

Industrial IoT Gateway

IOT-GATE-iMX7

Datasheet v.1



IOT-GATE-iMX7 is a powerful Industrial IoT Gateway PC based on the NXP i.MX7 processor designed for industrial control and monitoring.

Designed for reliability and with 24/7 operation in mind, IOT-GATE-iMX7 features extensive wireless and wired connectivity including 3G/LTE modem, WiFi a/b/g/n, BT 4.1, 2x Gbit Ethernet, 4x USB2, RS485, RS232, and CAN.

This impressive Gateway PC has an extended temperature range of -40°C to 85°C in a small form factor of 10.8 x 8.3 x 2.4 cm. It also features a fanless design in aluminum with rugged housing, and it supports DIN-rail and wall mounting, making it ideal for industrial and harsh environment.

Also available as a [System-on-Module](#) and [Single Board Computer](#).

Key Features:

- NXP i.MX7 CPU, dual-core Cortex-A7 1GHz
- Up to 2GB DDR3 and 32GB eMMC
- 3G/LTE modem, WiFi a/b/g/n, BT 4.1
- 2x Gbit Ethernet, 4x USB2, RS485, RS232, CAN
- Support for PoE powered mode

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CPU Core, Memory and Network

Note:

- "Option" column specifies the configuration code required to have the particular feature.
- "+" means that the feature is always available

Feature	Specification	Option
CPU	Freescall i.MX7 Dual ARM Cortex-A7, 1GHz	+
	NEON SIMD and VFPv4	
Real-Time Co-processor	ARM Cortex-M4, 200Mhz	+
RAM	512MB-2GB, DDR3L-1066	D
Storage	eMMC flash, 4GB-32GB	N
	Micro-SD socket	+
Ethernet	1x Gigabit Ethernet port, RJ45 connector	E1
	2x Gigabit Ethernet ports, RJ45 connectors	E2
WiFi	802.11b/g/n WiFi interface TI WiLink 8 WL1801 module	W
	Dual-band 2x2 802.11a/b/g/n WiFi interface TI WiLink 8 WL1837 module	WAB
Bluetooth	Bluetooth 4.1 BLE TI WiLink 8 WL1837 module	WAB
Cellular	3G cellular module, Simcom SIM5360 (EU bands)	J3GE
	4G/LTE cellular module, Simcom SIM7100E (EU bands)	J4GE
	4G/LTE cellular module, Simcom SIM7100A (US bands)	J4GA
	On board micro-SIM card socket	+

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Display, Audio and System

Feature	Specification	Option
DVI	DVI, up to 1920x1080, HDMI connector	+
Analog Audio	Analog audio - stereo line-out, stereo line-in, 3.5mm jacks	+
RTC	Real time clock operated from on-board coin-cell battery	+

I/O

PCI Express	mini-PCIe socket, full-size	+
USB	4x USB2.0 host, type-A connectors	+
Serial	1x RS485 port, half-duplex 2-wire, RJ11 connector	Not Y
	1x RS232 port, ultra-mini serial connector	+
	1 x serial console via UART-to-USB bridge, micro USB connector	+
CAN	1x CAN bus interface, RJ11 connector * precludes RS485 port	Y
UART	Up-to 1 x UART, embedded I/O header	+
SPI	Up-to 1x SPI interface, embedded I/O header	+
I2C	Up-to 1x I2C interface, embedded I/O header	+
GPIO	Up-to 12x GPIO, embedded I/O header	+
PoE	Support for PoE 802.3af (powered device)	POE and E2

Electrical, Mechanical and Environmental Specifications

Feature	Specification
Supply Voltage	Unregulated 8V to 24V
Digital I/O voltage	3.3V
Dimensions	108 x 83 x 24 mm
Enclosure Material	Aluminum housing
Cooling	Passive cooling, fanless design
Weight	450 gram

