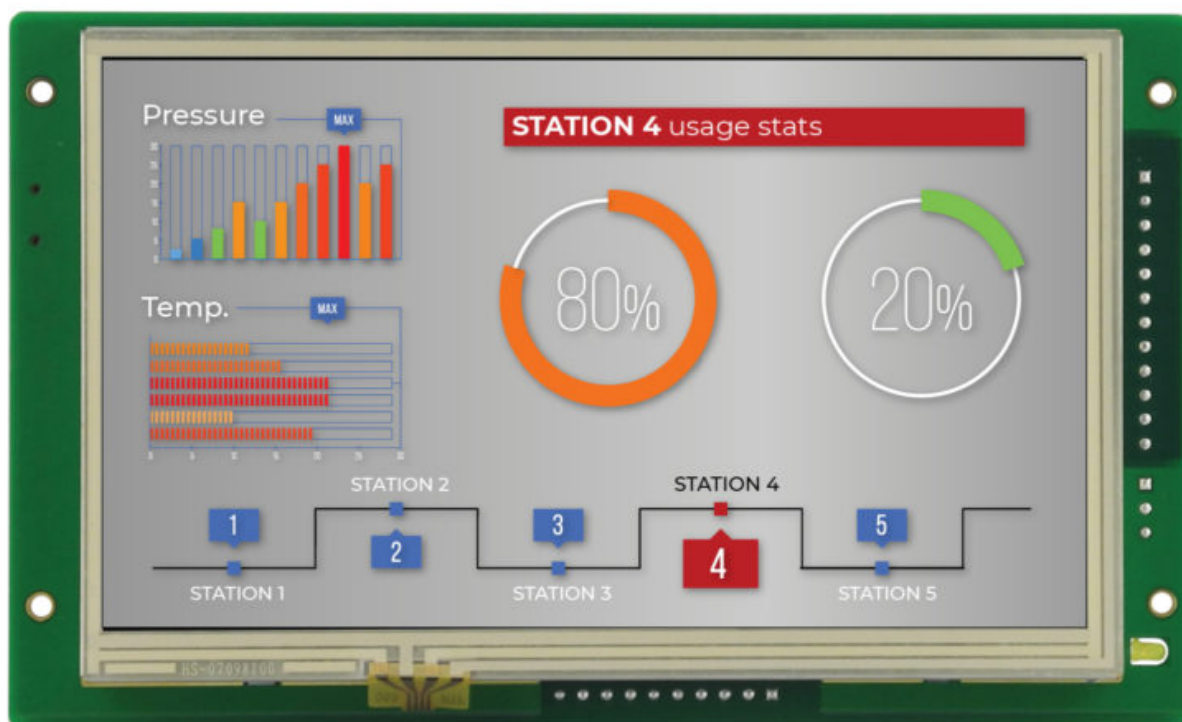


PPC/EPC-A8-70-HB-R

User Manual

Release 1.0





Chipsee Products Naming Rules

CS80480T070E-R133/CS80480T070E-R233 CS80480T070P-R133/CS80480T070P-R233	
CS	Chipsee Product Abbreviate
80	Horizontal Resolution 80 Means 800 Pixel 10 Means 1024 Pixel 12 Means 1280 Pixel
480	Vertical Resolution 480 Means 480 Pixel 600 Means 600 Pixel 768 Means 768 Pixel 800 Means 800 Pixel
T	Means Industrial Level product

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
R	Means Touch type R Means Resistive Touch C Means Capacitive Touch
1	Means LCD Brightness 1 Common brightness 2 High Brightness
3	Means PCB Version Version Number, Will change with PCB version
3	Means product Version Version Number, Will change with SOM module version

Hardware Features

Key features:

