

AXON-IMX8M-MINI



- The AXON-IMX8M-MINI is a System on Module (SOM) based on an NXP i.MX8M Mini Quad core Cortex-A53™ + M4™ processor clocking up to 1.8GHz.
- Field Programmable Grid Array (FPGA) enables creation of additional instances of CAN, UART and other desired interfaces to the AXON-IMX8M-MINI.
- The AXON-IMX8M-MINI operates in commercial and industrial temperature ranges from -40 to 85°C. The on-board Vivante GC NanoUltra, OpenGL ES 2.0 supports Full-HD MIPI DSI display and MIPI-CSI2 Camera. The OpenCL GPU accelerator brings up-to 32 GOPS AI/ML capabilities to IIoT edge devices.
- Accelerate your time-to-market and reduce development costs with TechNexion pre-certified FCC / IC / CE / RCM / TELEC dual-band Wi-Fi 802.11 ac/a/b/g/n, Bluetooth.
- Linux, Yocto, Android runtime images and full source code available.

Specifications



Core System

Processor	NXP i.MX8M Mini Quad
Processor Speed	up to 1.8GHz
Architecture	ARM Cortex-A53 + M4
Fabric	AXON Fabric
PMIC	ROHM BD71847
Memory	up to 4GB LPDDR4
Storage	eMMC (16GB Default)
Board-to-Board Connector	AXON 80-pin Hirose connectors
System on Module	AXON SOM

Connectivity

Network LAN	1x Atheros AR8035 Gigabit LAN
Wi-Fi/Bluetooth	Qualcomm QCA9377
	802.11 a/b/g/n/ac + BT (BR+EDR+BLE)
Antenna	MHF4 connector

Signaling

I/O	MIPI CSI	SDIO
	MIPI DSI	UART
	LAN	SPI
	PCIe	I ² C
	USB	PWM
	USB OTG	GPIO
	I ² S	

Video

Graphic Engine	Vivante GC7000Lite
Video Decode	1080p60 H.264
Video Encode	1080p60 H.264
Camera	MIPI CSI (4 lanes)

Audio

Audio Codec	On carrier board
Audio Interface	I ² S (2 channel)