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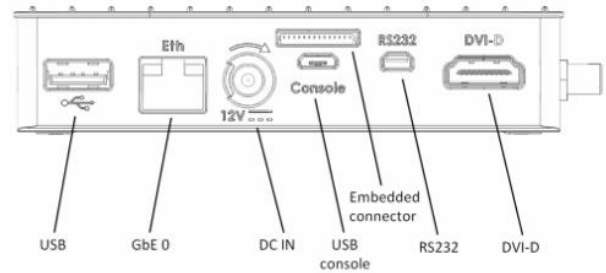
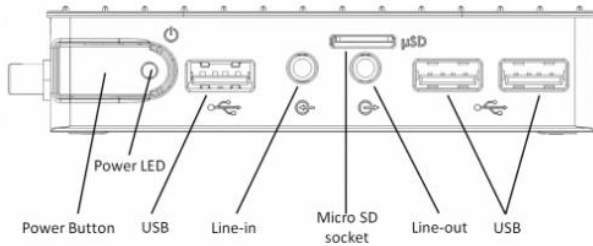
Feature	Specification
Compliance	FCC/CE, RoHS-II
MTTF	> 200,000 hours
Operating Temperature (case)	Commercial: 0° to 70° C Extended: -20° to 70° C Industrial: -40° to 85° C
Storage Temperature	-40° to 85° C
Relative Humidity	10% to 90% (operation) 05% to 95% (storage)

Software

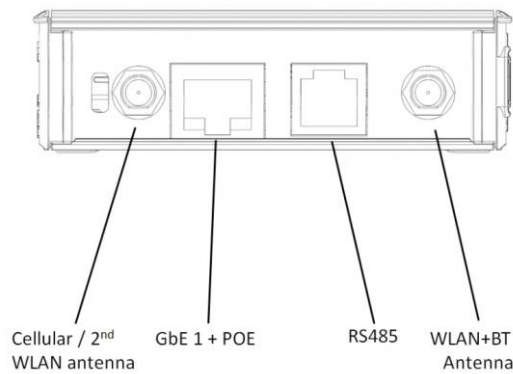
BSP	Full Board Support Package and ready-to-run images
OS Support	Linux kernel, Yocto Project file-system and U-Boot Certified with Microsoft Azure IoT

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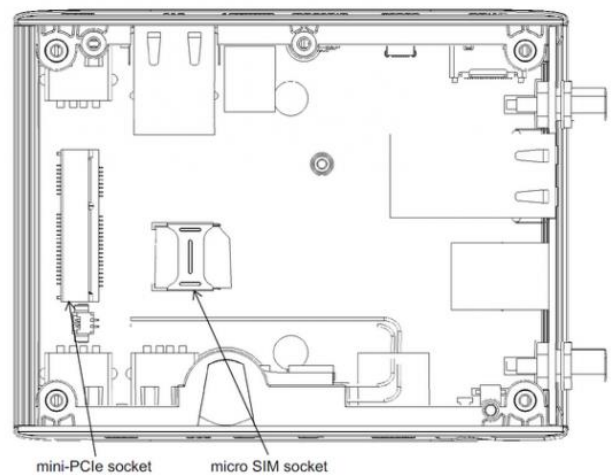
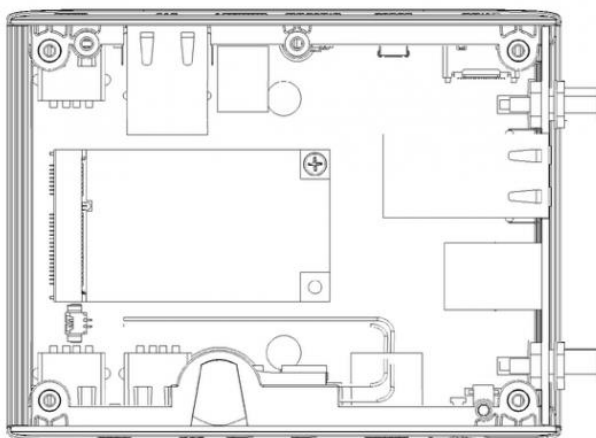
Front and Rear view



Side view



Service bay view



IOT-GATE-iMX7

IOT-GATE-iMX7 Evaluation Kit

Hardware

- IOTG-CIMX7-D1G-N16-E2-WAB-POE-PS-XL
- Serial port cable
- HDMI to DVI adapter
- USB cable
- RS485 cable
- Embedded I/O cable
- 2x WiFi antenna
- DIN-rail mounting bracket
- Wall mounting bracket

Technical Support

- Technical support for 12 months.
- 45-day trial period. Eval Kit will be accepted for refund if the user finds the product not suitable for his needs.

