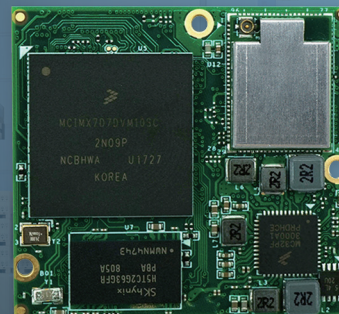


PICO-IMX7

- NXP i.MX 7 applications processor
- Cortex-M4 co-processor
- Low Power Dual core Cortex-A7 1 GHz processor
- Certified Wi-Fi 5 and Bluetooth LE



Specifications

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	16GB eMMC (default) MicroSD Cardslot (optional)
Board-to-Board Connector	PICO 70-pin Hirose connectors
System on Module	PICO SOM

Connectivity

Network LAN	RGMII
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)

Signaling

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

Video

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

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

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

Standard Support	Linux Yocto Android Ubuntu
Extended Support	Boot2Qt Commercial Linux FreeRTOS Real Time OS

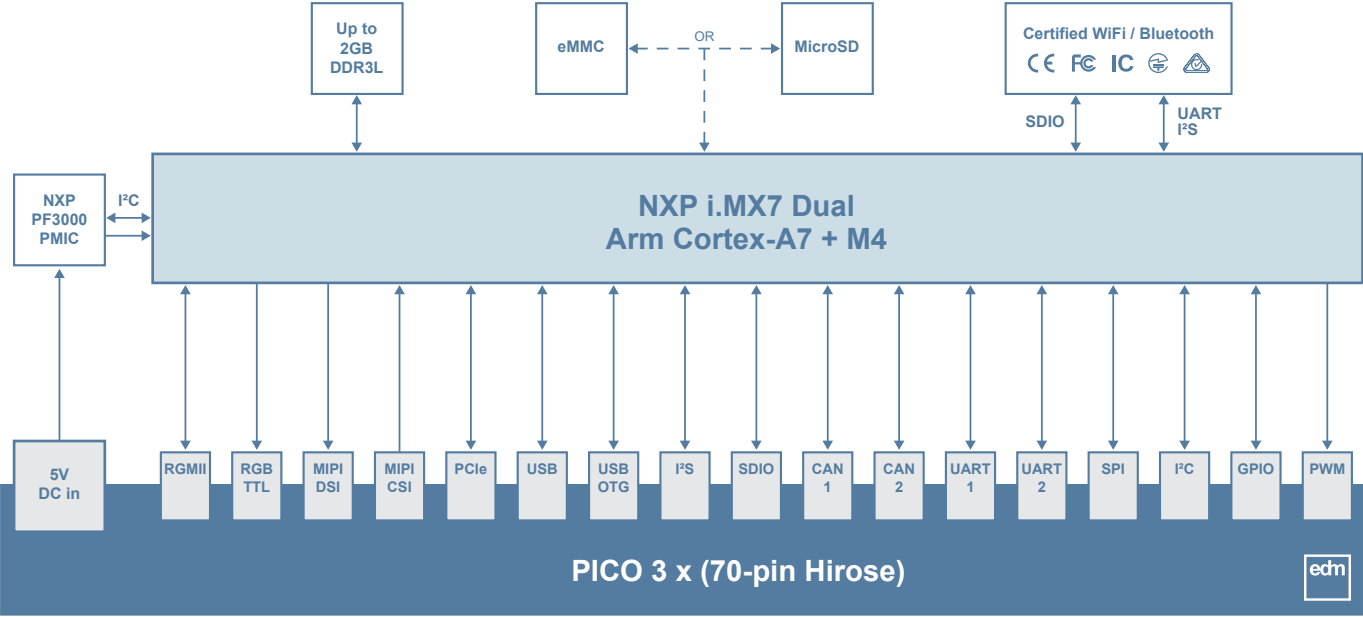
Dimensions	40 (W) x 37 (H) x 5.15 (D) mm
Form Factor	PICO
Relative Humidity	10 to 90 %
MTBF	100,000+ Hours
Shock	15G half-sine 11 ms duration
Operation Temperature	Commercial: 0° to +60° C Industrial: -20° to +70° C
Vibration	1 Grms random 5-500Hz hr/axis
Weight	8 grams

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

Technical drawings of the PCB showing top, side, and bottom views with dimensions:

- Top View:** Overall dimensions are 40.00 (width) and 37.00 (height).
- Side View:** Shows a thickness of 2.25. A feature is dimensioned at 1.3 from the right edge and 1.6 from the bottom edge.
- Bottom View:** Shows detailed dimensions for mounting and features:
 - Overall width: 38.53
 - Overall height: 34.27
 - Top mounting hole offset: 31.95
 - Top mounting hole diameter: $\varnothing 2$
 - Top mounting hole position: 22.07 from the right edge, 10.23 from the top edge.
 - Bottom mounting hole offset: 24.63
 - Bottom mounting hole position: 21.7 from the right edge, 6.33 from the bottom edge.
 - Other dimensions: 35.02, 26.4, 17.7, 1.47.

Block Diagram



Order Information

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

	Code	Description
Processor	IMX7D	NXP i.MX7 Dual
Processor Speed	10	1.0GHz
Memory	R05	512MB DDR3L
	R10	1GB DDR3L
	R20	2GB DDR3L
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 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)