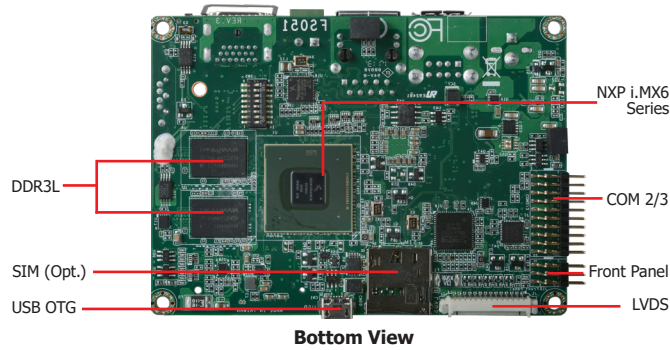
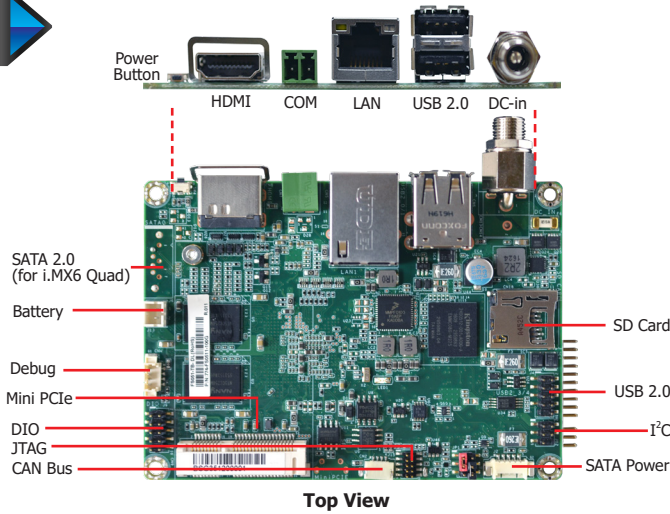


# FS051

**ARM**

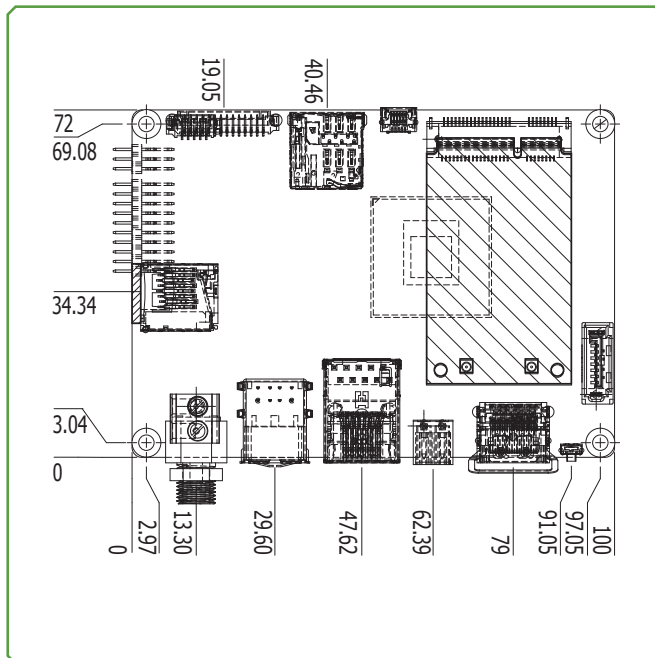


## Features

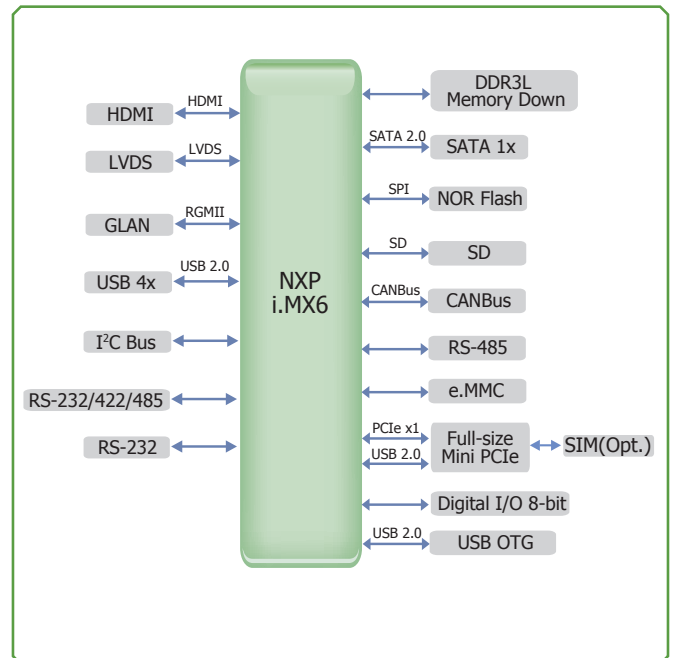
- NXP Cortex-A9 i.MX6 DualLite 1.0 GHz
- NXP Cortex-A9 i.MX6 Quad, 1.0 GHz
- DDR3L SDRAM memory down , up to 4GB.
- Dual independent displays: HDMI + LVDS
- Expansion: 1 Mini PCIe, 1 SD, 1 SIM (Optional)
- Rich I/O: 1 GbE, 3 COM, 5 USB 2.0, 1 CANBus



