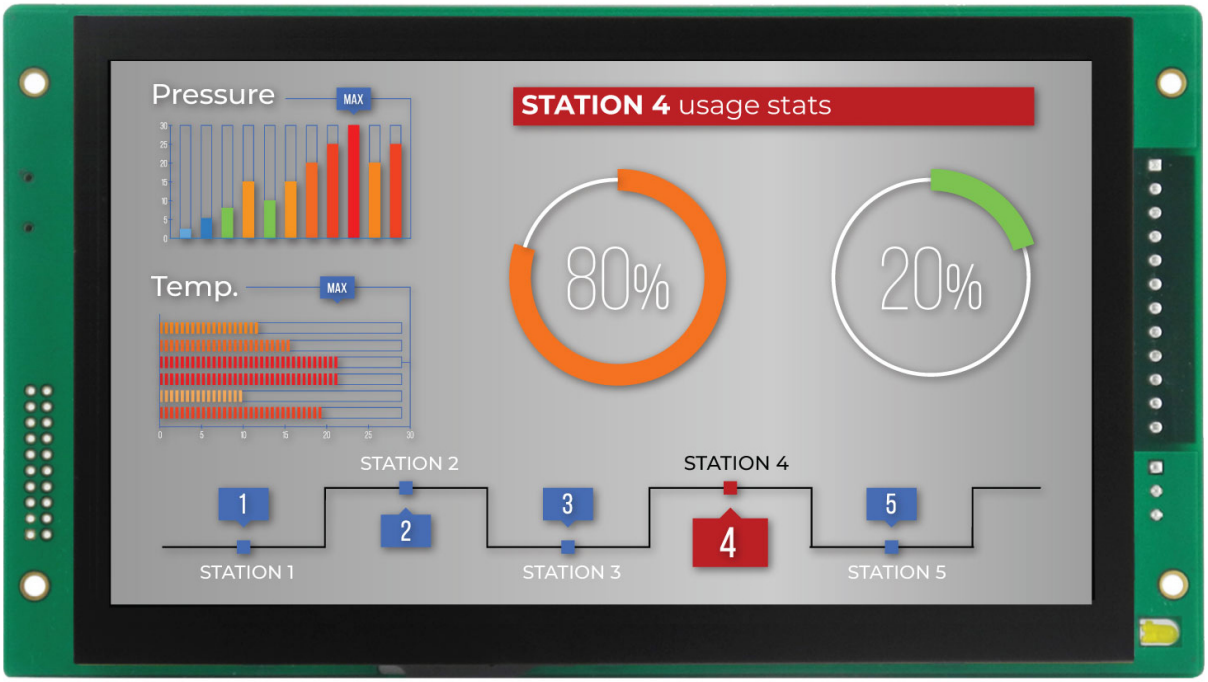
PPC/EPC-A8-70-HB-C

User Manual

Release 1.0



Chipsee Products Naming Rules

CS10600T070E-C211 CS10600T070P-C211	
CS	Chipsee Product Abbreviate
10	Horizontal Resolution 80 Means 800 Pixel 10 Means 1024 Pixel 12 Means 1280 Pixel
600	Vertical Resolution 480 Means 480 Pixel 600 Means 600 Pixel 768 Means 768 Pixel 800 Means 800 Pixel
T(F)	Product based on TI(FreeScale) CPU

070	**LCD dimension** **050** Means 5.0 Inch **070** Means 7.0 Inch **080** Means 8.0 Inch **097** Means 9.7 Inch **101** Means 10.1 Inch **104** Means 10.4 Inch
E	**Means Embedded PC or Panel PC** **E** Means Embedded PC without Case **P** Means Panel PC with Case
C	**Means Touch type** **R** Means Resistive Touch **C** Means Capacitive Touch
2	**Means LCD Brightness** **1** Common brightness **2** High Brightness
1	**PCB Version** Baseboard PCB Version Number
1	**PCB Version** SOM Module PCB Version Number

Hardware Features

Key features:

