PPC-A9-120-C

User Manual

Release 1.0

Chipsee Products Naming Rules

CS10768F120P-C121

CS	Chipsee Product Abbreviate
10	**Horizontal Resolution** **80** Means 800 Pixel **10** Means 1024 Pixel **12** Means 1280 Pixel **14** Means 1440 Pixel **19** Means 1920 Pixel
768	**Vertical Resolution** **480** Means 480 Pixel **600** Means 600 Pixel **768** Means 768 Pixel **800** Means 800 Pixel **900** Means 900 Pixel **102** Means 1024 Pixel **108** Means 1080 Pixel
F(T)	Product based on Freescale (TI) CPU
120	**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 **120** Means 12.0 Inch **150** Means 15.0 Inch **170** Means 17.0 Inch **190** Means 19.0 Inch **215** Means 21.5 Inch
P	**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

1	**Means LCD Brightness** **1** Means Common Brightness **2** Means High Brightness
2	**PCB Version** Baseboard PCB Version Number
1	**PCB Version** SOM Module PCB Version Number

Hardware Features

Key Features:	
CPU	iMX6Q,Quad-A9,1GHz
RAM	2GB DDR3
eMMC	8GB
Storage	TF card, supports up to 32GB SDHC
Display	12 Inch LCD,1024*768 Pixel Resolution,4:3
Touch	Ten-Point Capacitive Touch
USB	4 x USB 2.0 Host,1 USB OTG
LAN	1 Channel 1000M LAN
Audio	3.5mm Audio In/Out Connector,2W Speaker Internal
Buzzer	1
RTC	Yes
RS232	4 Channels(can be customized to RS485 or CAN)
GPIO	8 Channels
WiFi/BT	On Board WIFI/BT
HDMI	1 Channel

SATA II	1 Channel
4G/LTE	Optional
Power Input	15~36V DC
Current @ 15V	2000 mA max
Power Consumption	10W Typical
Working Temperature	-20°C to +70°C
OS	Android, Ubuntu, Linux
Dimension	307*245*41mm
Weight	2700g

CS10768F120P-C121

Figure 1 Top View (Android)
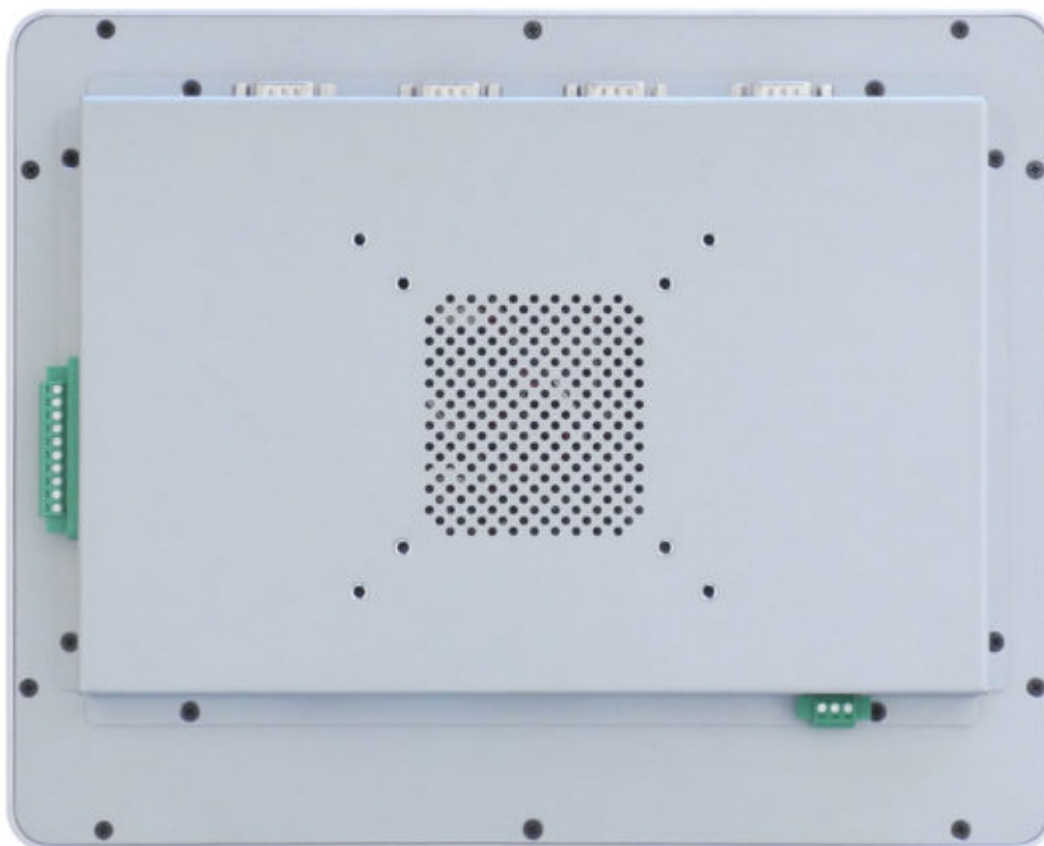
Figure 2 Back View

