

PICO-IMX7



- The PICO-IMX7 is a System on Module (SOM) based on an NXP i.MX7 Dual core Cortex-A7™ + M4™ processor clocking up to 1GHz.
- The PICO-IMX7 operates in commercial and extended temperature ranges from -20 to 70°C, providing industrial interfaces such as RGMII, USB, I²S, CAN, UART, SPI, I²C, PWM, GPIO with a RGB TTL graphic interface.
- The PICO-IMX7 is a member of the TechNexion “PICO pin-to-pin” product family, targeting low-power consumption embedded applications.
- 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



yocto
PROJECT



Core System

| | |
|--------------------------|--|
| Processor | NXP i.MX7 Dual |
| Processor speed | up to 1GHz |
| Architecture | ARM Cortex-A7 + M4 |
| PMIC | NXP PF3000 |
| Memory | up to 2GB DDR3L |
| Storage | eMMC (4GB Default) MicroSD Cardslot (optional) |
| Board-to-Board Connector | Edison compatible connector PICO 70-pin Hirose connectors |
| System on Module | PICO System on Module |

Connectivity

| | |
|-----------------|---|
| Network LAN | RGMII |
| Wi-Fi/Bluetooth | Qualcomm QCA9377 802.11 a/b/g/n/ac + BT (BR+EDR+BLE) |
| Antenna | MHF4 connector |

Signaling

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

Video

| | |
|----------------|---|
| Graphic Engine | Image re-sizing / rotation / overlay and CSC Pixel Processing Pipeline |
| Camera | MIPI CSI (2 lanes) |

Audio

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

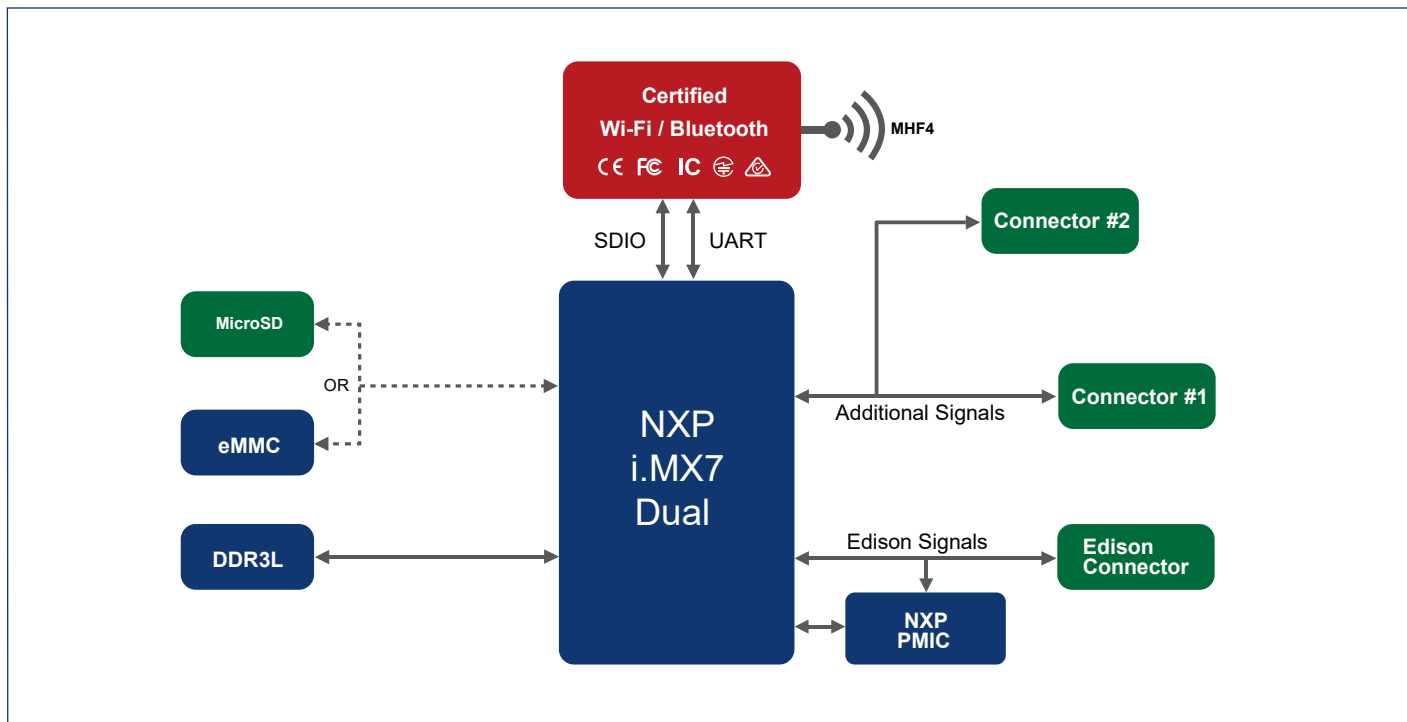
Operation Systems

| | |
|------------------|---------------------------|
| 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 v2.1.1 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

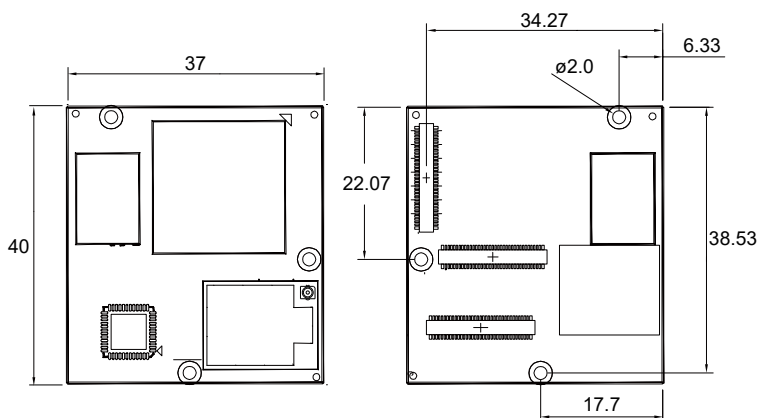
| | |
|-------------------|--|
| Dimensions | 37 x 40 mm / 1 3/8 x 1 5/8 inch |
| Form Factor | PICO Compute Module |
| Weight | 8 grams |
| Temperature | Commercial: 0° to +60°C Extended: -20° to +70°C |
| Relative Humidity | 10 to 90 % |
| MTBF | >100 000 Hours |
| Shock | 50G/25ms |
| Vibration | 20G/0-600Hz |

Power Specifications

| | |
|-------------------|----------------------------|
| Power Input | 4.25-5.25 VDC |
| Power Consumption | Depending on Configuration |

Dimensions

(units in mm)



Order Information :

PICO-IMX7x-xx-Rxx-xxx-xxxx-xx-xxxx

| | Code | Description |
|-------------------|-------|--|
| Processor | IMX7D | NXP i.MX7Dual |
| Processor Speed | 08 | 800MHz |
| | 10 | 1.0GHz |
| Memory | R05 | 512MB DDR3L |
| | R10 | 1GB DDR3L |
| Storage | MSD | MicroSD Cardslot |
| | E16 | eMMC 16GB |
| | EXX | eMMC other capacity |
| Wi-Fi / Bluetooth | - | - |
| Temperature Range | 9377 | Qualcomm QCA9377 802.11a/b/g/n/ac (2.4 + 5GHz) + Bluetooth |
| | - | Commercial Temperature range (0° to +60°C)(Default) |
| | TE | Extended Temperature range (-20° to +70°C) |
| Custom ID | XXXX | Custom Part number ID for customized software loader and special component (BOM) |