Sitara Core	**AM3354ZCZ100**
CPU	ARM Cortex A8, 1GHz
RAM	512MB DDR3
eMMC	4GB

Storage	uSD card, supports up to 32GB SDHC
Display	7.0 Inch LCD,1024 x 600 Pixel Resolution High Brightness,500nit
Touch	C: Capacitive Touch (Five-Point) R: Resistive Touch (Four-Wire)
USB	2 x USB 2.0 Host (can be customized to HOST or OTG)
LAN	1 Channel 100M LAN
Audio	3.5mm Audio In/Out Connector
Buzzer	1
RTC	Yes
RS232	2 Channels
RS485	2 Channels *
CAN	1 Channel * Can Customized to 2 Channel
GPIO	8
WiFi/BT	On Board WIFI/BT, Optional. Not mount on by default
Power Input	6~42V DC
Current @ 12V	600 mA max
Power Consumption	6W Typical
Working Temperature	-20°C to +70°C
OS	Android, TI Linux, Debian, Angstrom
Dimension	CS10600T070E-C211:190 x 107.8 x 29mm CS10600T070P-C211:206 x 135 x 29.8mm
Weight	CS10600T070E-C211: 340g CS10600T070P-C211: 680g

* The RS485 and CAN channels may be customized to the following arrangements:

- 2 x RS485, 1 x CAN(Default)