Power Input Connector

The product CS10768F120P-C121 uses a wide range power input: **DC 15~36V**. The total power consumption is normally about **10W**. The Power Input Connector is 3 Pin 3.81mm Screw Terminal Connector as Figure 3 shows. The Character "**+**" means power **Positive** input, The Character "**–**" means power **Negative** input. The Character "**G**" means system Ground. Table 1 has detailed descriptions about the connector definition.

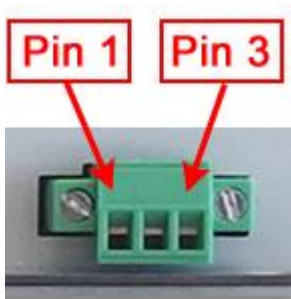Figure 3 Power Input Connector

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**

ATTENTION:

*The system ground **"G"** has been connected to power negative **"-"** on board.*

Capacitive Touch

The product CS10768F120P-C121 uses ten-point capacitive touch.

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 user power adapter can't be good enough, there's another effective method to solve this problem: Make sure the CS10768F120P-C121 power input connector **Pin 3 really connect to user "Power System Ground"**. This method can eliminate the problem totally. User can also use another method to test this problem: touch the GND of CS10768F120P-C121 by one hand, the other hand operates on the capacitive touch screen. In this case, user's body acts as the Power System Ground.*

DB9 Connector

The product CS10768F120P-C121 has 4*DB9 connectors configured as RS232 by default. These DB9 connectors can be customized to RS485 or CAN. If you need any other setting different to the default setting, please contact us.

Figure 4 RS232 Connector

USB HOST Connector

The product CS10768F120P-C121 has four USB connectors as Figure 5 shows. These two USB can provide 500mA current each.

Figure 5 USB HOST Connector

USB OTG Connector

The product CS10768F120P-C121 has one USB OTG connector as Figure 6 shows. It works as slave by default. User can connect it to host PC by this connector.

Figure 6 USB OTG Connector

LAN Connector

The product CS10768F120P-C121 has one channel 1000Mbit Ethernet Connector, as Figure 7 shows.

Figure 7 LAN Connector

4G Module

The product CS10768F120P-C121 has a mini-PCIe connector inside for 4G module. 4G module is optional.

ATTENTION:

This product is not mounted on any 4G module by default.

WiFi+BT

The product CS10768F120P-C121 has one WiFi+BT. It uses Realtech RTL8723 which integrates WiFi and BT.

WiFi+BT

The product CS12800F101P-C141 has one WiFi+BT. It uses Realtech RTL8723 which integrates WiFi and BT. There is a connector on the backside case which can connect external

WiFi/BT Antenna, as Figure 12 shows.

Figure 12 WiFi+BT Antenna

HDMI Connector

The product CS10768F120P-C121 has one HDMI connector as Figure 10 shows. The HDMI output resolution can be configured by software.

Figure 10 HDMI Connector

Expansion Connector

The product CS10768F120P-C121 has one Expansion Connector, as Figure 11 shows. This connector has connected to isolated GPIO signals. As for the definition of every Pin, please refer to Table 2.
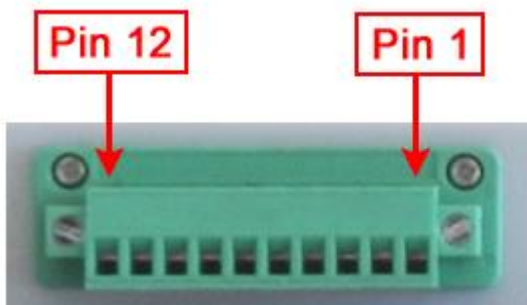
Figure 14 Boot Switch

Table 2

PIN	Function	PIN	Function
1	VDD, Isolated Power +5 — +24V Input	2	GND_ISO
3	OUT1	4	OUT2
5	OUT3	6	OUT4
7	IN1	8	IN2
9	IN3	10	IN4
11	NC	12	NC

Measurements and Mounting

Measurements

The measurement of CS10768F120P-C121 is 345*275*50mm.

Mounting Method

This product CS10768F120P-C121 can be mounted using the 8

screw holes on the backside of the product as figure 2 shows.

How to Get Support

Please feel free to contact us with any questions, queries or suggestions.

If your question is about technical support or troubleshooting for one of our products, we kindly ask you to first check our documentation for a possible solution.

If you cannot find the solution you are looking for then please write to contact@chipsee.com providing all possible details.

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