

FPC-08R1

8" SVGA TFT RISC Panel PC with FreeScale IMX51

Quick Reference Guide

1st Ed –1 April 2013

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1. Getting Started

1.1 Safety Precautions

Warning!



Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!



Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

- 1 x 8" SVGA TFT RISC Panel PC System.
- 1 x CD/DVD-ROM contains the followings:
 - User's Manual (this manual in PDF file)
 - Win CE & Linux software (bootloader, Kernel, Image, BSP, SDK)
 - iMX_AdvancedToolKit
 - Mfgtools
- 1 x Quick Reference Guide
- Other major components include the following:
 - 1 x Power Adapter(12V/5A)



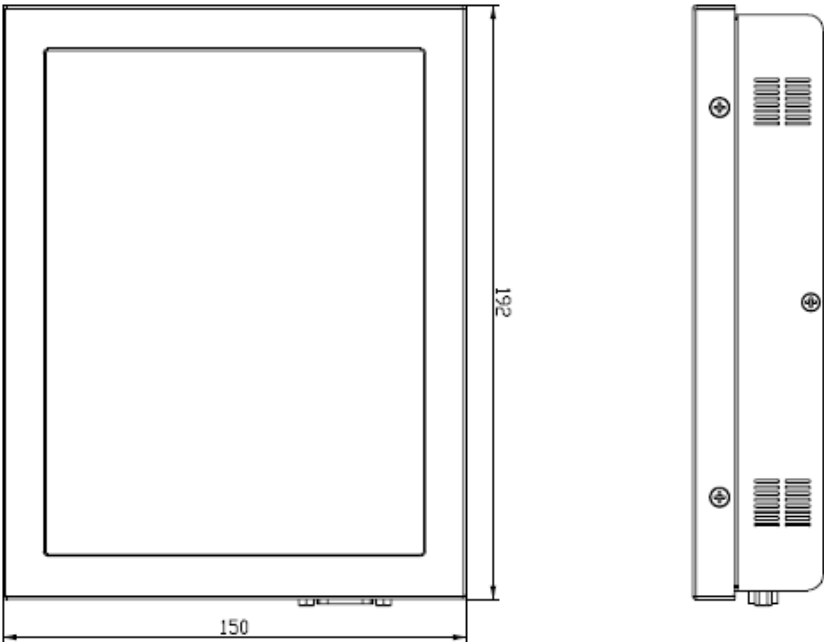
If any of the above items is damaged or missing, contact your retailer.

1.3 System Specifications

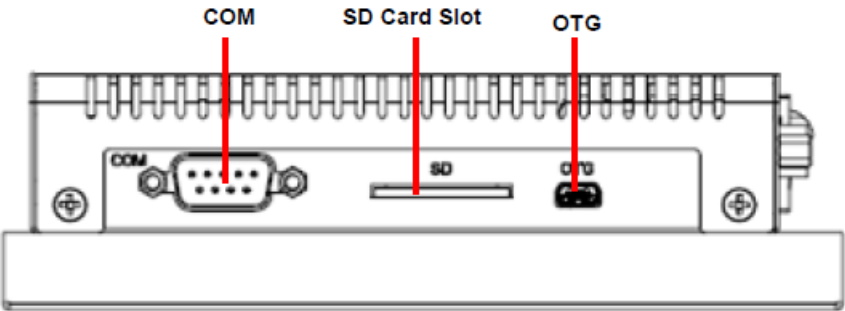
Panel		
Model	FPC-08R1-M51	FPC-08R1-M51W
LCD size	8 inch	
Display type	SVGA TFT	
Resolution	800(R.G.B) x 600	
Color	262K	
Pixel pitch	0.0675mm(W) x 0.2025mm(H)	
Luminance	250cd/m²	
Contrast ratio	400	
Viewing angle	50(U), 70(D), 70(L), 70(R)	
Response time	10 ms	
Backlight	LED	
Touch Type	4-Wire Resistive	
Touch Light Transmission	80%	
Integrated Module	Reserved	w/ WiFi Module
System		
Board	RSC-IMX51	
CPU	Freescale i.MX515 ARM Cortex-A8 800MHz	
PMIC	Freescale MC13892AJVL	
eMMC	Onboard 4GB eMMC	
Memory	Onboard 512MB DDR2 SDRAM	
SSD	SD socket support SDHC (eSDHC-2)	
Rear Panel I/O		
Serial Port	2 x DB9 connectors for 1 x RS-232/ 422/ 485 and 1 x Debug port	
USB Host	2 x USB 2.0 connectors (Type A)	
USB Client	1 x Mini-USB connector	
Fast Ethernet	1 x RJ-45 connector (10/100 Base-TX)	
Mechanical & Environmental		
Color	Front & Rear panel Black	
Power Requirement	+12 VDC Input	
Operating Temperature	0°C to 40°C (32°F to 140°F)	
Relative Humidity	0%~90% relative humidity, non-condensing	
Storage Temperature	-20°C to 60°C	
Mounting	Wall/Stand/VESA 75 mm X 75 mm	
Dimensions	192mm x 150mm x 42.2mm	
Weight	0.95Kgs	