- 1 x RS485, 2 x CAN

CS10600T070E-C211

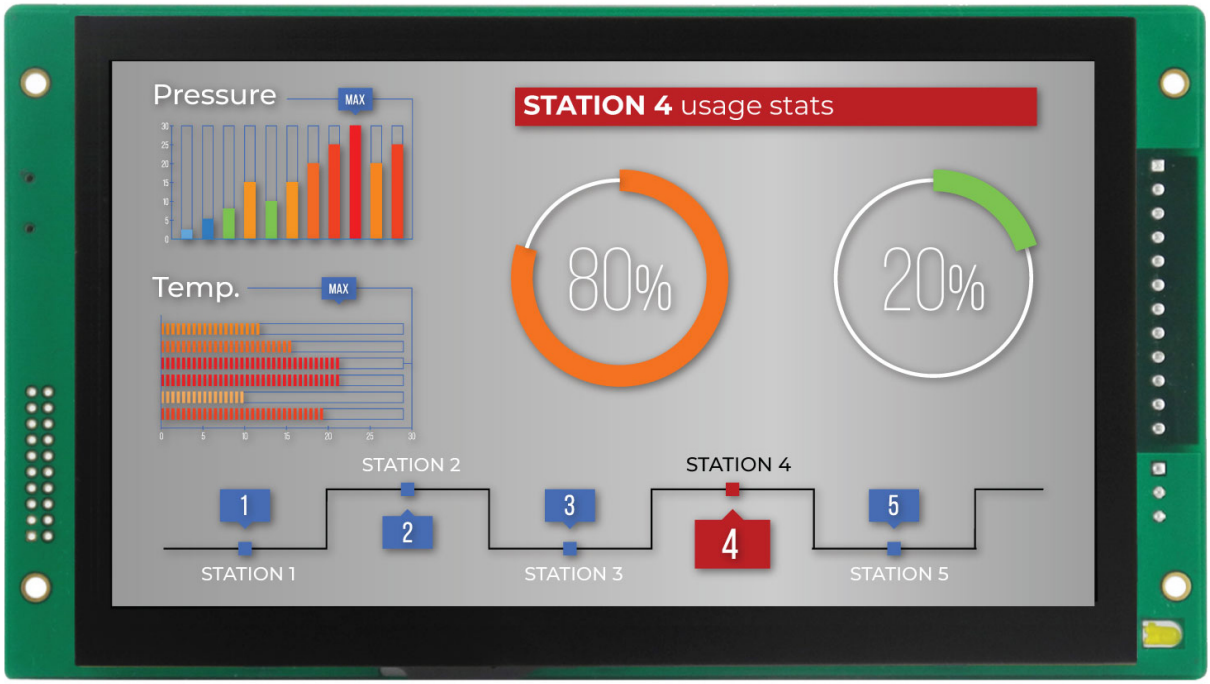


Figure 1 Top View

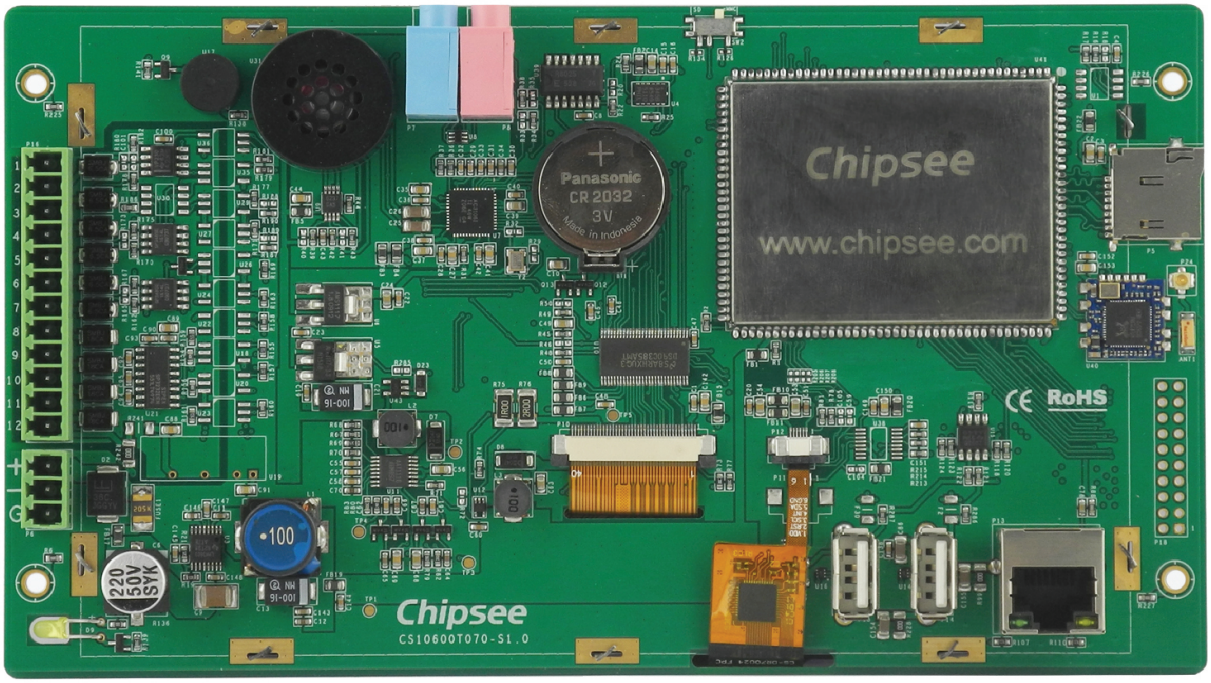


Figure 2 Back View

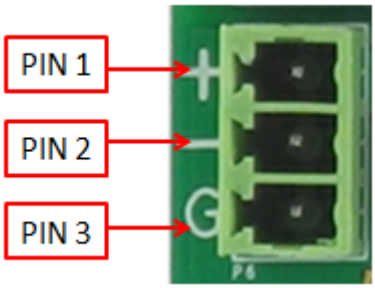
CS10600T070P-C211

Figure 1 Top View

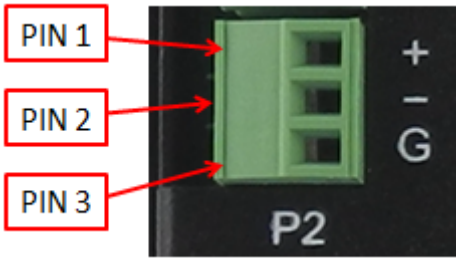
Figure 2 Back View

Power Input Connector

The product CS10600T070E/CS10600T070P uses a wide range of power Input: **DC 6~42V**. And the total power consumption is normally around **6W**. The Power Input Connector is 3 pin 3.81mm Screw Terminal connector as Figure 5 Power Input Connector and Figure 4 Back View. It is labelled as P6 on the PCB, P2 on the backside of the metal case. The character "**+**" means power **Positive** input, The character "**–**" means power **Negative** input. The character "**G**" means system Ground. Table 2 has detailed descriptions about the connector definition.