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

Storage	uSD card, supports up to 32GB SDHC
Display	7.0 Inch LCD,800 x 480 Pixel Resolution Brightness:R133 – 250nit R233 – 400nit
Touch	Resistive Touch
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 * (drivers available for Linux only)
GPIO	4 Input, 4 Output, 1000V DC Isolated
WiFi	Support External USB WiFi, Optional
Power Input	6~42V DC
Current @ 12V	400 mA max
Power Consumption	5W
Working Temperature	-20°C to +70°C
OS	Android,Linux Debian,Angstrom
Dimension	CS80480T070E:190 x 112 x 28 mm CS80480T070P:206 x 139 x 33mm
Weight	CS80480T070E:410g CS80480T070P:830g

* 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

CS80480T070E- R133/CS80480T070E-R233

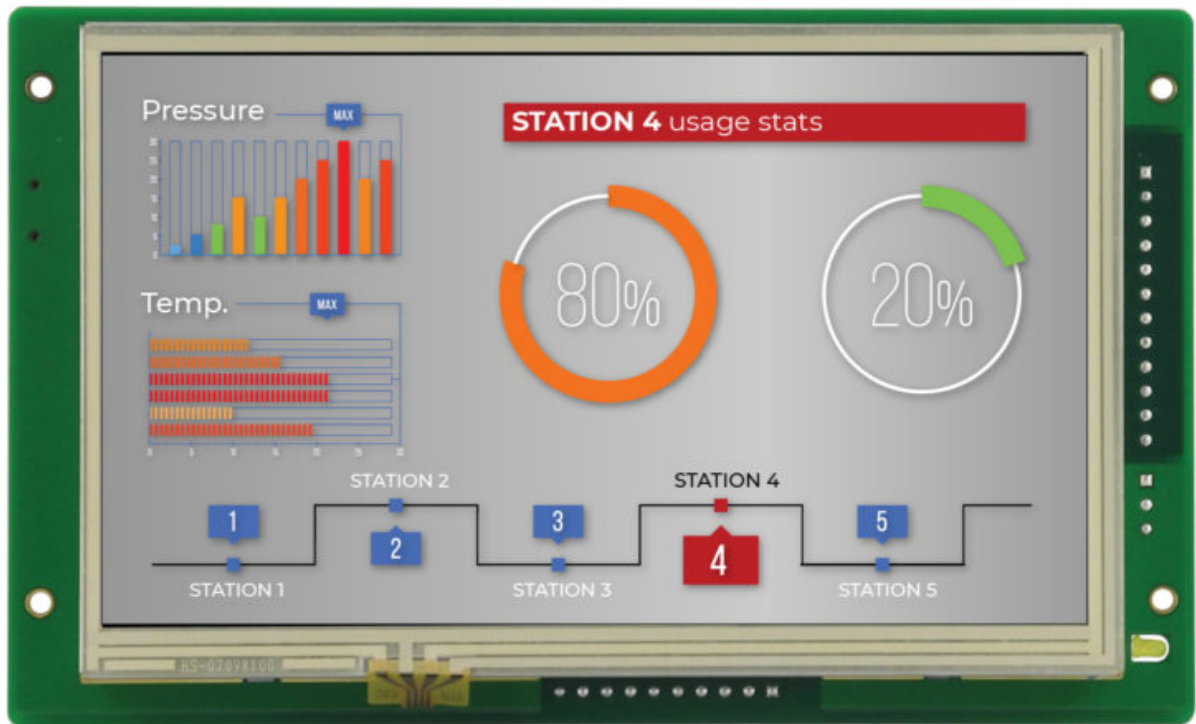


Figure 1 Top View(Android)

