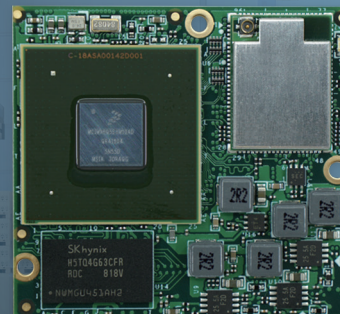


## PICO-IMX6

- NXP i.MX6 Solo/DualLite/Quad applications processor
- Performance scalable Cortex-A9 processor
- Built-in powerful GPU capable for dual-display applications at Full-HD resolutions
- Linux Mainline Support
- Certified Wi-Fi 5 and Bluetooth



## Specifications

### Core System

|                          |                                                        |
|--------------------------|--------------------------------------------------------|
| Processor                | NXP i.MX6 Solo<br>NXP i.MX6 Duallite<br>NXP i.MX6 Quad |
| Processor speed          | Up to 1GHz                                             |
| Architecture             | ARM Cortex-A9                                          |
| PMIC                     | Discrete Power Solution                                |
| Memory                   | Up to 1GB DDR3L                                        |
| Storage                  | 16GB eMMC (Default)<br>MicroSD                         |
| Board-to-Board Connector | PICO 70-pin Hirose connectors                          |
| System on Module         | PICO SOM                                               |

### Signaling

|     |                  |                  |
|-----|------------------|------------------|
| I/O | RGMI             | SDIO             |
|     | HDMI             | CAN              |
|     | LVDS             | UART             |
|     | RGB TTL          | SPI              |
|     | MIPI CSI         | I <sup>2</sup> C |
|     | MIPI DSI         | PWM              |
|     | PCIe             | GPIO             |
|     | SATA             |                  |
|     | USB              |                  |
|     | USB OTG          |                  |
|     | I <sup>2</sup> S |                  |

### Connectivity

|             |                                                                       |
|-------------|-----------------------------------------------------------------------|
| Network LAN | RGMI                                                                  |
| Wi-Fi       | Qualcomm Atheros QCA9377<br>Wi-Fi 5 – 802.11 a/b/g/n/ac<br>(optional) |
| Bluetooth   | Qualcomm Atheros QCA9377<br>Bluetooth (optional)                      |
| Antenna     | MHF4 connector (optional)                                             |

### Video

|              |                                                                                                                  |
|--------------|------------------------------------------------------------------------------------------------------------------|
| GPU Engine   | Vivante GC2000 (Quad)<br>Vivante GC320 (2D Composition)<br>Vivante GC355 (Quad)<br>Vivante GC880 (Solo/DualLite) |
| Video Decode | 1080p30 + D1 (Solo/DualLite)<br>1080p60 H.264 (Quad)                                                             |
| Video Encode | BP/Dual 720p                                                                                                     |
| Camera       | MIPI CSI (4 lanes)                                                                                               |

## Audio

|                  |                              |
|------------------|------------------------------|
| Audio Codec      | On carrier board             |
| Audio Connectors | I <sup>2</sup> S (2 channel) |

## Power Specifications

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

## Operation Systems

|                  |                                     |
|------------------|-------------------------------------|
| Standard Support | Linux<br>Yocto<br>Android<br>Ubuntu |
| Extended Support | Commercial Linux                    |