(a) CS10600T070E



(b) CS10600T070P

Figure 5 Power Input Connector

Table 1

Power Input Pin Definition:

Pin Number	Definition	Description
Pin 1	Positive Input	Connect to DC Power **Positive Terminal**
Pin 2	Negative Input	Connect to DC Power **Negative Terminal**
Pin 3	Ground	Connect to **Power System Ground**

Please note:

The system ground "**G**" has been connected to power Negative "**–**" on board.

Capacitive Touch

Product CS10600T070E/CS10600T070P uses capacitive touch, As Figure 6 shows.

Figure 6 Capacitive Touch Connector

Attention:

Capacitive touch is very sensitive to power noise. Ripple voltage/current from the power adapter will cause the LCD ripples, and will also cause the capacitive touch malfunction: If you use the APK Multi-Touch under Android to test, you can find the touch point float. There are several ways to solve this problem:

1) *Use a high quality power adapter. Or use battery to provide the power like cell phone or tablet PC.*

2) *If the user's power adapter isn't good enough, there's another effective method to solve this problem: Make sure the CS10600T070E-C211 Power Input Connector* ***P6 Pin 3 really connect to user "Power System Ground".*** *This method can eliminate the problem totally. The user can also use another method to test this problem: Touch the GND of CS10600T070E-C211 by one hand, the other hand operates on the Capacitive Touch Screen. In this case, the user's body acts as the Power System Ground.*

CAN+RS485+RS232 Connector

The RS232 / RS485 / CAN connector is a 12 Pin 3.81mm Screw Terminal connector.

It is defined as P16 on the PCB, P1 on the backside of the metal case, as shown in Figure 4 Back View and Figure 7 RS232 / RS485 / CAN Connector.

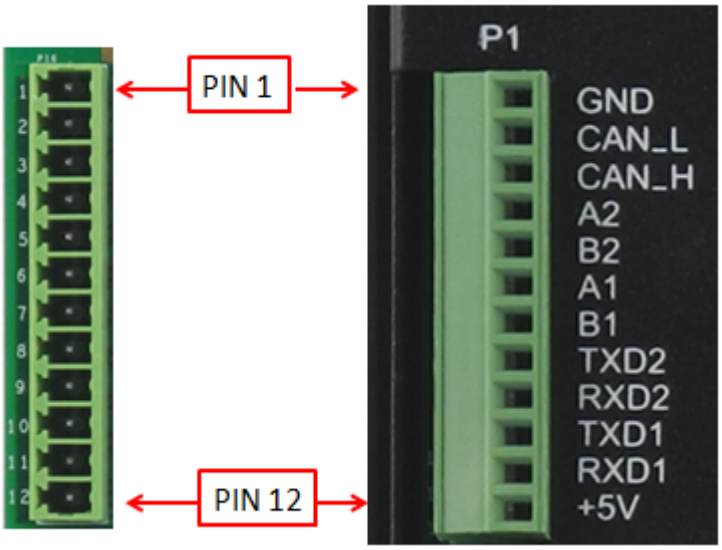


Figure 7 RS232 / RS485 / CAN Connector

As for the definition of every Pin, please refer to Table 3. This product can be customized to inherit two CAN channels. If two CAN channels are needed, please contact us.