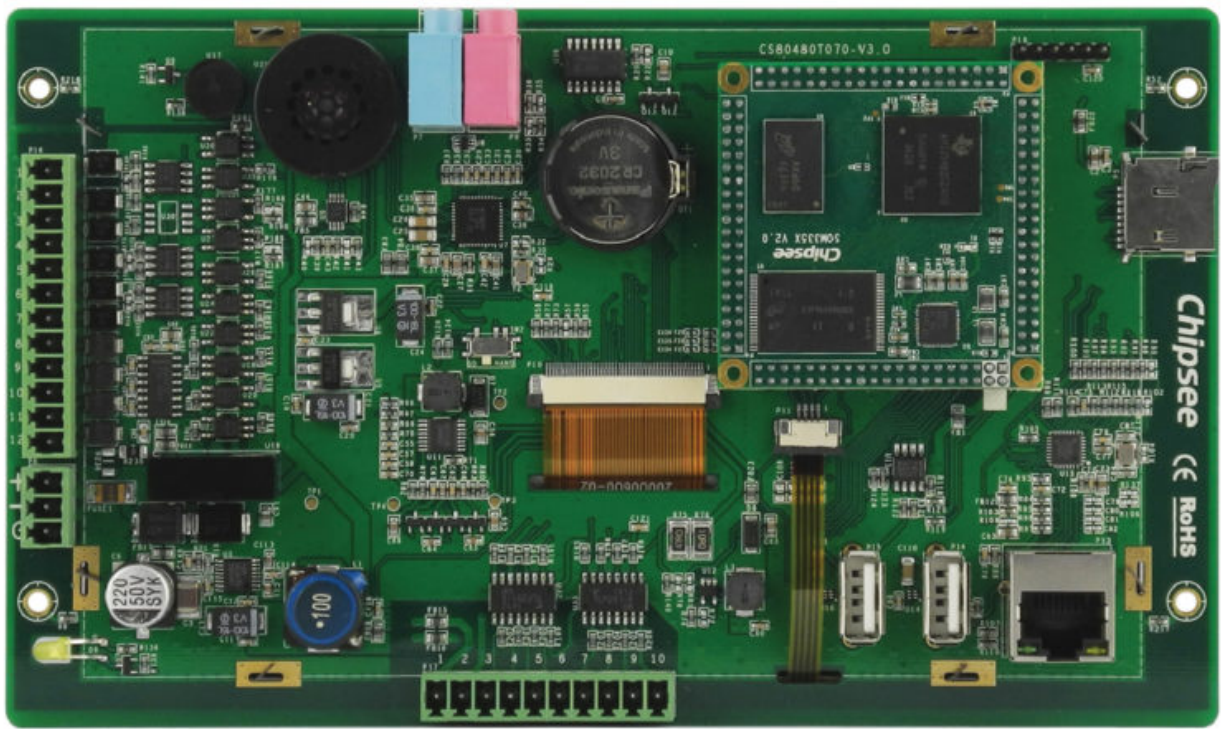


Figure 2 Back View

**CS80480T070P-
R133/CS80480T070P-R233**



Figure 1 Top View(Android)

