

SH7000Series HMI Product Specifications

Publication Status: Standard Product Edition

V1.00

STATE human-machine interface SH7000 series, as a new generation of IoT human-machine interface, continues the advantages of STEP product line, industrial ABS plastic shell, high reliability; new mold opening settings for the rear cover, and antenna holes are added to the rear cover to improve product quality. The overall design sense, and a variety of resolution models are available to meet the needs of different application scenarios.

At present, the SH7000 series is divided into four models: SH7070W, SH7070WE, SH7100W, and SH7100WE according to the difference in size and function.



SH7070W Specifications

touch screen 4 wire industrial power touch screen CPU memory	display screen	7'16:9 TFT LCD screen
	resolution	1024×600
	color	24 bit
	brightness	350cd/m ²
	backlight	led
	LCD lifetime	50000 hours
	touch screen	4-wire industrial resistive touch screen
	CPU	1GHz, quad-core CortexTM-A7
	memory	128MB Flash + 128MB DDR3
	RTC	Real-time clock built-in
	ethernet	none
	SD card	not support
	usb port	1 Type-C OTG interface
	Program download method	USB Slave/U disk (compatible with Type-C adapter cable)
	serial communication port	COM1: RS232/RS485/RS422 COM2:RS485 COM3:RS232
LCD viewing angle (T/B/L/R)	85'/85'/85'/85'	
Electrical Specifications	rated power	<10W
	Rated voltage	DC24V, working range DC 9V~28V
	power protection	With lightning surge protection
	Allow power loss	<5mS
	CE & RoHS	Compliant with EN61000-6-2:2005, EN61000-6-4:2007 Compliant with RoHS Lightning surge ±1KV, group pulse ±2KV; static contact 4KV, air discharge 8KV
Environmental requirements	Operating temperature	0~50°C
	storage temperature	- 20~60°C
	Anti-UV	Do not work in a strong ultraviolet environment (such as direct sunlight)
	environment humidity	10~90%RH (no condensation)
	Shock resistance	10~25Hz (2G/30 minutes in X, Y, Z direction)
	cooling method	natural air cooling
Mechanical index	Degree of protection	The front panel conforms to IP65 (installed with a flat cabinet), and the rear shell of the fuselage conforms to IP20
	Mechanical structure	engineering plastics
	Hole Size	192mm×138mm
	Overall size	204mm×145mm×34mm (tolerance ±0.5mm)
	Total Weight	About 468g



SH7070W interface definition

电源端子		DB9 串口		Type-C 485端口		天线端子	
Power terminals (Pin1~2 from left to right)							
	Pin1	0V					
	Pin2	DC24V					
DB9 serial terminal (COM1/ COM3)							
	pin	COM1				COM3	
	Pin1	Rx-(B) (RS422/485-)					
	Pin2	RxD (RS232)					
	Pin3	TxD (RS232)					
	Pin4	Tx- (RS422)					
	Pin5	GND					
	Pin6	Rx+(A) (RS422/485+)					
	Pin7					RxD (RS232)	
	Pin8					TxD (RS232)	
Pin9	Tx+ (RS422)						
485 terminal (Pin1~2 from left to right) COM2							
	Pin1	A+ (COM2 RS485)					
	Pin2	B-(COM2 RS485)					
Type-C OTG interface							
	Type-C	Slave port function: for downloading programs and debugging					
		Main port function: used to connect peripherals such as U disk, code scanner, etc. (Type C and USB Type A conversion cables are required)					
antenna port							
	Antenna port (the antenna hole is open for IoT function models)						



