

User Manual of SAVCH B series IoT Cloud HMI



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1. Product Introduction

1.1 Main function

Savch HMI Embedded System is an embedded system software running in industrial automation monitoring and management equipment. Through running Savch SCADA project, it can visually observe the situations of the industrial scene and communicate with various industrial control equipment, by the collected production signals of industrial sites to achieve monitor.

The alarm information of the industrial site is promptly notified to the relevant staffs through the form of screen, computer language, WeChat, SMS, and mail. Support the function of network project, so that multiple devices can be mutually client and server, share data through the network to realize distributed control. Also support recording and storing data. Analyze and record the real-time working condition data and historical working condition data to solve production failures, improve production efficiency and product quality.

Savch HMI high-speed version is a new series of HMI launched by SHACH Technology Co., Ltd. in 2019, based on the original HMI system to improve the speed of the HMIS series, and on the basis of HMIS to optimize the definition of HD version HMIH series.

1.2 Technical characteristics

Savch HMI embedded system is based on embedded Linux system development, integrated SVG image editing and processing technology, TCP / IP network communication technology, serial communication technology, multi-threading, multi-process, Javascript extended script analysis and running engine and other technologies for development.

2. Product Specifications

Properties	Models	B7	B10
Display	Screen size	7 " TFT	10.1 " TFT
	Resolution	1024x600pixels	
	Display color	16.7M	
	Brightness	250 cd/m ²	
	Contrast Ratio	800:1	500:1
	Touch panel type	Analog resistive film	
Backlight	Type	LED	
	Life	30,000 hours	
	Auto sleep function	Yes	
Hardware	CPU	4-core A7 processor	
	Flash	4GB	
	RAM	512M	
	Ethernet Port	10/100 Base-T	
	Serial Port	RS485/RS232	
	USB(HOST)	USB2.0 x 2	
	RTC	Yes	
Power	Rated input voltage	24±20%VDC	
	Power consumption	7W@24VDC	10W@24VDC
	Power protection	Surge protection and anti-reverse protection	
	Withstand voltage	500VAC	
	Insulation resistance	50MΩ@500VDC or more	

	Vibration resistance	10 ~ 25 Hz X, Y, Z direction 2G/30 minutes	
Environment	Cooling method	Natural air circulation	
	Protection grade	Front: IP65 Rear: IP20	
	Storage temperature	-20 ~70℃	
	Operating temperature	-10℃ ~ 60℃	
	Relative humidity	10 ~ 90% RH (non-condensing)	
	Operating environment	Prevention of dust, moisture, corrosion, electric shock and external shock	
Structure	Material	ABS (fire-retardant)	
	External dimensions	200x146x37mm	270x212x35mm
	Panel cut dimensions	193x138mm	260x202mm
	Weight	0.8kg	1.3kg
	Installation	Panel mounting	
Function	WiFi (optional)	802.11b/g/n	
	Wireless network (optional)	4G(global)	
Software	HMI software	SavchSoft_HMI software	

7" IoT Cloud HMI

Model	TFT screen	Storage	LAN	USB	COM	Audio	WIFI	Wireless	Hole Size	Dimension W*H*D
B7	7" 1024x600 HD	4G + 512M	1	2	2	Yes			193x138mm	200x146x37mm
B7-G		4G + 512M	1	2	2	Yes		4G (China)		
B7-W		4G + 512M	1	2	2	Yes	Yes			
B7-E		4G + 512M	1	2	2	Yes		4G (Global)		

10.1" IoT Cloud HMI

Model	TFT screen	Storage	LAN	USB	COM	Audio	WIFI	Wireless	Hole Size	Dimension W*H*D
B10	10.1" 1024x600	4G + 512M	1	2	2	Yes			260x202mm	270x212x35mm
B10-G		4G + 512M	1	2	2	Yes		4G (China)		
B10-W		4G + 512M	1	2	2	Yes	Yes			
B10-E		4G + 512M	1	2	2	Yes		4G (Global)		