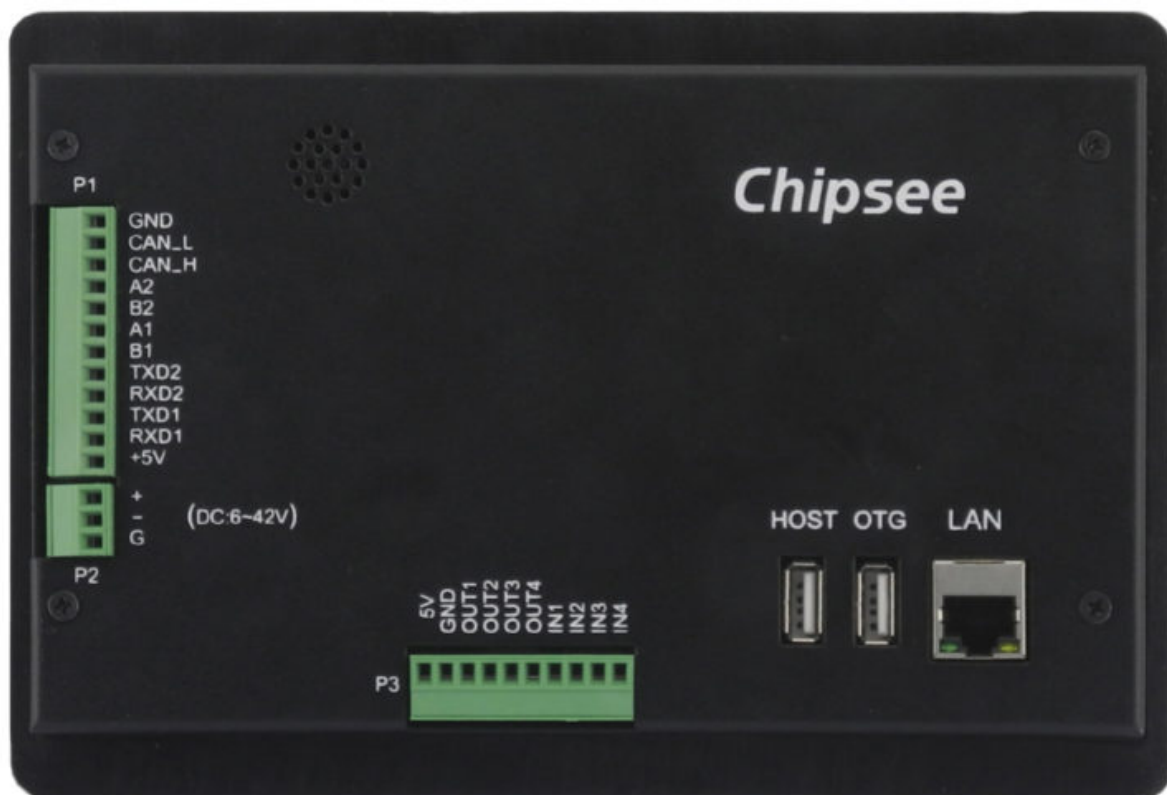


Figure 2 Back View

Power Input Connector

The product CS80480T070E/CS80480T070P use a wide range of power Input: **DC 6~42V**. And the total power consumption is about **5W** normal. 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. The Character “+” means power **Positive** input, The Character “-” means power **Negative** input. The Character “**G**” means system Ground. Table 2 have detailed description about the connector definition.

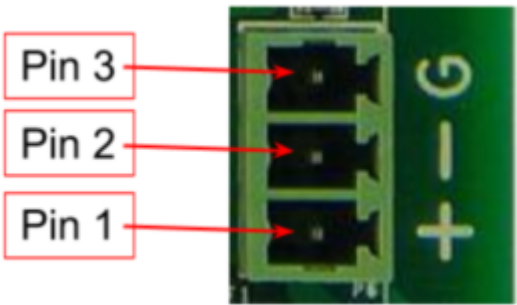


Figure 5 Power Input Connector

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.

Resistive Touch

Product CS80480T070E/CS80480T070P use resistive touch, As Figure 6 shows.



Figure 6 Capacitive Touch Connector

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 as shown in Figure 4 Back View and Figure 7 RS232 / RS485 / CAN Connector.

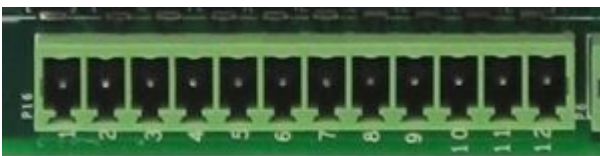


Figure 7 RS232 / RS485 / CAN Connector

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

GPI0 Connector Definition

GPI0 Connector use 10 PIN 3.81mm Connector□It defined as P17 on the PCB board, As figure 8□