RS232 / RS485 / CAN Pin Definition

Table 3

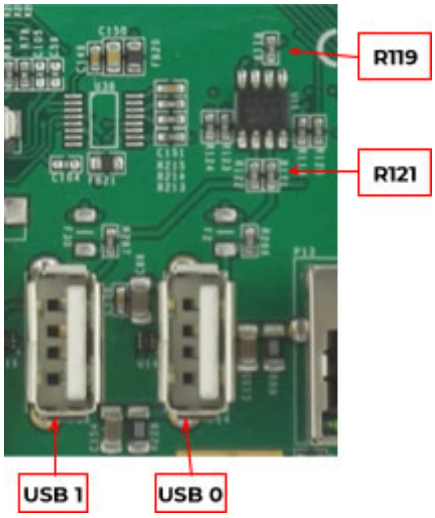
RS232 / RS485 / CAN Pin Definition:		
Pin Number	**Definition**	**Description**
Pin 1	GND	Isolated Ground Output
Pin 2	CAN_L	DCAN0 of CPU,CAN L Signal
Pin 3	CAN_H	DCAN0 of CPU,CAN H Signal
Pin 4	A2	UART4 of CPU, RS485 A Signal
Pin 5	B2	UART4 of CPU, RS485 B Signal
Pin 6	A1	UART2 of CPU, RS485 A Signal
Pin 7	B1	UART2 of CPU, RS485 B Signal
Pin 8	TXD2	UART1 of CPU,RS232 TXD Signal
Pin 9	RXD2	UART1 of CPU,RS232 RXD Signal
Pin 10	TXD1	UART0 of CPU, RS232 TXD Signal
Pin 11	RXD1	UART0 of CPU,RS232 RXD Signal
Pin 12	+5V	System +5V Power Output, No more than 1A Current output

The RS485 and CAN channels may be customized by Chipsee to the following arrangements:

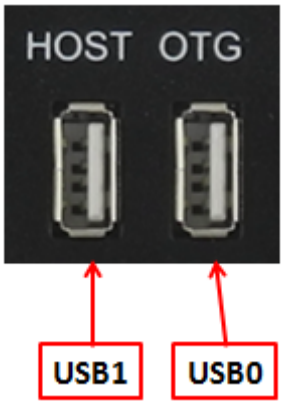
- 2 x RS485, 1 x CAN(Default)
- 1 x RS485, 2 x CAN

USB Connector

The product CS10600T070E/CS10600T070P has two USB connectors as Figure 8 shows. These two USB connectors can be customized to HOST or SLAVE. All these two connectors have been defined as HOST by default.



(a) CS10600T070E



(b) CS10600T070P

Figure 8 USB connector

Please note:

The OTG Connector P14 (USB0) is defined as **HOST** by default. If it’s needed to be defined as **SLAVE (OTG)**, please **Remove** two 0603 package 0 Ohm resistors **R119** and **R121** as Figure 8 shows.

LAN Connector

The product CS10600T070E/CS10600T070P features one channel 100Mbit Ethernet. The connector can be found on the PCB labelled as P13 as Figure 9 LAN Connector shows.

(a) CS10600T070E

(b) CS10600T070P

Figure 09 LAN Connector

uSD Card

As in Figure 10, the uSD card connector is labelled as P5 on the PCB. The device supports uSD cards up to 32GB.

(a) CS10600T070E

(b) CS10600T070P

Figure 11 TF Card (uSD) Connector

Please note: The uSD card Slot is **NOT Mounted** with any uSD card by default.

Boot Switch

The device features a boot switch which can be used to change the boot sequence. It is defined as SW2 on the PCB as shown in Figure 4 Back View and Figure 11 Boot Switch. The position can either be eMMC or SD. The device will boot from the location that’s selected.

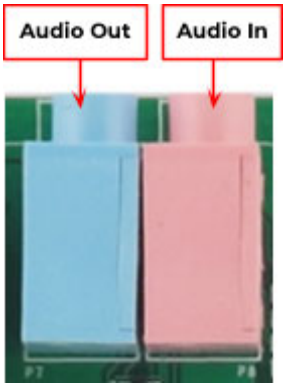
(a) CS10600T070E

(b) CS10600T070P

Figure 11 Boot Switch

Audio Connector

As Figure 12 shows, the device has one Audio Input (“Line-in”) and one Audio (“Line-out”) Output.