1.4 System Overview

1.4.1 Front & Top View



1.4.2 Right Side View



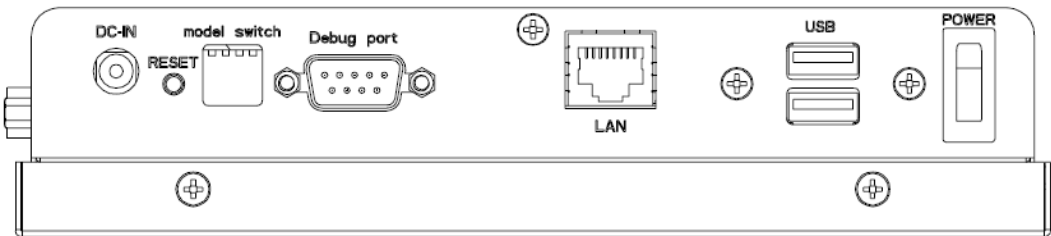
Connectors		
Label	Function	Note
SD Card Slot	SD/SDHC card socket	Right side
OTG	USB on The Go connector	Mini USB connector
COM	Serial port connector	DB-9 male connector

FPC-08R1

1.4.3 Left Side View



1.4.4 Rear View



Connectors		
Label	Function	Note
DC-IN	+12V DC power-in connector	
Debug port	Debug target application	DB-9 male connector
LAN	RJ-45 Fast Ethernet connector	
MODE SWITCH	Boot Mode selector	
Power S/W	System power switch	
RESET	Reset button	
USB1~2	USB 2.0 connector 1~2	

2. Hardware Configuration

Jumper and Connector Setting

For advanced information, please refer to:

- 1- RSC-IMX51 Installation Guide or User's Manual
- 2- AUX-MPCIE (Optional) Installation Guide.



Note: If you need more information, please visit our website:

<http://www.avalue.com.tw>

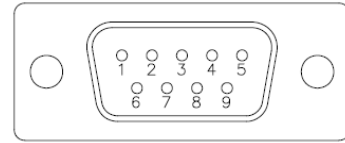
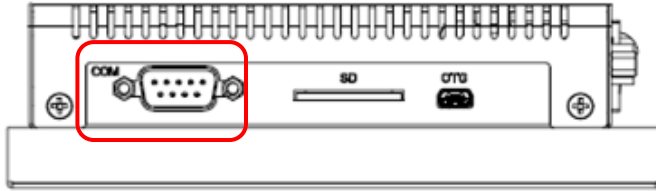
2.1 Jumper & connector list

Connectors

Label	Function	Note
COM	Serial port connector	DB-9 male connector
DC-IN	+12V DC power-in connector	
Debug port	Debug target application	DB-9 male connector
LAN	RJ-45 Fast Ethernet connector	
MODE SWITCH	Boot Mode selector	
OTG	USB on The Go connector	Right side
Power S/W	System power switch	
RESET	Reset button	
SD Card Slot	SD/SDHC card socket	Right side
USB	USB 2.0 connector 1&2	

2.2 Jumper & connector settings

2.2.1 Serial port connector (COM)



RS232 mode

Signal	Pin	Pin	Signal
NC	1	2	RX
TX	3	4	NC
GND	5	6	NC
RTS	7	8	CTS
NC	9	10	GND

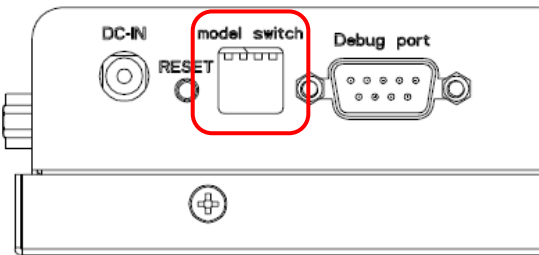
RS422 mode

Signal	Pin	Pin	Signal
TX-	1	2	RX+
TX+	3	4	RX-
GND	5	6	NC
NC	7	8	NC
NC	9	10	GND

RS485 mode

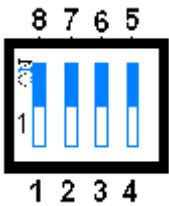
Signal	Pin	Pin	Signal
DATA-	1	2	NC
DATA+	3	4	NC
GND	5	6	NC
NC	7	8	NC
NC	9	10	GND