SH7070WE Specifications

hardware parameters	display screen	7"16:9 TFT LCD screen
	resolution	1024×600
	color	24 bit
	brightness	350cd/m ²
	backlight	led
	LCD lifetime	50000 hours
	touch screen	4-wire industrial resistive touch screen
	CPU	1GHz, quad-core Cortex™-A7
	memory	4GB Flash + 128MB DDR3
	RTC	Real-time clock built-in
	ethernet	1 channel 10M/100M self-adaptive
	SD card	not support
	usb port	1 Type-C OTG interface
	Program download method	USB Slave/U disk
	serial communication port	COM1: RS232/RS485/RS422 COM2:RS485 COM3:RS232
LCD viewing angle (T/B/L/R)	85'/85'/85'/85'	
Electrical Specifications	rated power	<10W
	Rated voltage	DC24V, working range DC 9V~28V
	power protection	With lightning surge protection
	Allow power loss	<5mS
	CE & RoHS	Compliant with EN61000-6-2:2005, EN61000-6-4:2007 Compliant with RoHS Lightning surge ±1KV, group pulse ±2KV; static contact 4KV, air discharge 8KV
Environmental requirements	Operating temperature	0~50°C
	storage temperature	- 20~60°C
	Anti-UV	Do not work in a strong ultraviolet environment (such as direct sunlight)
	environment humidity	10~90%RH (no condensation)
	Shock resistance	10~25Hz (2G/30 minutes in X, Y, Z direction)
	cooling method	natural air cooling
Mechanical index	Degree of protection	The front panel conforms to IP65 (installed with a flat cabinet), and the rear shell of the fuselage conforms to IP20
	Mechanical structure	engineering plastics
	Hole Size	192mm×138mm
	Overall size	204mm×145mm×34mm (tolerance ±0.5mm)
	Total Weight	About 472g