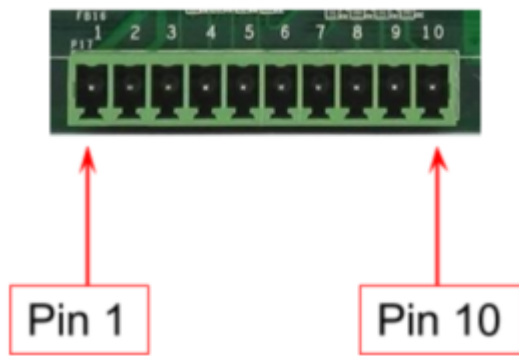


Figure 8 GPIO Connector

At the upside of the Connector, there are numbers from " 1" to "10", this represents the Pin number of the connector. As for the definition of every Pin, please refer to Table 4

Pay attention, all the isolated GPIO use 5V Logic by default. If the customer provides external isolated power, the GPIO logic can be changed according to customer's desired power (the "FB15" and "FB16" need to be removed on the PCB)

Table 4

PIN number	Definition	Description
1	VCC	Isolated Power +5V Output
2	GND	Isolated Ground
3	OutPut_1	Isolated Output 1
4	OutPut_2	Isolated Output 2
5	OutPut_3	Isolated Output 3
6	OutPut_4	Isolated Output 4
7	InPut_1	Isolated Input 1
8	InPut_2	Isolated Input 2
9	InPut_3	Isolated Input 3
10	InPut_4	Isolated Input 4

USB Connector

The product CS80480T070E/CS80480T070P have 2 USB connector, as Figure 9 shows. These two USB connectors can be customized to Host or Slave. All these two connectors have been defined as HOST by default.

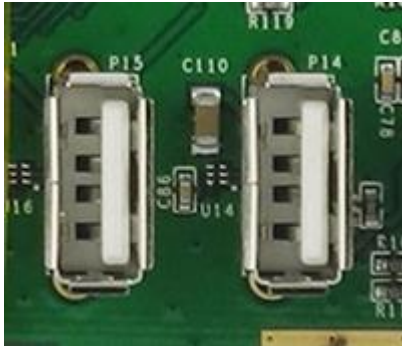


Figure 9 USB connector

Please note:

The OTG Connector P15 (USB0) is defined as **HOST** by default. If needed defined as **Slave (OTG)**, please **Remove** two 0603 Package 0 Ohm Resistors **R1339** and **R121** as Figure 9 shows.

LAN Connector

The product CS80480T070E/CS80480T070P feature one channel 100Mbit Ethernet. The connector can be found on the PCB labelled as P13 as Figure 10 LAN Connector shows.



Figure 10 LAN Connector

uSD Card

As in Figure 11 uSD card connector labelled as P5 on the PCB. The device supports uSD cards up to 32GB.



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 boot sequence. It is defined as SW1 on the PCB as shown in Figure 4 Back View and Figure 12 Boot Switch. The position can either be NAND or uSD. The device will boot from the location selected.



Figure 12 Boot Switch

Audio Connector

As Figure 13 Audio Connector shows, the unit has got one Audio Input (“Line-in”) and one Audio (“Line-out”) output.

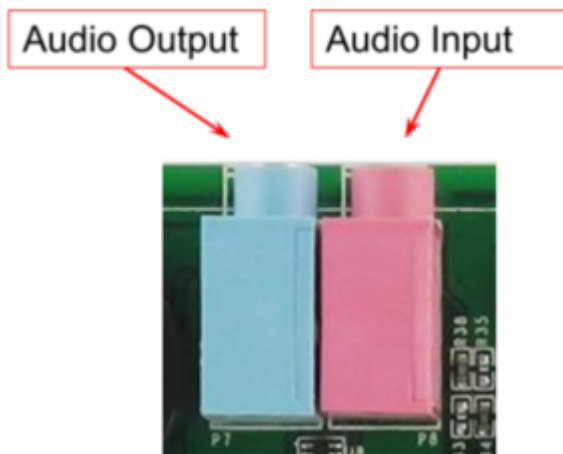


Figure 13 Audio Connector

Measurements and Mounting

How to Mount the Embedded PC

The product CS80480T070E/CS80480T070P can be mounted using the 4 screw holes on the PCB as shown in Figure 14. Please make sure the display is not exposed to high pressure when mounting into an enclosure.