2.2.2 Boot Mode selector

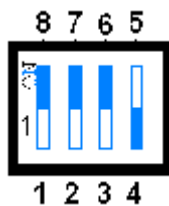


Signal	PIN	PIN	Signal
BMOD1	1	5	+V2D775_BOOT
BMOD0	2	6	
BT_SRC[1]	3	7	+V1D8_DIG1
BT_SRC[0]	4	8	

Boot from onboard SD

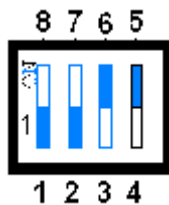


Boot from SD socket



DIP ON ↓

USB OTG mode



DIP ON ↓

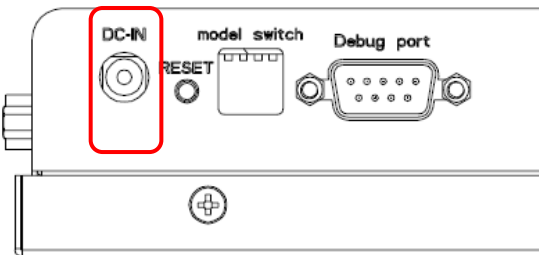
Please note:

DIP Switch setting:

0=Off, 1=On

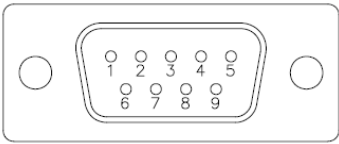
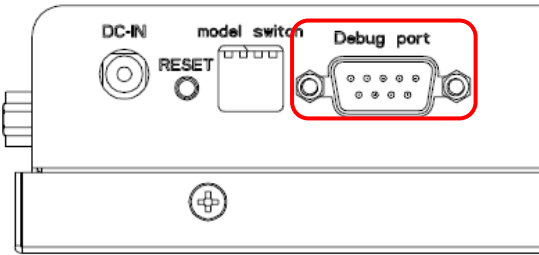
When **Position4** is switched On, the system is forced to power On as soon as power is applied. Switch to Off mode for normal operation.

2.2.3 DC power-in connector (DC-IN)



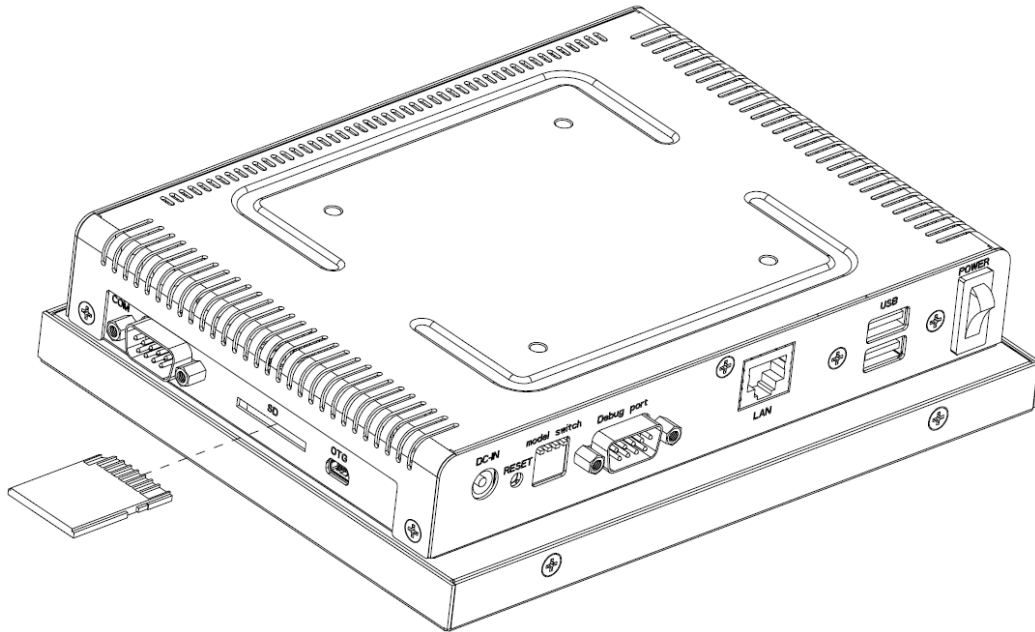
DC-IN 12V

2.2.4 Debug port connector (Debug port)



Signal	Pin	Pin	Signal
NC	1	2	RX
TX	3	4	NC
GND	5	6	NC
RTS	7	8	CTS
NC	9	10	GND

2.3 Installing SD Card (FPC-08R1)



Step1. Put SD Card into the SD Card Slot.

