PICO-IMX7

Main Features

- The PICO-IMX7 design based on the NXP i.MX7 multi-market applications processor is designed to enable secure and portable applications within the Internet of Things.

- Pin-compatible with the Intel Edison for sensors and low-speed I/O, but also adds additional expansion possibilities for multimedia and connectivity, that can easily be expanded and implemented for IoT designs.

- WiFi and Bluetooth communication interface.

EDISON				
Power 3.3~4.5V	SDIO	I²S	SPI	PWM
	USB OTG	UART	I²C	GPIO

EXP-A			
LVDS		RGMII	
TTL			

EXP-B			
CAN	PCIe	HDMI	SATA
I²C	USB HOST	MIPI	

Specifications

Core System

Processor	NXP i.MX7 Solo
	NXP i.MX7 Dual
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 compatibile connector
	PICO 70-pin Hirose connectors
System on Module	PICO System on Module

Connectivity

Network LAN	RGMII
WiFi	1x Broadcom BCM43438
	802.11 b/g/n (optional)
	1x Broadcom BCM4339
	802.11 a/b/g/n/ac (optional)
Bluetooth	1x Broadcom BCM43438
	BT 4.1 (BR+EDR+BLE) (optional)
	1x Broadcom BCM4339
	BT 4.1 (BR+EDR+BLE) (optional)
Antenna	u.FL connector (optional)

Signaling

I/O		
	RGB TTL	SDIO
	MIPI CSI	CAN
	MIPI DSI	UART
	RGMII	SPI
	PCIe	I²C
	USB	PWM
	USB OTG	GPIO
	I²S	

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	I²S (2 channel)

Power Specifications

Power Input	4.2-5.25V DC
Power Consumption	Depending on Configuration

Operation Systems

Standard Support	Android Things
	Linux
	Yocto
	Ubuntu
	Android
Extended Support	Commercial Linux

Block Diagram
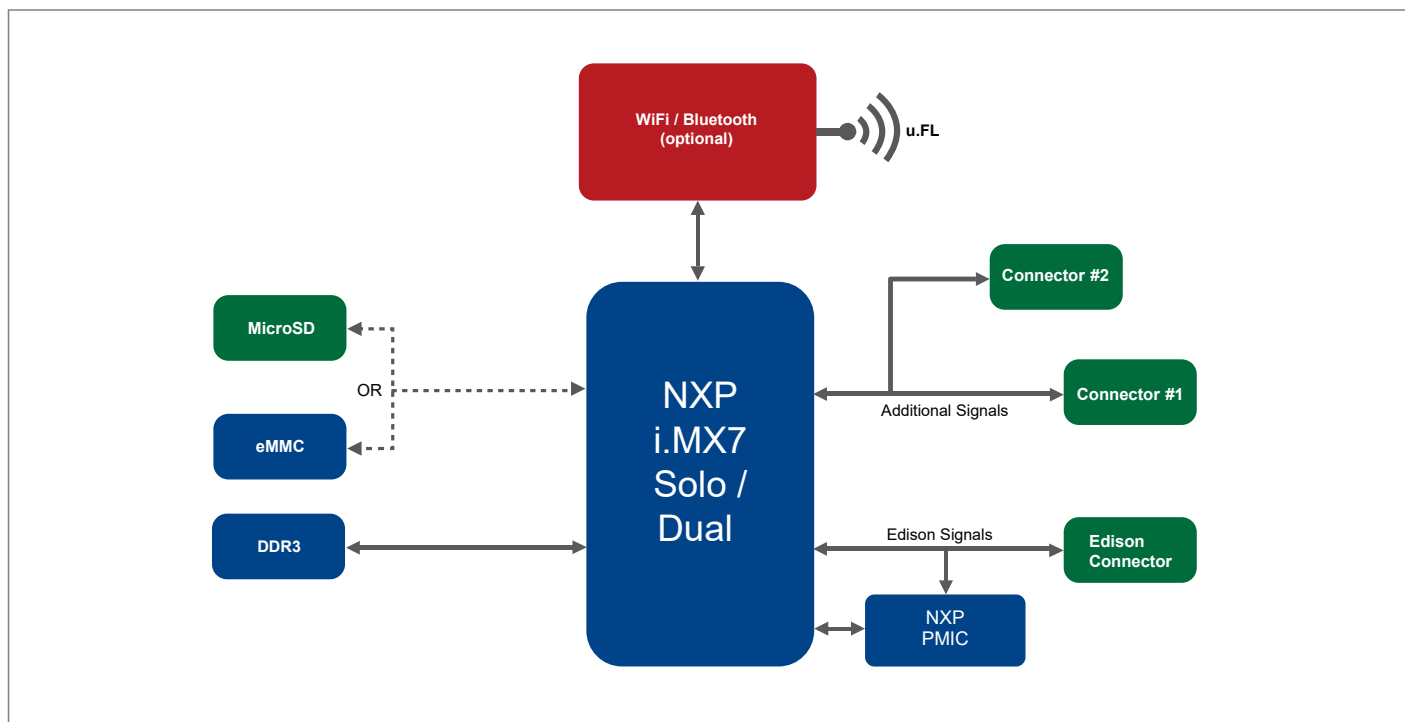
Environmental and Mechanical

Dimensions	37 x 40 mm / 1⅜ x 1⅝ 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
Certification	Compliant with CE / FCC / RoHS / REACH directives

Dimensions
(units in mm)
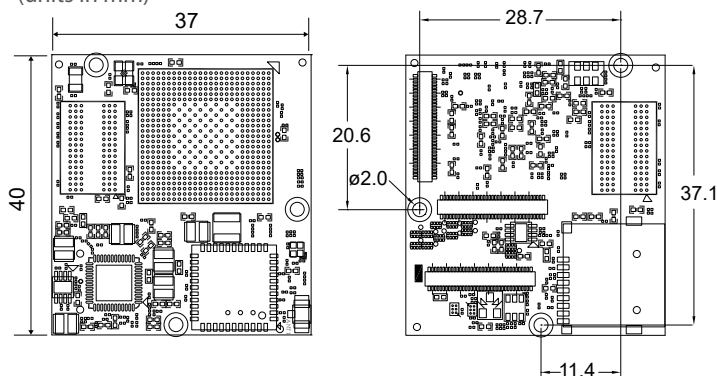
Order Information Example:

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

	Code	Description
Processor	IMX7S	NXP i.MX7 Solo
	IMX7D	NXP i.MX7 Dual
Memory	R05	512MB DDR3L
	R10	1GB DDR3L
Storage	MSD	MicroSD Cardslot
	E04	eMMC capacity in Gigabytes E04 = 4GB / E08 = 8GB / E16 = 16GB E32 = 32GB / E64 = 64GB
Bluetooth / WiFi	-	-
	BB	Broadcom BCM43438 802.11b/g/n (2.4Ghz) + Bluetooth 4.1
	BW	Broadcom BCM4339 802.11a/b/g/n/ac (2.4 + 5Ghz) + Bluetooth 4.1
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)

* Feel free to contact us for customization requests.