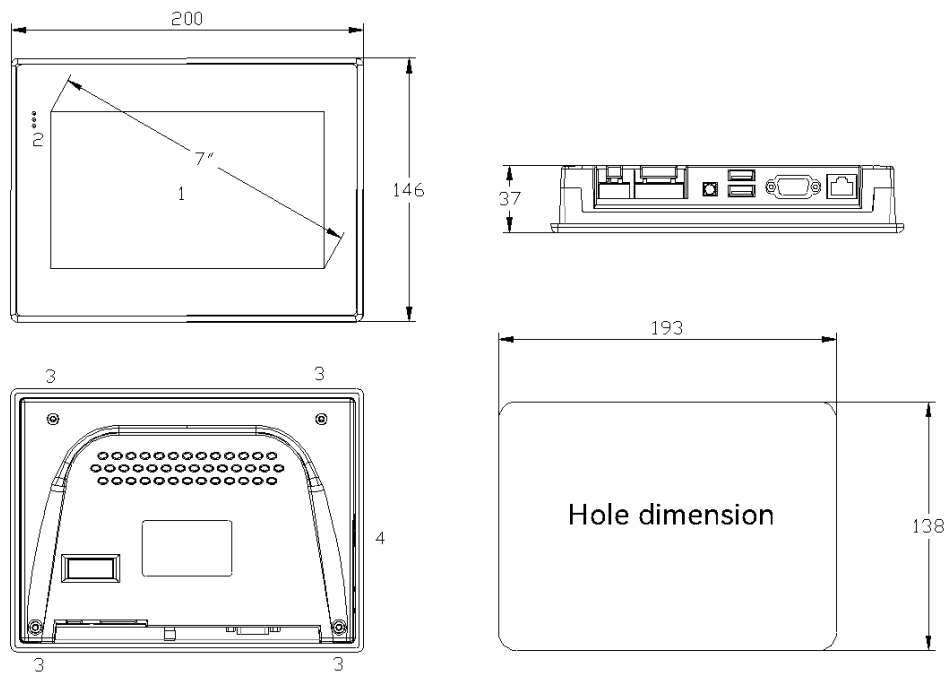
3. HMI Bundled software

- 3.1 Savch HMI uses the SavchSoft_HMI software.You can download from. <http://en.savch.net..>
- 3.2 Savch cloud service can be used by visiting Savch cloud website <http://cloud.haiwell.com>. It is also recommended to download Savch Cloud APP.
- 3.3 Savch Cloud APP download:

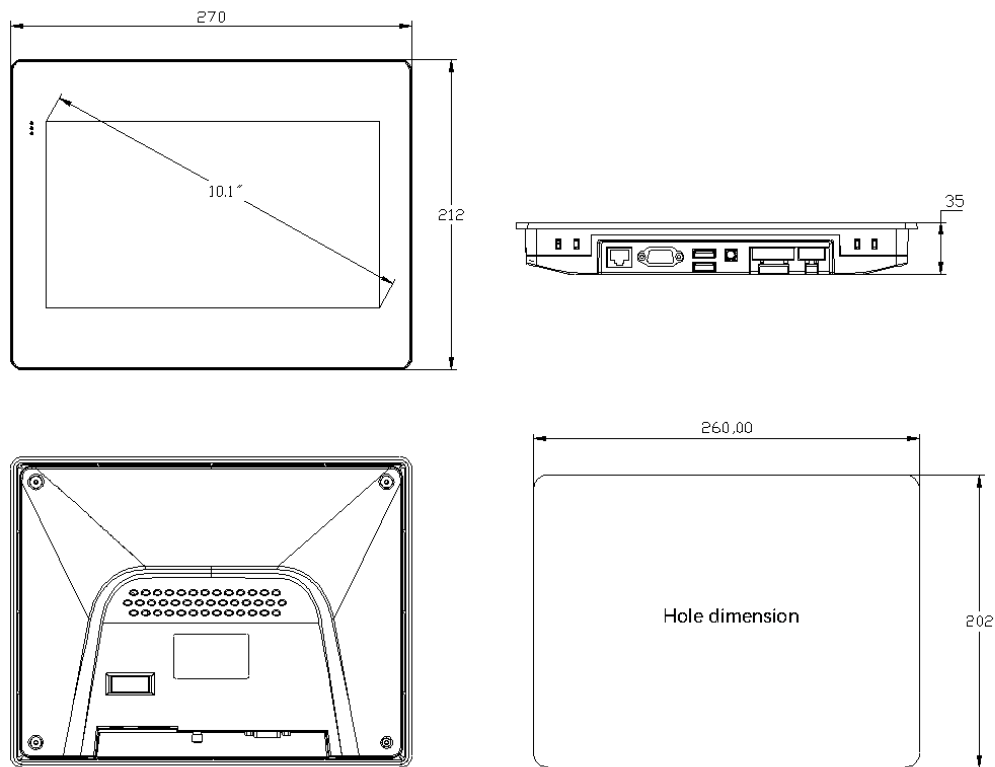
✓Login and download from Savch Cloud website.
 ✓For iOS terminal, it can search and download " Savch Cloud" APP in Apple App Store.
 ✓Scan the QR code below to download.

