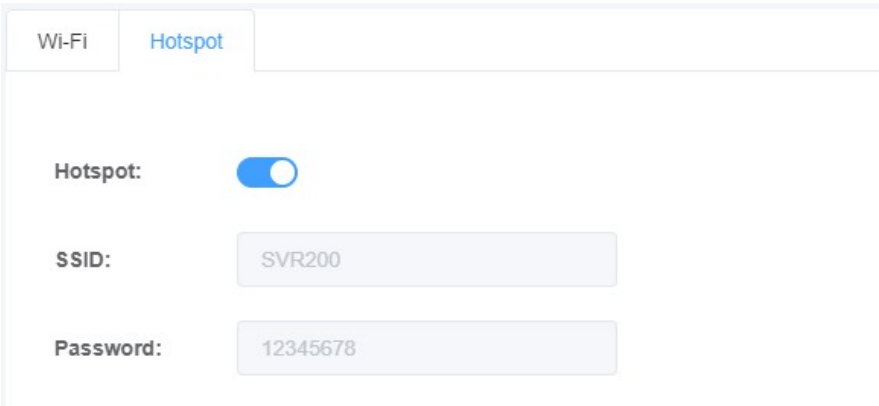
On **Wi-Fi** tab, click on **Hotspot**.



Set up the SSID of hotspot and its password. Then turn ON the Hotspot switch.



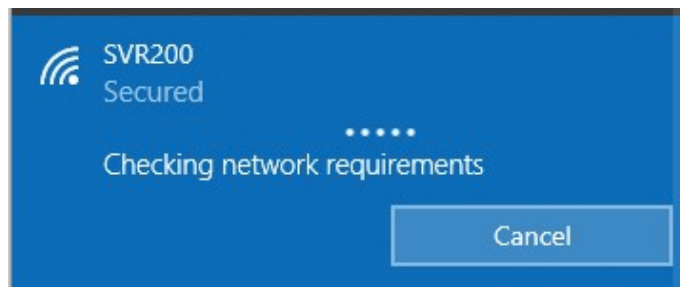
While the Hotspot is enabled, the SSID and password cannot be changed.



Your Wi-Fi device can scan the access point.



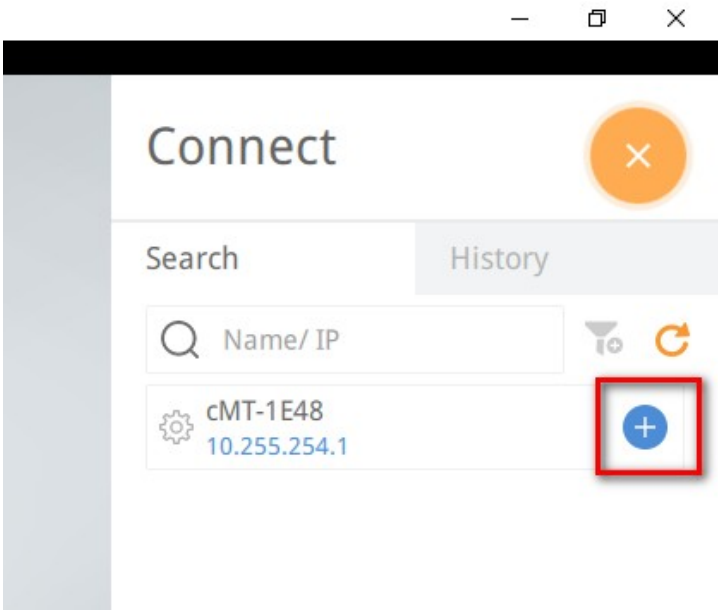
Enter the password and connect to the access point. Then launch cMT-Viewer to control the project.



The default IP of the hotspot is 10.255.254.1. The DHCP pool will assign one of IP addresses to the Wi-Fi device from 10.255.254.2 to 10.255.254.254 once connected. The maximum Wi-Fi devices that are allowed to connect to the hotspot is 10.

The supported security protocols to secure wireless network is WPA-PSK (MIX). No encrypted mode and WEP are not supported.

In cMT-Viewer, tap the + button to access the project.