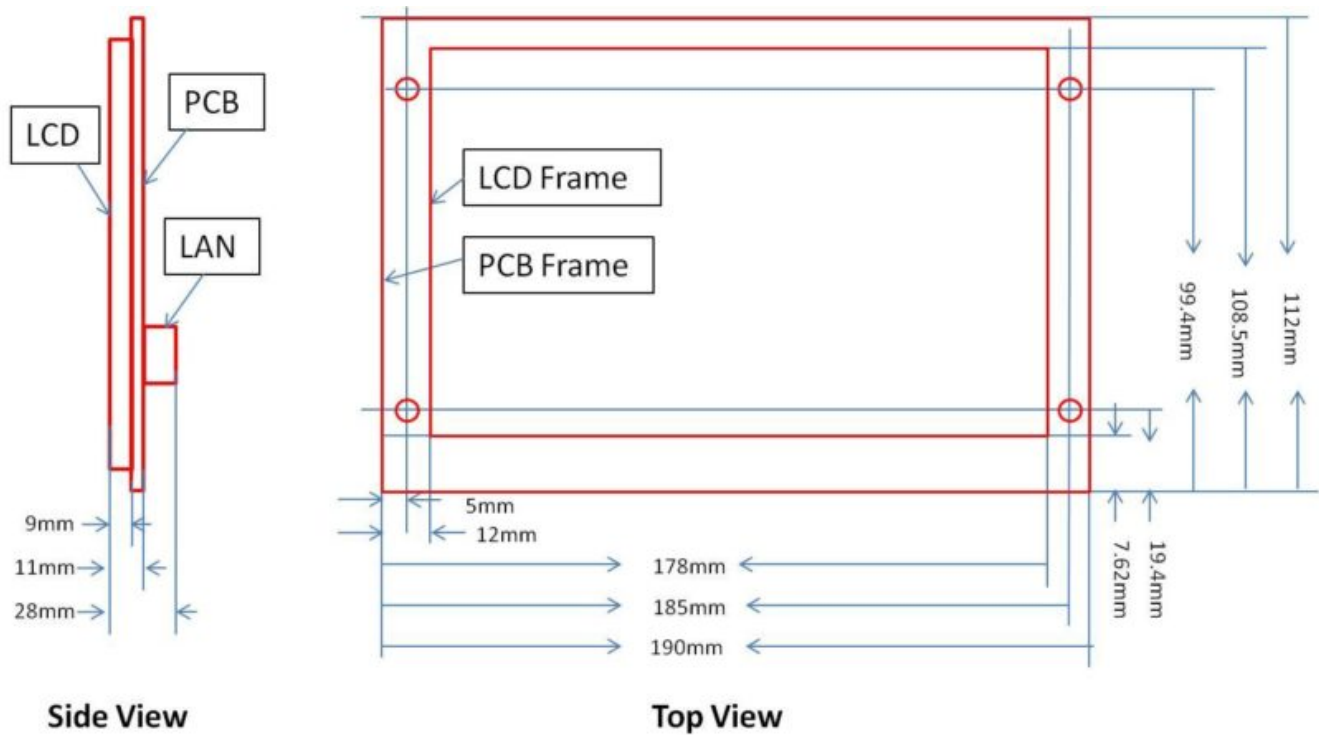


Figure 14 CS80480T070E Dimensions

How to Mount the Panel PC





Figure 17 Push the PC into the Panel



Figure 12 Mounting Method

How to Get Support

Chipsee assumes no responsibility for any errors, which may appear in this manual. Furthermore, Chipsee reserves the right to alter the hardware, software, and/or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein. Chipsee products are not authorized for use as critical components in life support devices or systems.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Chipsee:

[CS80480T070E](#) [CS80480T070E-R233](#) [CS80480T070P](#) [CS80480T070P-R233](#)