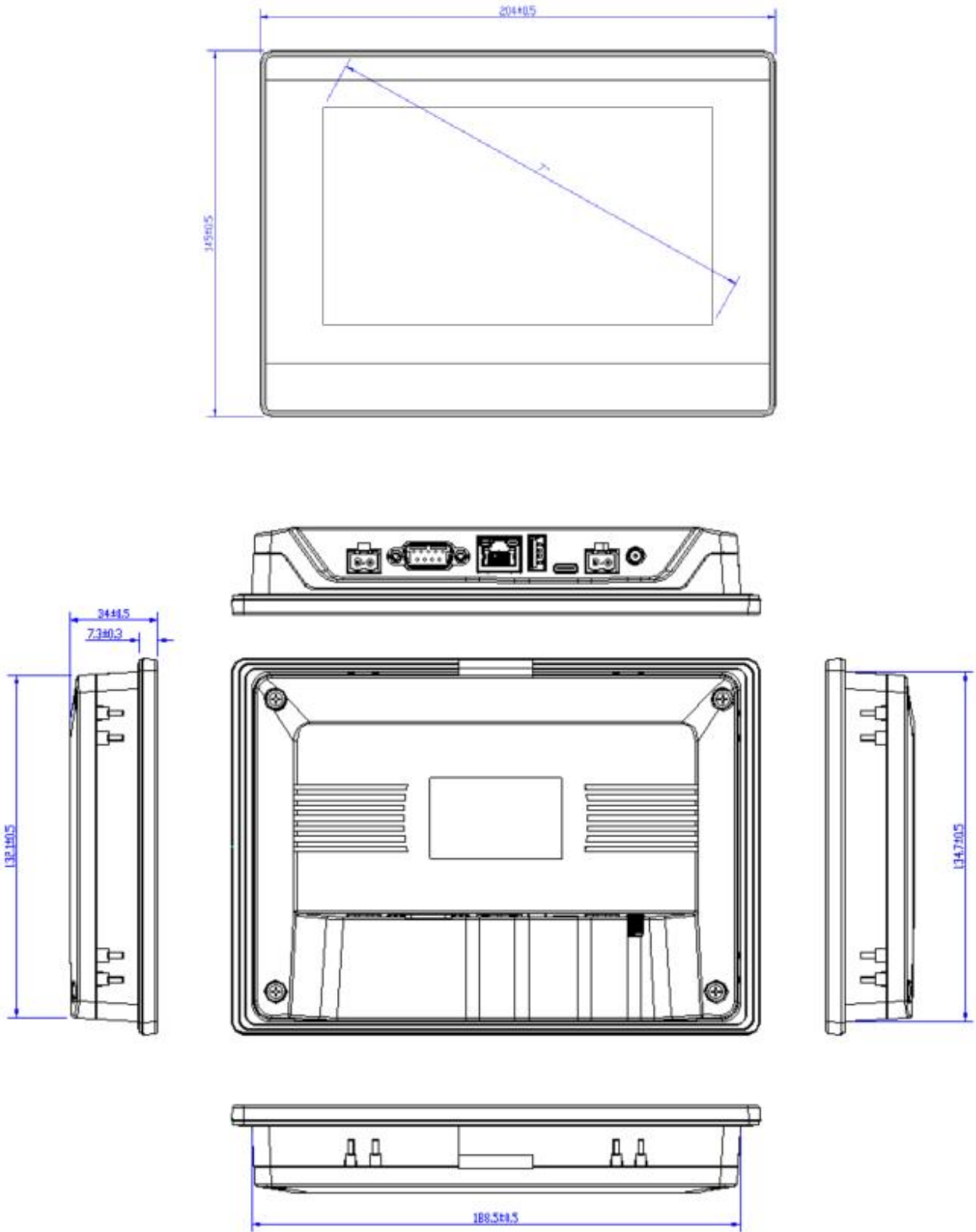


SH7070WE interface definition

Power terminals (Pin1~2 from left to right)			
	Pin1	0V	
	Pin2	DC24V	
DB9 serial terminal (COM1/ COM3)			
	pin	COM1	COM3
	Pin1	Rx-(B) (RS422/485-)	
	Pin2	RxD (RS232)	
	Pin3	TxD (RS232)	
	Pin4	Tx- (RS422)	
	Pin5	GND	
	Pin6	Rx+(A) (RS422/485+)	
	Pin7		RxD (RS232)
	Pin8		TxD (RS232)
	Pin9	Tx+ (RS422)	
485 terminal (Pin1~2 from left to right) COM2			
	Pin1	A+ (COM2 RS485)	
	Pin2	B-(COM2 RS485)	
Ethernet port			
	RJ45	For Ethernet communication with controllers or for linking servers	
Type-C OTG interface			
	Type-C	Slave port function: for downloading programs and debugging Main port function: used to connect peripherals such as U disk, code scanner, etc. (Type C and USB Type A conversion cables are required)	



SH7070W/ SH7070WE Dimensions

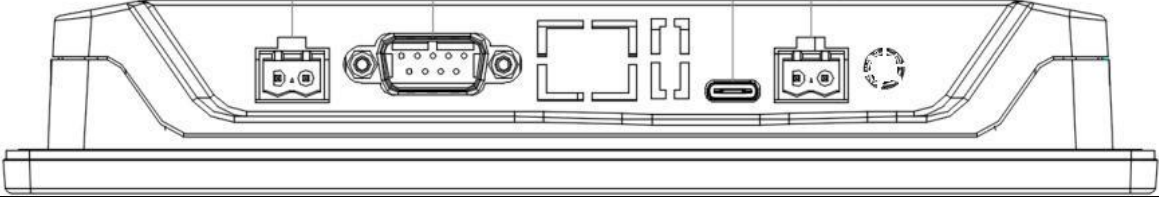

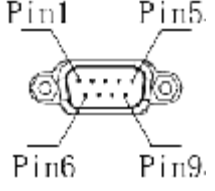




SH7100W Specifications

hardware parameters	display screen	10.1'16:9 TFT LCD screen
	resolution	1024×600
	color	24 bit
	brightness	400cd/m ²
	backlight	led
	LCD lifetime	50000 hours
	touch screen	4-wire industrial resistive touch screen
	CPU	1GHz, quad-core CortexTM-A7
	memory	128MB Flash + 128MB DDR3
	RTC	Real-time clock built-in
	ethernet	none
	SD card	not support
	usb port	1 Type-C OTG interface
	Program download method	USB Slave/U disk (compatible with Type-C adapter cable)
	serial communication port	COM1: RS232/RS485/RS422 COM2:RS485 COM3:RS232
LCD viewing angle (T/B/L/R)	85'/85'/85'/85'	
Electrical Specifications	rated power	<10W
	Rated voltage	DC24V, working range DC 9V~28V
	power protection	With lightning surge protection
	Allow power loss	<5mS
	CE & RoHS	Compliant with EN61000-6-2:2005, EN61000-6-4:2007 Compliant with RoHS Lightning surge ±1KV, group pulse ±2KV; static contact 4KV, air discharge 8KV
Environmental requirements	Operating temperature	0~50°C
	storage temperature	- 20~60°C
	Anti-UV	Do not work in a strong ultraviolet environment (such as direct sunlight)
	environment humidity	10~90%RH (no condensation)
	Shock resistance	10~25Hz (2G/30 minutes in X, Y, Z direction)
	cooling method	natural air cooling
Mechanical index	Degree of protection	The front panel conforms to IP65 (installed with a flat cabinet), and the rear shell of the fuselage conforms to IP20
	Mechanical structure	engineering plastics
	Hole Size	260mm×202mm
	Overall size	273mm×213mm×36mm (tolerance ±0.5mm)
	Total Weight	about 890g