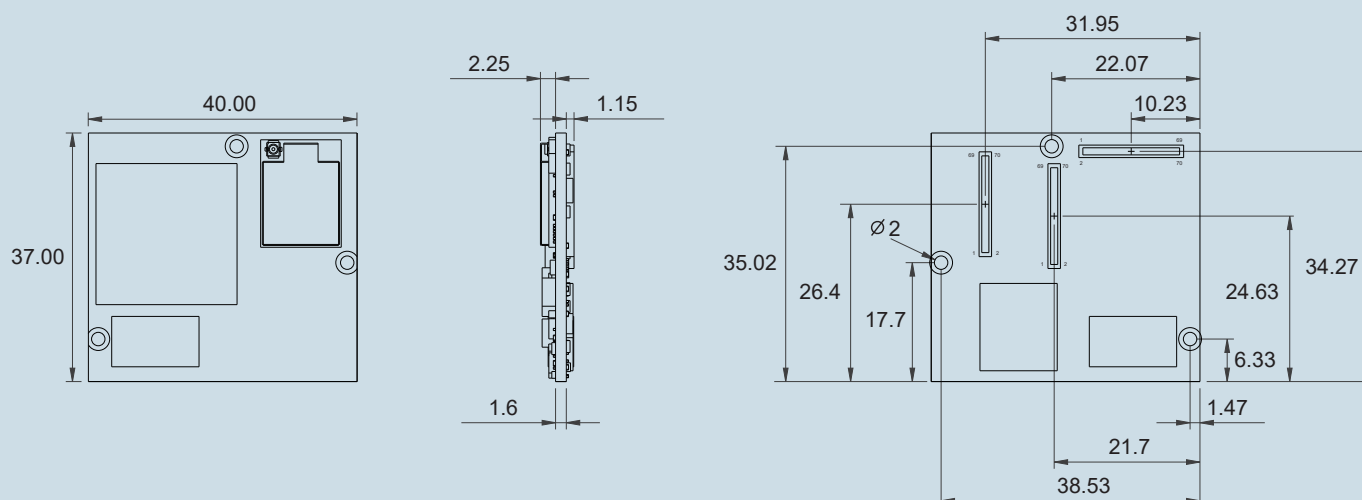
## Environmental and Mechanical

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

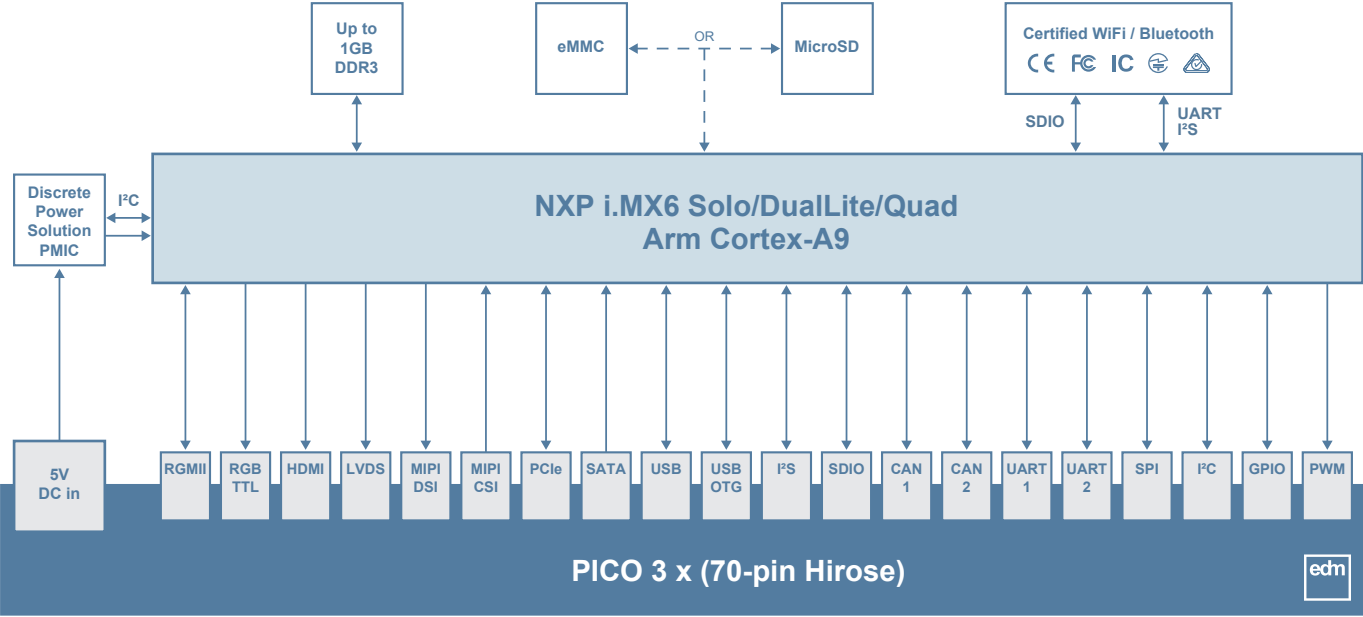
## Certification and Compliance

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

## Dimensions (units in mm)



## Block Diagram



## Order Information

PICO-IMX6x-xx-Rxx-xxx-xxxx-xx-xxxx

|                   | Code  | Description                                                                      |
|-------------------|-------|----------------------------------------------------------------------------------|
| Processor         | IMX6S | NXP i.MX6 Solo                                                                   |
|                   | IMX6U | NXP i.MX6 DualLite                                                               |
|                   | IMX6Q | NXP i.MX6 Quad                                                                   |
| Processor Speed   | 08    | 800MHz                                                                           |
|                   | 10    | 1GHz (Default)                                                                   |
| Memory            | R05   | 512 MB DDR3                                                                      |
|                   | R10   | 1GB DDR3                                                                         |
| Storage           | MSD   | MicroSD Cardslot                                                                 |
|                   | E16   | eMMC 16GB                                                                        |
|                   | EXX   | eMMC other capacity                                                              |
| Wi-Fi / Bluetooth | -     | -                                                                                |
|                   | 9377  | Qualcomm QCA9377 802.11a/b/g/n/ac (2.4 + 5GHz) + Bluetooth                       |
| Temperature Range | -     | Commercial Temperature (0° to +60°C)(Default)                                    |
|                   | TE    | Extended Temperature range (-20° to +70°C)                                       |
|                   | TI    | Industrial Temperature range (-40° to +85°C)                                     |
| Custom ID         | XXXX  | Custom Part number ID for customized Software loader and special component (BOM) |