## Mechanical Drawing



## Block Diagram



## Specifications

<b>SYSTEM</b>	<b>Processor</b>	NXP i.MX6 Cortex-A9 Dual Lite, 1.0 GHz NXP i.MX6 Cortex-A9 Quad, 1.0 GHz	
	<b>Memory</b>	1GB/2GB SDRAM Memory Down (default), 4GB (available upon request) Single Channel DDR3L 1600MHz/1866MHz	
	<b>Flash</b>	4MB NOR Flash	
<b>GRAPHICS</b>	<b>Display</b>	1 x HDMI 1 x LVDS	HDMI: resolution up to 1920x1080 @ 60Hz LVDS: single channel, resolution up to 1366x768 @ 60Hz
	<b>Single/Dual Displays</b>	Yocto: HDMI or LVDS (Default) Android: HDMI + LVDS (available upon request)	
<b>EXPANSION</b>	<b>Interface</b>	1 x Full-size Mini PCIe (PCIe/USB) 1 x SIM (Option)	
<b>ETHERNET</b>	<b>Controller</b>	1 x Atheros AR8033 Ethernet (10/100/1000Mbps)	
<b>REAR I/O</b>	<b>Ethernet</b>	1 x GbE (RJ-45)	
	<b>Serial</b>	1 x RS-485 (2-wire)	
	<b>USB</b>	2 x USB 2.0 1 x USB 2.0 OTG Port	
	<b>Display</b>	1 x HDMI	
	<b>Power</b>	1 x Power Button	
<b>INTERNAL I/O</b>	<b>Serial</b>	1 x RS-232 (4-wire) 1 x RS-232/422/485 (8-wire)	
	<b>USB</b>	2 x USB 2.0	
	<b>Display</b>	1 x LVDS LCD Panel Connector	
	<b>SATA</b>	1 x SATA 2.0 (up to 3Gb/s) (Quad processor only)	
	<b>DIO</b>	1 x 8-bit DIO	
	<b>eMMC</b>	Supports 8GB, 16GB and 32GB eMMC onboard	
	<b>SD</b>	1 x Micro SD Slot	
	<b>CANBus</b>	1 x CANBus	
	<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds
<b>POWER</b>	<b>Type</b>	Single 5V +/-5% DC	
	<b>Connector</b>	DualLite: DC jack Quad: Terminal block (2 poles)	
	<b>Consumption</b>	Typical: i.MX6:5V @ 0.460A (2.30Watt) Max.: i.MX6:5V @ 0.963A (4.82Watt)	
<b>OS SUPPORT</b>		Yocto (1.8, Default Preloaded on eMMC) Android (5.1.1)	
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: 0 to 60°C / -20 to 70°C	Storage: -40 to 85°C
	<b>Humidity</b>	Operating: 5 to 95% RH	Storage: 5 to 95% RH
	<b>MTBF</b>	491,355 hrs @ 25°C; 342,435 hrs @ 45°C ; 235,039 hrs @ 60°C	
<b>MECHANICAL</b>	<b>Dimensions</b>	2.5" Pico-ITX Form Factor	100mm (3.94") x 72mm (2.83")
	<b>Height</b>	PCB: 1.6mm	Top Side: 16.15mm, Bottom Side: 4mm
<b>CERTIFICATIONS</b>		CE, FCC, RoHS	

## Ordering Information

Model Name	P/N	Processor	Memory	eMMC	GbE	RS-485	RS-232	RS-232/ 422/485	USB 2.0	Power	Thermal	Temp.
<b>FS051-BB-18DL</b>	770-FS0512-300G	i.MX6 DualLite 1.0GHz	1GB DDR3	8GB	1	1	1	1	5	5V DC in DC jack	Fanless	0~60°C
<b>FS051-BB-28QD</b>	770-FS0512-200G	i.MX6 Quad 1.0GHz	2GB DDR3	8GB	1	1	1	1	5	5V DC in Terminal block	Fanless	0~60°C
<b>FS051-EB-18DL</b>	770-FS0512-100G	i.MX6 DualLite 1.0GHz	1GB DDR3	8GB	1	1	1	1	5	5V DC in DC jack	Fanless	-20 to 70°C
<b>FS051-EB-28QD</b>	770-FS0512-000G	i.MX6 Quad 1.0GHz	2GB DDR3	8GB	1	1	1	1	5	5V DC in Terminal block	Fanless	-20 to 70°C

## Packing List

• 1 FS051 board	
• 1 1 terminal block for RS485	342-361021-000
• 1 Heat spreader (Height: 11mm)	A71-808303-000G

Note: Please choose "FS051 product page > Download button" to download the Driver.

## Optional Items

• COM port cable (Length: 300mm, 2 x COM ports)	A81-015020-001G
• USB 2.0 port cable (Length: 200mm, 2x USB ports)	A81-001032-016G
• Power cable for SATA and LCD backlight (Length: 155mm)	A81-020016-018G
• Heat sink (Height: 16.8mm)	A71-008105-000G
• Power adapter (30W, 5V)	671-103002-000G