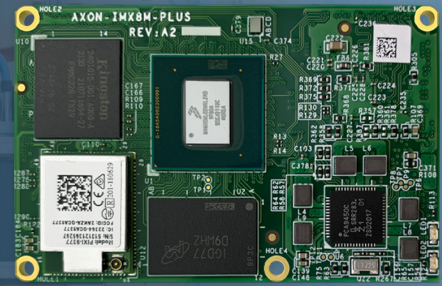


AXON-IMX8M-PLUS

- NXP i.MX 8M Plus applications processor
- Up to 4 Cortex-A53 1.8 GHz processors
- Cortex-M7 processor with speeds up to 800 MHz
- Neural Processing Unit (NPU)
- Image Signal Processor (ISP)
- Armv8 64-Bit CPU cores



Core System

Processor	NXP i.MX8M Plus
Architecture	ARM Cortex-A53 + M7
PMIC	NXP PCA9450
Memory	Up to 8GB LPDDR4
Storage	32GB eMMC (default)
Board-to-Board Connector	AXON 80-pin Hirose connectors
System on Module	AXON SOM
Debug Interface	JTAG / UART

AI / Vision Capabilities

NPU / AI	NN Accel 2.3 TOPS
Camera	Dual MIPI CSI (4 lanes)

Connectivity

Network LAN	1x Realtek RTL8211
Wi-Fi	Qualcomm Atheros QCA937 Wi-Fi 5 – 802.11 a/b/g/n/ac (optional)
Bluetooth	Qualcomm Atheros QCA9377 Bluetooth (optional)
Antenna	MHF4 connector (optional)

Signaling

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

Video

GPU Engine	GC520L (2D) Vivante GC7000UL
Video Decode	1080p60 (h.265, h.264, VP9, VP8)
Video Encode	1080p60 (h.265, h.264)

Audio

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

Power Specifications

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

Operation Systems

Standard Support	Linux Yocto Android Ubuntu/Debian
Extended Support	Commercial Linux

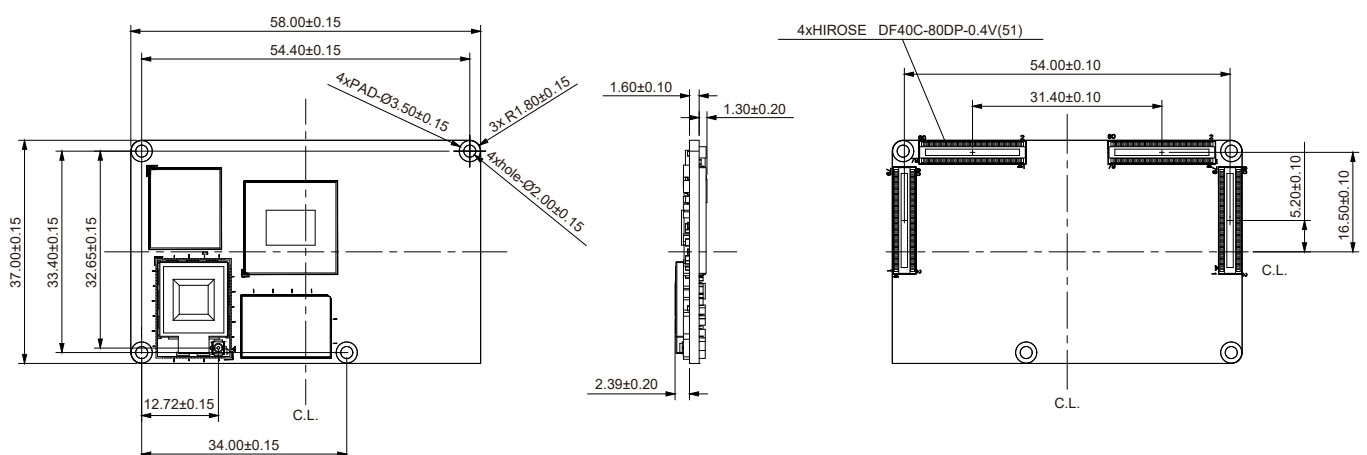
Environmental and Mechanical

Dimensions	58 (W) x 37 (H) x 5.3 (D) mm
Weight	8 grams
Form Factor	AXON
MTBF	100,000+ Hours
Shock	15G half-sine 11 ms duration
Vibration	1 Grms random 5-500Hz hr/axis
Relative Humidity	10 to 90 %
Operating Temperature	Commercial: 0° to +60° C Industrial: -40° to +85° C