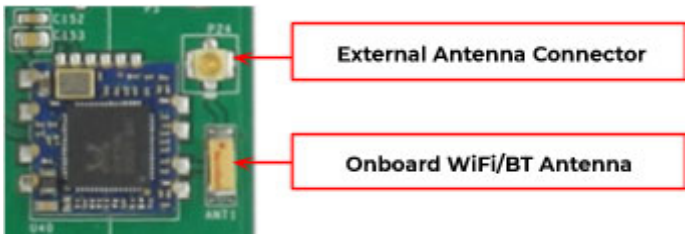
(a) CS10600T070E

(b) CS10600T070P

Figure 12 Audio Connector

WiFi+BT

The product CS10600T070E/CS10600T070P features one WiFi+BT. As figure 13 shows. It uses Realtech RTL8723 which integrates WiFi and BT.



(a) CS10600T070E

(b) CS10600T070P

Figure 13 WiFi+BT module

Please note:

1. The WiFi/BT module is **NOT Mounted** by default. If the user needs WiFi/BT, please contact us.
2. This WiFi/BT module uses USB1 channel to communicate with CPU, so it will occupy the USB1 channel when mounted on.

Expansion Connector

There is an Expansion Connector labelled as P18 on the PCB as figure 14 shown, it is connected to CPU GPIO/ADC/SPI/I2C signals The connector is not mounted by default.

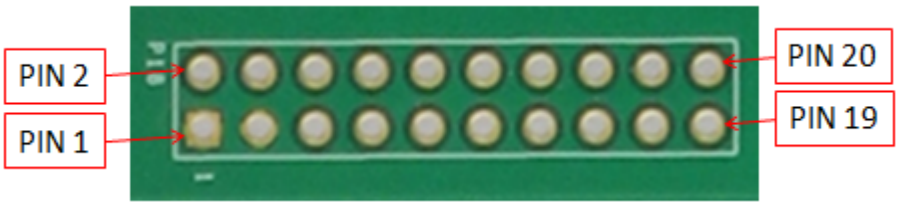


Figure 14 Expansion Connector

As for the definition of every pin, please refer to Table 4

ATTENTION: All these signals connect to the CPU directly. Please use it carefully or the CPU will be damaged easily.

Expansion Connector Definition

Table 4

PIN	Function	CPU PIN	PIN	Function	CPU PIN
1	GND	Power Ground	2	VDD_5V0	+5V Power
3	GND	Power Ground	4	VDD_3V3	+3.3V Power
5	GPMC_A1	V14	6	GPMC_A3	T14
7	GPMC_A2	U14	8	GPMC_A5	V15

9	GPMC_A4	R14	10	GPMC_A7	T15
11	GPMC_A6	U15	12	GPMC_A8	V16
13	SPI0_D1	B16	14	SPI0_D0	B17
15	SPI0_CS0	A16	16	SPI0_CLK	A17
17	AIN4	C8	18	AIN5	B8
19	AIN6	A8	20	AIN7	C9

Measurements and Mounting

How to Mount the Embedded PC

The dimensions for CS10600T070E-C211 can be found on the Figure 15. The CS10600T070E can be mounted using the 4 screw holes on the PCB as shown in Figure 15. Please make sure the display is not exposed to high pressure when mounting into an enclosure.