4. Product dimension

4.1 B7

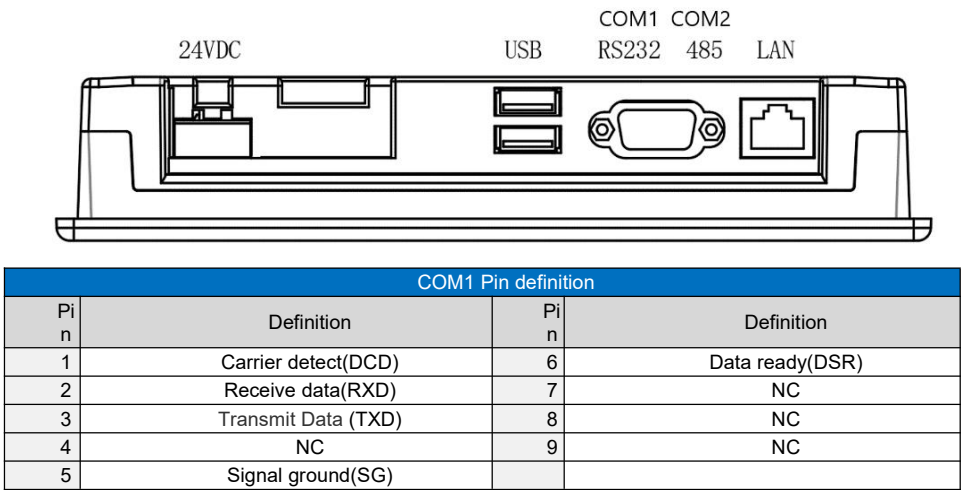


4.2 B10

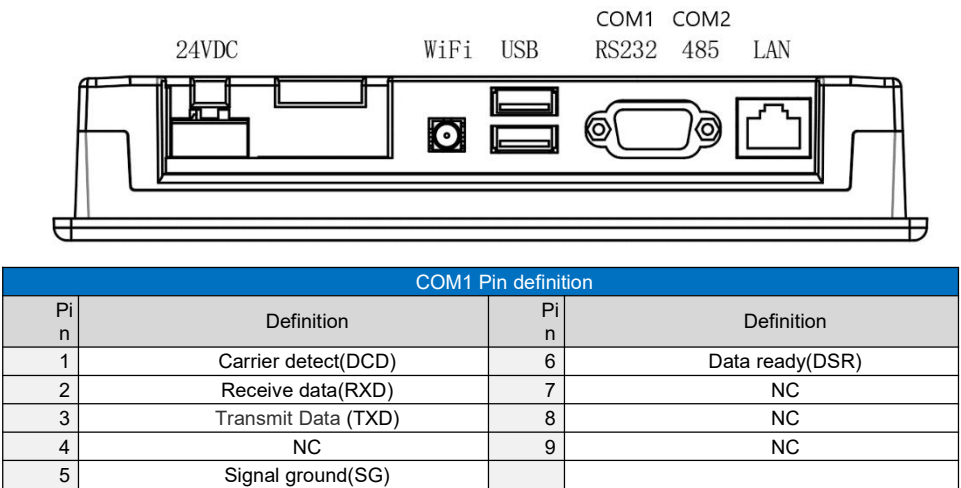


5. HMI interface diagram

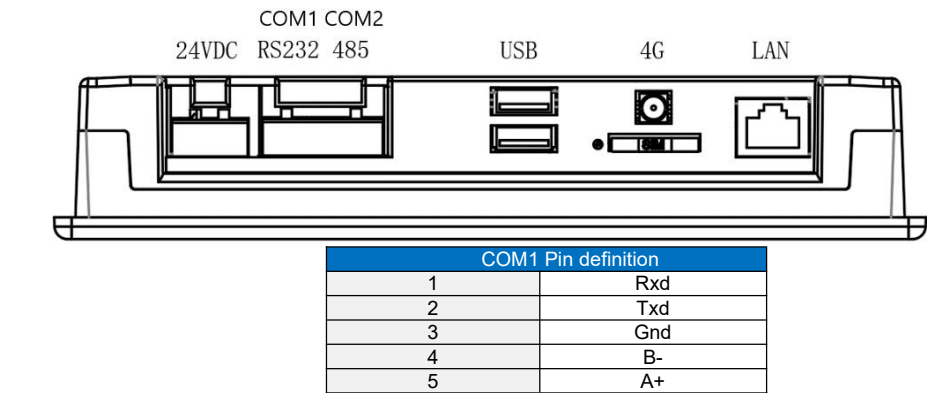
5.1 B7/B10



5.2 B7-W/B10-W



5.3 B7-G/B7-E/B10-G/B10-E



6. Installation and operation

6.1 Hardware installation

6.1.1 Notice

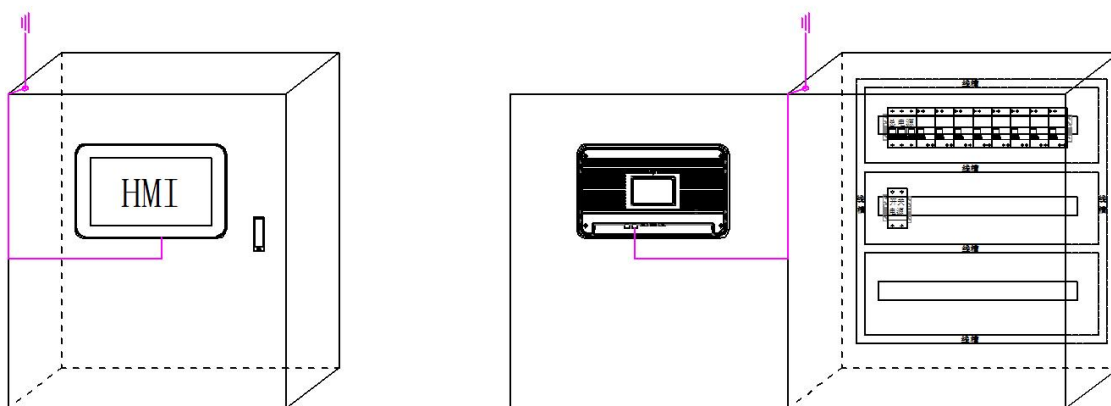
- ① Strictly follow the direction of installation marked on the terminal. Otherwise, there might be breakdowns or damage with HMI.
- ② There should be enough space between the bottom of HMI and other devices, which helps to avoid the damages caused by poor heat dissipation.

6.1.1 Installation procedure

Set the HMI in the panel cutout and tighten four screw clamps until HMI is fixed on panel.

6.2 Antenna installation

4G and WiFi are optional functions of Savch HMI. The antennas should be placed outside of the control cabinet in order to get better signal. After locking the antenna's connector to HMI, the antenna cable can be attached to the door of cabinet and placed on the top of cabinet, as shown below.



6.3 Touch screen calibration

Press the screen and then power up the HMI. The system will enter calibration mode after hearing three beeps. Touch the

center of  sign on the top-left corner of touch screen for more than 1 second. Then the next sign will show up in the next position. Calibrate the top left, top right, low right, low left and center of touch screen.