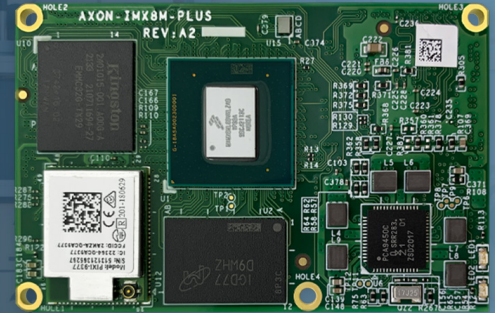


AXON-IMX8M-PLUS

- 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 |
| AI / ML | NN Accel 2.3 TOPS |
| 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 |

Signaling

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

Connectivity

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

Video

| | |
|--------------|---|
| GPU Engine | GC520L (2D) Vivante GC7000UL |
| Video decode | 1080p60 (h.265, h.264, VP9, VP8) |
| Video encode | 1080p60 (h.265, h.264) |
| Camera | 2 x ISP up to 12 MP resolution Dual MIPI CSI (4 lanes) |

Audio

| | |
|------------------|------------------------------|
| Audio Codec | On carrier board |
| Audio Connectors | 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 |
| Extended Support | Boot2Qt |
| | Commercial Linux |

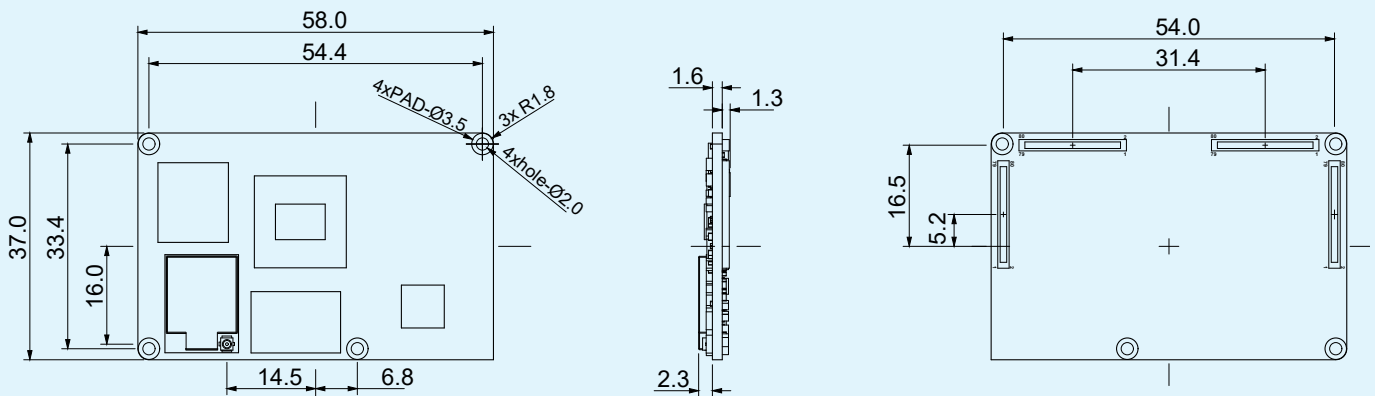
Environmental and Mechanical

| | |
|-----------------------|--|
| Dimensions | 58 (W) x 37 (H) x 5.2 (D) mm |
| Form Factor | AXON |
| Relative Humidity | 10 to 90 % |
| MTBF | 100,000+ Hours |
| Shock | 15G half-sine 11 ms duration |
| Operation Temperature | Commercial: 0° to +60° C Industrial: -40° to +85° C |
| Vibration | 1 Grms random 5-500Hz hr/axis |
| Weight | 8 grams |

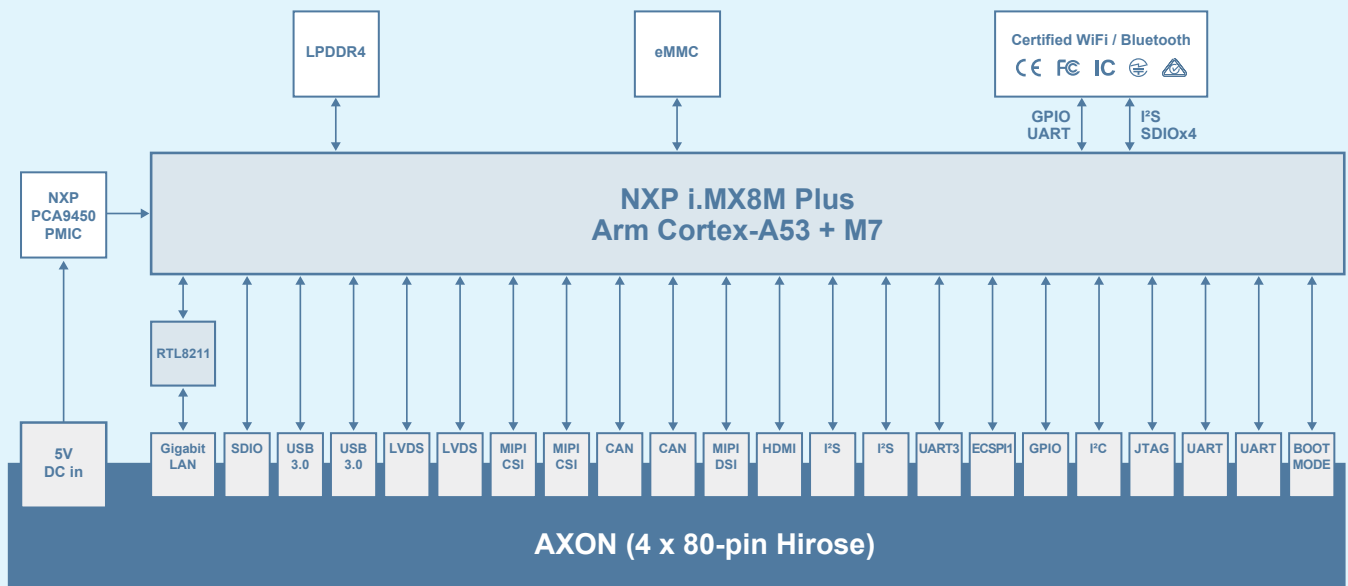
Certification and Compliance

| | |
|-----------------------|--|
| 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 CE / FCC / RoHS / REACH directives |

Dimensions (units in mm)



Block Diagram



Order Information

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

| 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 |
| | R60 | 6GB LPDDR4 |
| | R80 | 8GB LPDDR4 |
| Storage | E32 | 32GB eMMC |
| 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) |

For customization, please contact your TechNexion sales representative.