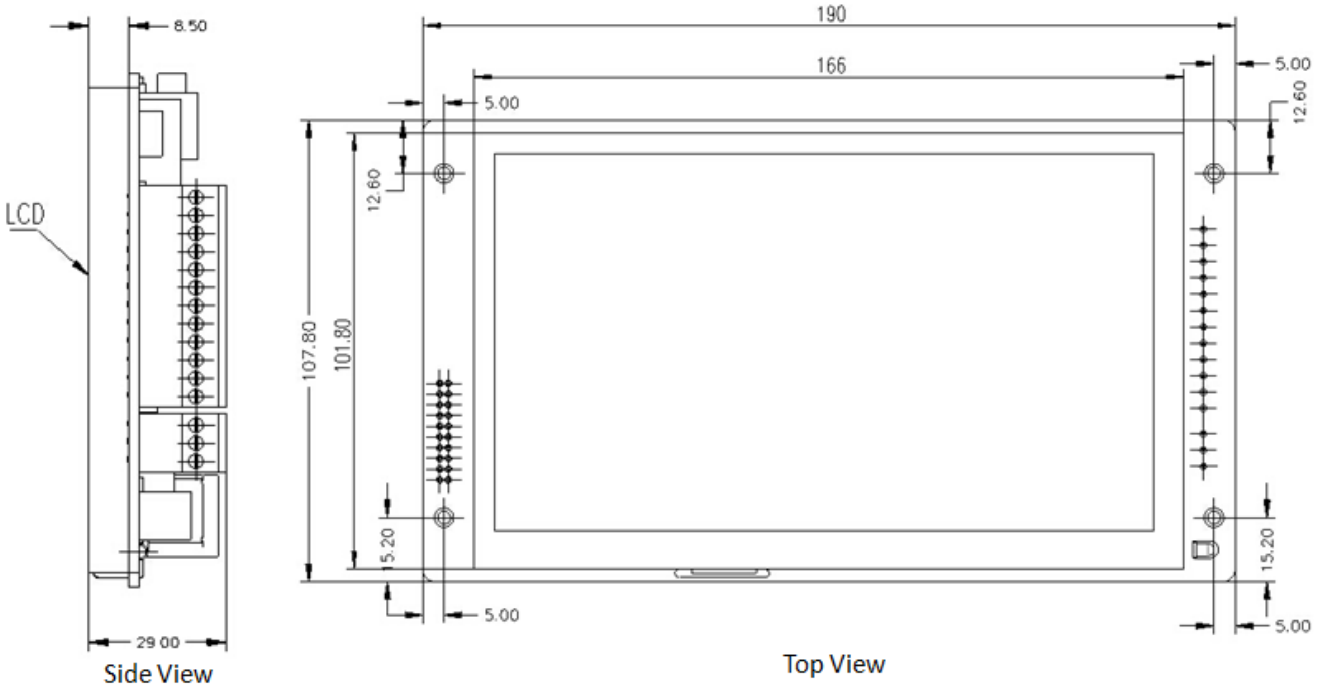


Figure 15 CS10600T070E-C211 Dimensions

How to Mount the Panel PC

The dimensions for CS10600T070P-C211 can be found on the Figure 16.