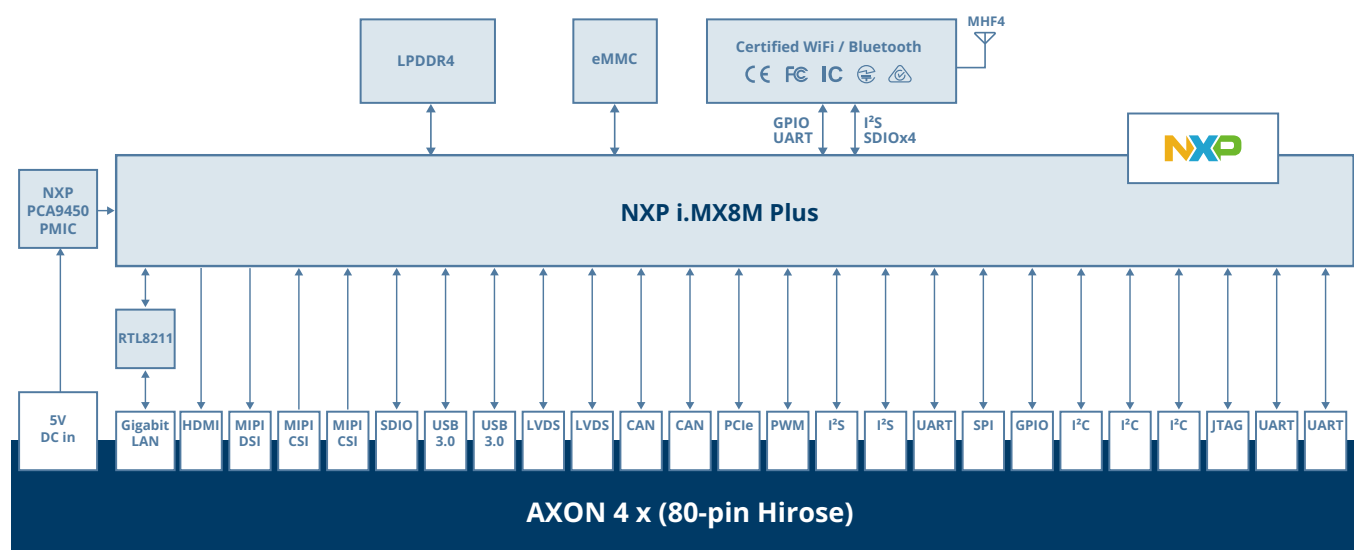
Certification and Compliance

USA	FCC ID: 2AKZA-QCA9377
Canada	IC: 22364-QCA9377
European Union	EN 300 328 v2.2.2 EN 301 893 v2.1.1 EN 55032 / EN 55024
Japan	TELEC: 201-180629
Australia / New Zealand	RCM Compliant
Bluetooth Logo	QDID 150839 (Bluetooth 4.2) QDID 193238 (Bluetooth 5)
Certification	Compliant with RoHS / REACH directives

Dimensions (units in mm)



Block Diagram



Order Information

AXON-IMX8MLQ-18-Rxx-Exx-xxxx-xx-xxxx

Option	Code	Description
Processor	IMX8MLQ	NXP i.MX8M Plus
Processor Speed	16	1.6GHz
	18	1.8GHz
Memory	R10	1GB LPDDR4
	R20	2GB LPDDR4
	R40	4GB LPDDR4
	R80	8GB LPDDR4
Storage	E32	eMMC 32GB
	EXX	eMMC other capacity
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)
	TI	Industrial Temperature range (-40° to +85°C)
Custom ID	XXXX	Custom Part number ID

For customization, please contact your TechNexion sales representative.