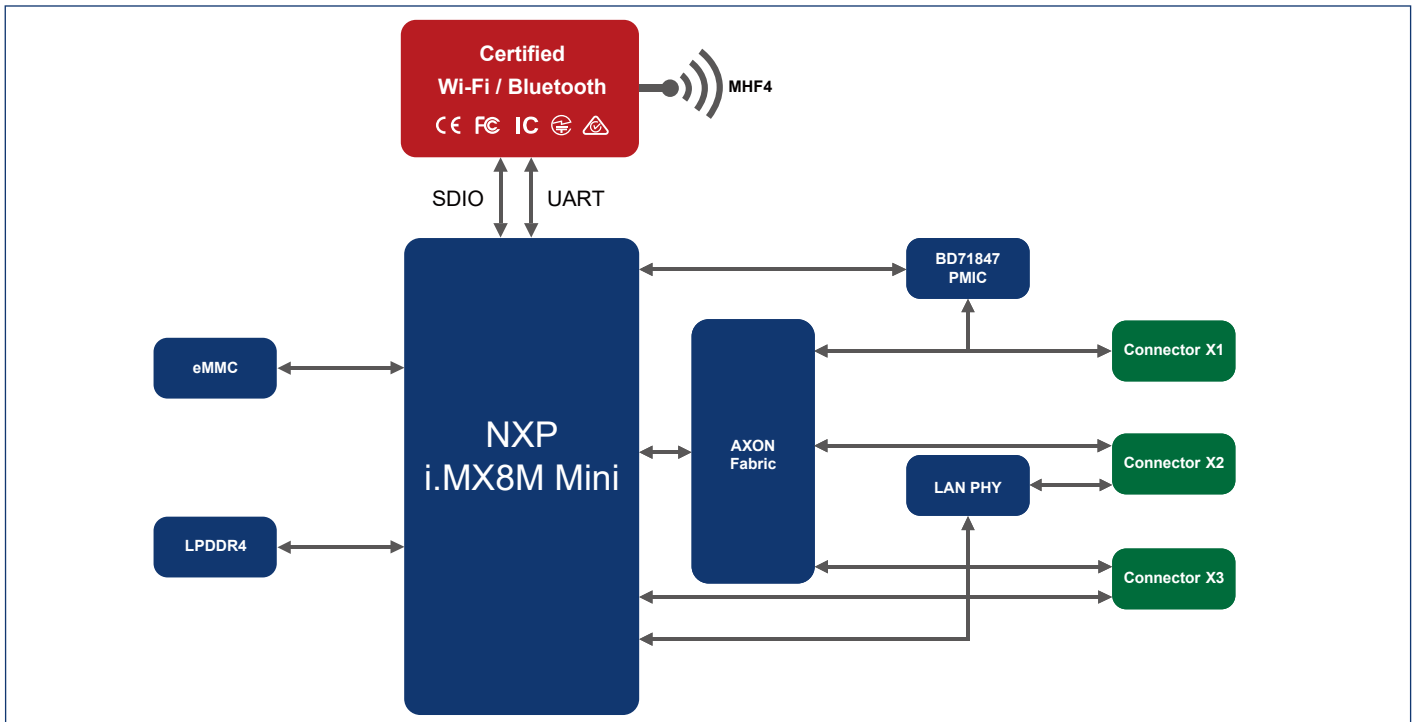
Operation Systems

Standard Support	Linux
	Yocto
	Android

Certification and Compliance

USA	FCC ID: 2AKZA-QCA9377
Canada	IC: 22364-QCA9377
Japan	TELEC: 201-180629
European Union	EN 55032 / EN 55024
	EN 300 328 v2.2.2
	EN 301 893 v2.1.1
Australia/New Zealand	RCM
Bluetooth Logo	QDID150839 (Bluetooth 4.2)
Certification	Compliant with RoHS / REACH directives

Block Diagram



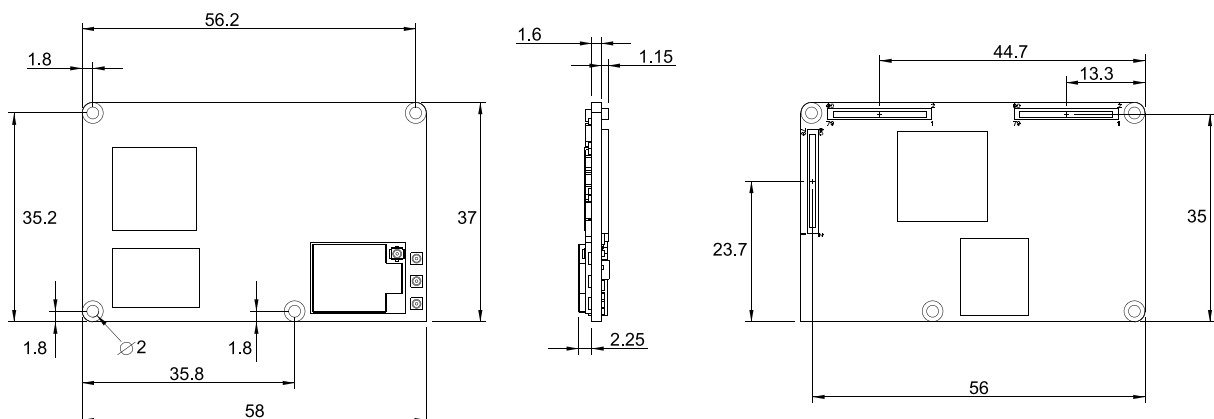
Environmental and Mechanical

Dimensions	58 x 37 mm
Form Factor	AXON Compute Module
Weight	12 grams
Temperature	Commercial: 0° to +60°C Industrial: -40° to +85°C
Relative Humidity	10 to 90 %
MTBF	>100 000 Hours
Shock	15G half-sine 11 ms duration
Vibration	1 Grms random 5-500Hz hr/axis

Power Specifications

Power Input	5V DC +/-5%
Power Consumption	Depending on Configuration

Dimensions
(units in mm)



Order Information :

AXON-IMX8MMx-xx-Rxx-Exx-Fxx-xxxx-xx-xxxx

	Code	Description
Processor	IMX8MMQ	NXP i.MX8M Mini Quad
Processor Speed	18	1.8GHz
Memory	R10	1GB LPDDR4
	R20	2GB LPDDR4
	R40	4GB LPDDR4
Storage	E16	eMMC 16GB
	E32	eMMC 32GB
	EXX	eMMC other capacity
Fabric	F01	TechNexion Fabric F01
	F03	TechNexion Fabric F03
Wi-Fi / Bluetooth	-	-
	9377	Qualcomm QCA9377 802.11a/b/g/n/ac (2.4 + 5GHz) + Bluetooth
Temperature Range	-	Commercial Temperature range (0° to +60°C) (Default)
	T1	Industrial Temperature range (-40° to +85°C)
Custom ID	XXXX	Custom Part number ID for customized Software loader and special component (BOM)