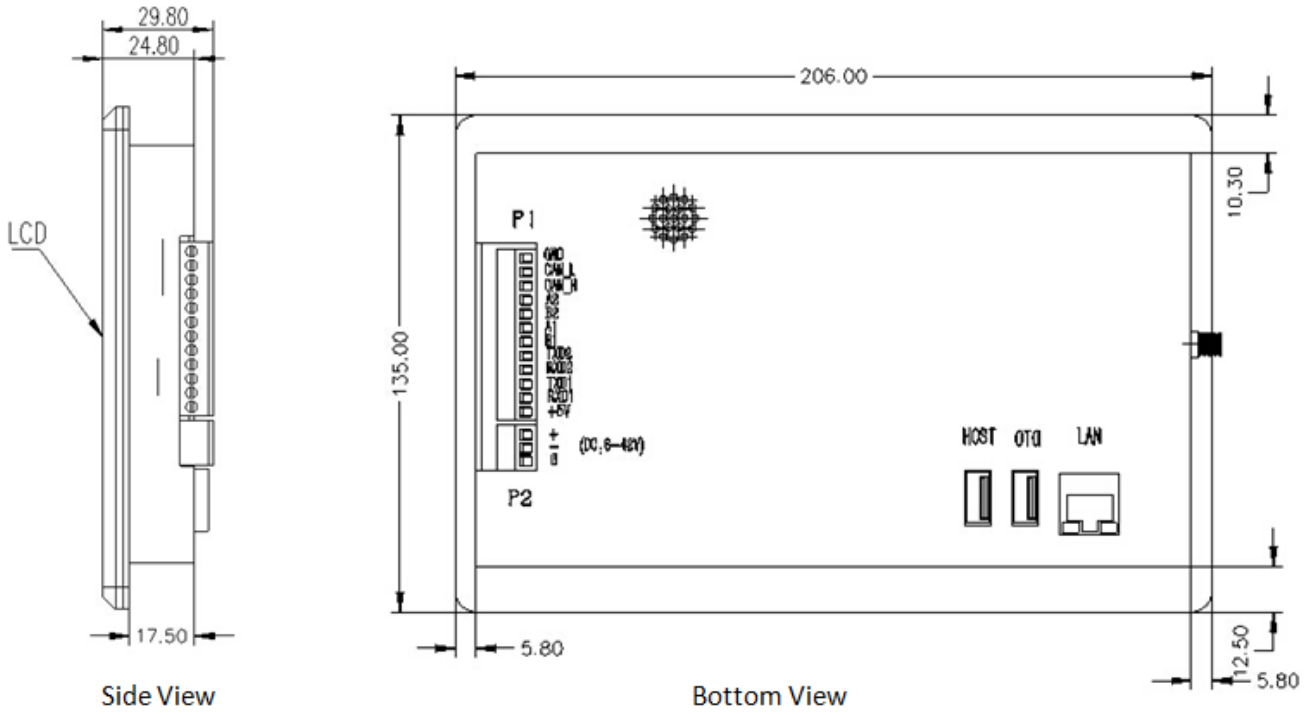


Figure 16 CS10600T070P-C211 Dimensions

As figure 17 shows, the unit shall be mounted from the front pushed inside the panel. The recommended maximum thickness of the panel material is 8mm.

1. Make sure the Panel PC is configured correctly. The Boot Switch is sitting inside the housing. To use it, the Panel PC has to be unmounted from the panel. For more info see chapter “uSD Card”.
2. Push the Panel PC straight into the Panel Hole until the unit sits flash on the panel as shown in Figure 17.
3. Use the mounting fixtures to lock the Panel PC into it’s place as shown in Figure 18.


TF Card
SIM Card
Sensor Tool
Angry Birds
Sensor List
Settings
Fruit Ninja
NFS Shift
Gallery
Talking Tom
09:33

Figure 17 Push the PC into the Panel

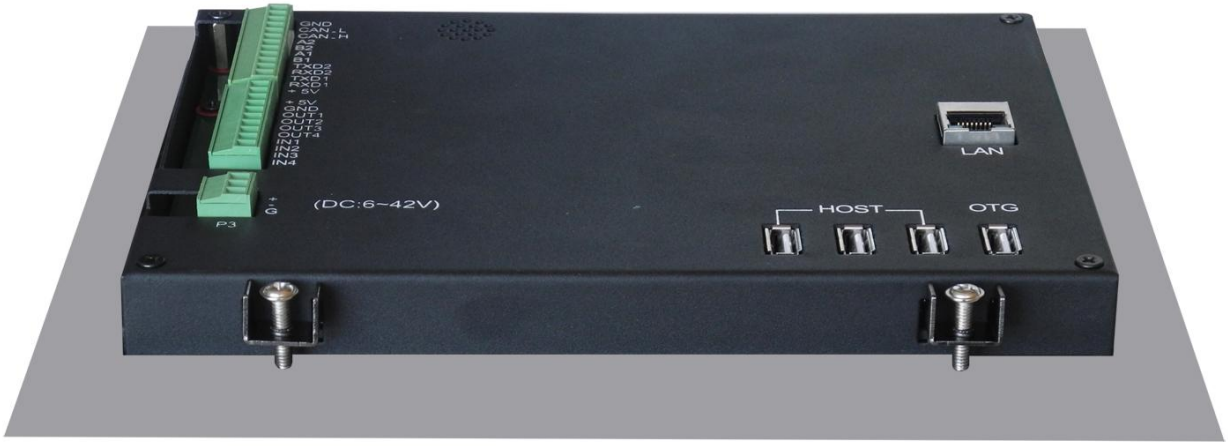


Figure 18 Mounting fixture

How to Get Support

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