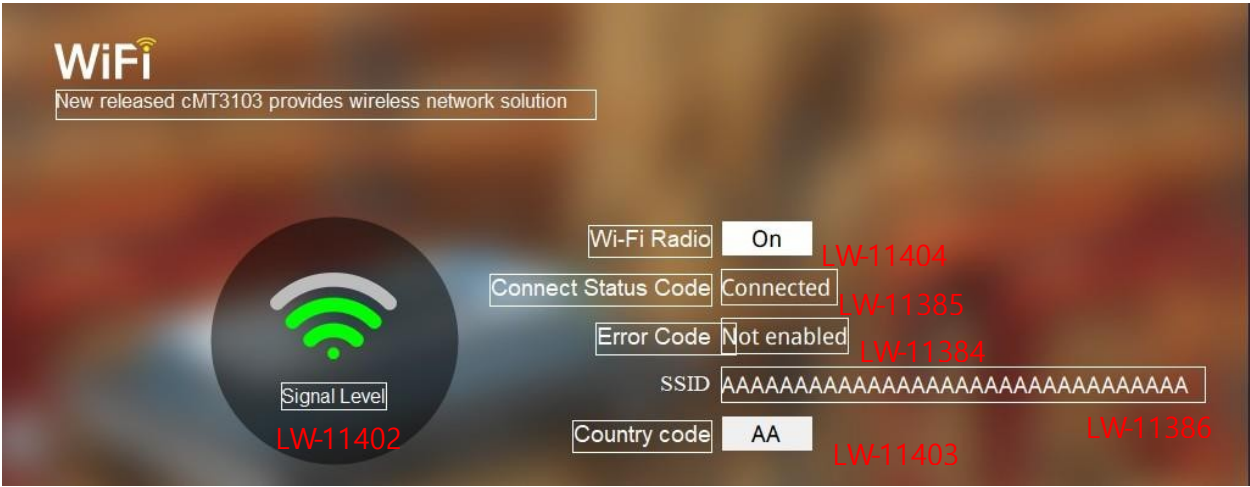


Chapter 4 — System Registers

Register No.	Descriptions	Associated object	Readable/Writable
LW-11383 (16bit)	Wi-Fi control (1: Disconnected, 2: Connect, 3: Popup Wi-Fi setting dialog)	Multi-State Switch	R/W
LW-11384 (16bit)	Error code (0: No error, 1: No such device, 2: Wi-Fi radio is off)	Word Lamp	R
LW-11385 (16bit)	Status (0: Stopped, 1: Connecting, 2: Retrying, 3: Connected)	Word Lamp	R
LW-11386 (16 words)	Connected SSID	ASCII	R
LW-11402 (16bit)	Signal strength level (0: None, 1: Weak, 2: Fair, 3: Good, 4: Excellent) *Note 1	Word Lamp	R
LW-11403 (16bit)	Country code *Note 2	ASCII	R/W
LW-11404 (16bit)	Wi-Fi radio (0: Off, 1: On)	Multi-State Switch	R/W

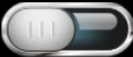
***Note 1:** The signal strength is classified into four levels: 1. Weak (<-70 dBm), 2. Fair (-60 ~ -70 dBm), 3. Good (-50 ~ -60 dBm), 4. Excellent (>-50 dBm).

***Note 2:** Enter Wi-Fi country code in ASCII for uppercase letters, the setting will take effect after rebooting HMI. Wireless regulations vary from country to country. The country code selection affects the list of channels of wireless radio.



Register No.	Descriptions	Associated object	Readable/ Writable
LB-12666 (1 bit)	Disable/enable Wi-Fi Hotspot	Toggle Switch	R/W
LB-12667 (1 bit)	Refresh Wi-Fi Hotspot setting	Toggle Switch	R/W
LW-12006 (16 words)	Wi-Fi Hotspot SSID	ASCII	R/W
LW-12022 (32 words)	Wi-Fi Hotspot password	ASCII	R/W

Enable/Disable Wi-Fi Hotspot



LB-12666

Wi-Fi Hotspot SSID


LW-12006

Wi-Fi Hotspot Password

LW-12022

LW-12038

Refresh Wi-Fi Hotspot setting



LB-12667

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