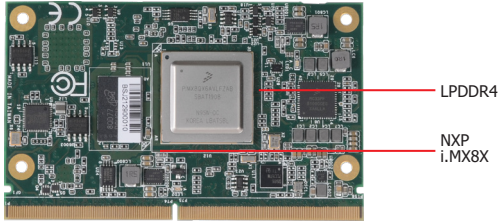
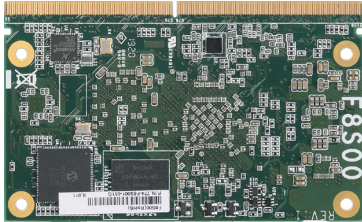


F8S00

ARM



TOP



BOTTOM

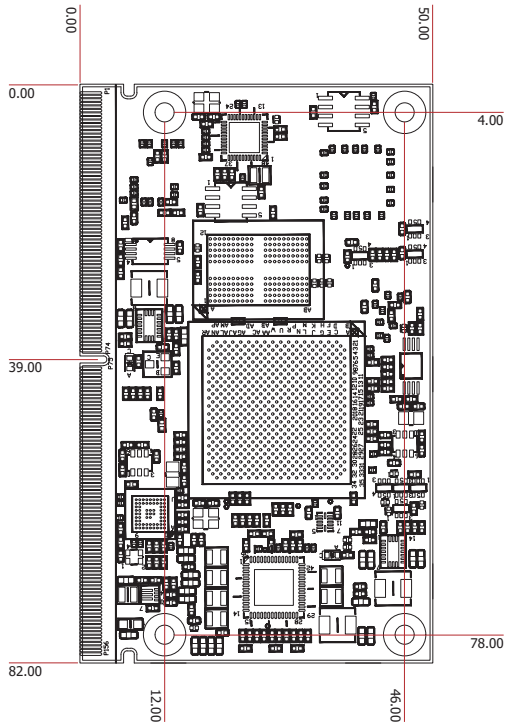
Features

- 2GB/4GB LPDDR4 Dual Channel Memory Down
- Supports QSPI
- Supports dual displays: 1 eDP, 1 HDMI
- Multiple expansions: 1 PCIe x1, 1 SD x4 bit
- Rich I/O: 1 GbE, 2 USB 3.0, 3 USB 2.0

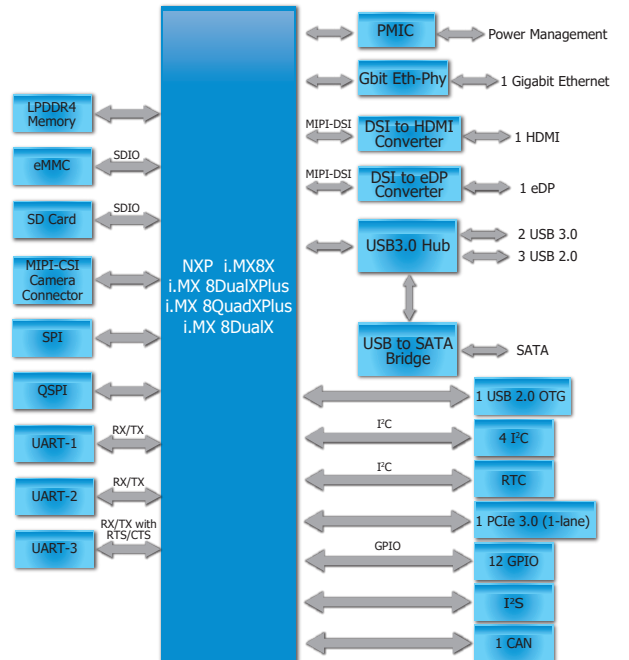
* Populated by default



Mechanical Drawing



Block Diagram



Specifications

SYSTEM	Processor	NXP i.MX8X series processors i.MX 8DualXPlus: 2 X Cortex-A35 (1.2GHz) i.MX 8QuadXPlus: 4 X Cortex-A35 (1.2GHz) i.MX 8DualX: 2 X Cortex-A35 (1.2GHz)		
	Memory	LPDDR4 32Bit up to 4GB	Dual Channel LPDDR4 3200MHz	
	BIOS	1 x QSPI		
GRAPHICS	Controller	Integrated in NXP i.MX8X Series GC7000Lite (4 shader)		
	Feature	OpenCL 1.2 VPU: 4K h.265 dec, 1080p h.264 enc/dec		
	Display	1 x HDMI (DP++ available upon request) 1 x eDP	HDMI: HDMI v1.4, resolution up to 1920x1200 @ 60Hz eDP: eDP v1.4, 4 Lane, resolution up to 1920x1200 @ 60Hz	
	Dual Display	HDMI + eDP		
EXPANSION	Interface	1 x PCIe x1 1 x 4-bit SDIO 4 x I ² C 2 x SPI (1 x QSPI, 1 x SPI) 3 x UART (2 x TX/RX, 1 x Tx/Rx/RTS#/CTS#)		
AUDIO	Interface	1 x I ² S		
ETHERNET	Controller	1 x ATHEROS AR8033 Ethernet (10/100/1000Mbps)		
I/O	USB	2 x USB 3.0 3 x USB 2.0 1 x USB 2.0 OTG		
	SATA	1 x SATA 3.0		
	eMMC	1 x 4GB/8GB/16GB eMMC		
	GPIO	12 x GPIO		
	CAN Bus	1 x CAN/CAN-FD		
	Camera	1 x MIPI-CSI (4 lane)		
	WATCHDOG TIMER	Output & Interval	Software programmable	
POWER	Type	3.3V~5V		
	Consumption	Under 3.3V~5V @ 5A		
OS SUPPORT		Yocto2.5 – Kernel 4.14.78		
ENVIRONMENT	Temperature	Operating: -40 to 85°C	Storage: -40 to 85°C	
	Humidity	Operating: 5 to 90% RH	Storage: 5 to 90% RH	
	MTBF	TBD		
MECHANICAL	Dimensions	SMARC™ form factor	82mm (3.22") x 50mm (1.97")	
	Compliance	SMARC™ specification revision 2.0		

Ordering Information

Model Name	P/N	Processor	Memory Down	eMMC	USB 3.1 Gen 1	HDMI	Power	Thermal	Temperature
F8S00	770-F8S001-000G	i.MX 8QuadXPlus	4GB LPDDR4	16 GB	2	1	3.3V~5V	Fanless	-40 to 85°C

Packing List

- 1 F8S00 board