SH7100W Interface Definition

电源端子		DB9 串口		Type-C 485端口	
					
Power terminals (Pin1~2 from left to right)					
	Pin1	0V			
	Pin2	DC24V			
DB9 serial terminal (COM1/ COM3)					
	pin	COM1		COM3	
	Pin1	Rx-(B) (RS422/485-)			
	Pin2	RxD (RS232)			
	Pin3	TxD (RS232)			
	Pin4	Tx- (RS422)			
	Pin5	GND			
	Pin6	Rx+(A) (RS422/485+)			
	Pin7			RxD (RS232)	
	Pin8			TxD (RS232)	
	Pin9	Tx+ (RS422)			
485 terminal (Pin1~2 from left to right) COM2					
	Pin1	A+ (COM2 RS485)			
	Pin2	B-(COM2 RS485)			
Type-C OTG interface					
	Type-C	Slave port function: for downloading programs and debugging			
		Main port function: used to connect peripherals such as U disk, code scanner, etc. (Type C and USB Type A conversion cables are required)			
		Type A conversion cables are required)			



SH7100WE Specifications

hardware parameters	display screen	10.1"16:9 TFT LCD screen
	resolution	1024×600
	color	2 digits
	brightness	400cd/m ²
	backlight	led
	LCD lifetime	50000 hours
	touch screen	4-wire industrial resistive touch screen
	CPU	1GHz, quad-core Cortex™-A7
	memory	4GB Flash + 128MB DDR3
	RTC	Real-time clock built-in
	ethernet	1 channel 10M/100M self-adaptive
	SD card	not support
	usb port	1 Type-C OTG interface
	Program download method	USB Slave/U disk
	serial communication port	COM1: RS232/RS485/RS422 COM2:RS485 COM3:RS232
LCD viewing angle (T/B/L/R)	85°/85°/85°/85°	
Electrical Specifications	rated power	<10W
	Rated voltage	DC24V, working range DC9V~28V
	power protection	With lightning surge protection
	Allow power loss	<5mS
	CE & RoHS	Compliant with EN61000-6-2:2005, EN61000-6-4:2007 Compliant with RoHS Lightning surge ±1KV, group pulse ±2KV; static contact 4KV, air discharge 8KV
Environmental requirements	Operating temperature	0~50°C
	storage temperature	- 20~60°C
	Anti-UV	Do not work in a strong ultraviolet environment (such as direct sunlight)
	environment humidity	10~90%RH (no condensation)
	Shock resistance	10~25Hz (2G/30 minutes in X, Y, Z direction)
	cooling method	natural air cooling
Mechanical index	Degree of protection	The front panel conforms to IP65 (installed with a flat cabinet), and the rear shell of the fuselage conforms to IP20
	Mechanical structure	engineering plastics
	Hole Size	260mm×202mm
	Overall size	273mm×213mm×36mm (tolerance ±0.5mm)
	Total Weight	About 920g



SH7100WE interface definition

Power terminals (Pin1~2 from left to right)			
	Pin1	0V	
	Pin2	DC24V	
DB9 serial terminal (COM1/ COM3)			
	pin	COM1	COM3
	Pin1	Rx-(B) (RS422/485-)	
	Pin2	RxD (RS232)	
	Pin3	TxD (RS232)	
	Pin4	Tx- (RS422)	
	Pin5	GND	
	Pin6	Rx+(A) (RS422/485+)	
	Pin7		RxD (RS232)
	Pin8		TxD (RS232)
	Pin9	Tx+ (RS422)	
485 terminal (Pin1~2 from left to right) COM2			
	Pin1	A+ (COM2 RS485)	
	Pin2	B-(COM2 RS485)	
Ethernet port			
	RJ45	For Ethernet communication with controllers or for linking servers	
Type-C OTG interface			
	Type-C	Slave port function: for downloading programs and debugging Main port function: used to connect peripherals such as U disk, code scanner, etc. (Type C and USB Type A conversion cables are required)	



SH7100W/ SH7100WE Dimensions

