

iEP-5020G Series Industrial IoT Controller

ASRock
— Industrial —

Preliminary



Basic SKU

PoE SKU
5LAN SKU

DIO SKU

KEY FEATURES

- Latest and Powerful Intel® Atom® x7433RE Processor (Amston Lake)
- Fan-less and Rugged Design
- -40°C to 70°C Wide Operating Temp. for Basic SKU
- -40°C to 50°C Wide Operating Temp. for PoE SKU
- 6-36VDC Wide Range Power Inputs for Basic SKU
- 19-36VDC Wide Range Power Inputs for PoE SKU
- Most Flexible IOs and Expansion for Industrial Applications
- Intel® TCC and TSN Support for Real-Time Computing
- DIN Rail or Wall Mount Options
- 4 x Intel 1G LAN (2 Support IEEE 802.3AF PoE Ports)
- 1 x Intel 2.5G LAN
- Support Intel® IN-Band ECC

SPECIFICATIONS

System Core

| | |
|-----------|---|
| Processor | Intel® Atom® x7000RE Processor (Amston Lake Platform) - Intel® Atom® x7433RE, 4C, 1.5GHz, 9W |
| Video | 1 x Type-C, 1 x DP1.4a |
| Memory | 1 x DDR5 4800MHz SO-DIMM, up to 16GB (In-Band ECC) |

I/O Interface

| | |
|-----------------------|--|
| Ethernet | 2 x Intel® I210-IT (1GbE) 1 x Intel® I226-IT (2.5GbE, support TSN) 2 x Intel® I210-AT for PoE SKU/5LAN SKU |
| Ethernet/PoE (Option) | 2 x Intel® i210AT, each port supports IEEE 802.3AF PoE for PoE SKU |
| Serial Port | 2 x RS-232/422/485 (9-pin D-sub connector) |
| USB | 2 x USB 3.2 Gen2 1 x USB2.0 1 x Type-C USB3.2 Gen2 |
| Digital I/O | 8DIs/8DOs with sink/source isolation 3KV for DIO SKU |
| Audio | 1 x Mic in 1 x Line out |

Expansion

| | |
|----------------------|---|
| SIM | 1 x Nano SIM Card slot |
| RF& Antenna (Option) | M.2 Wi-Fi 6E module supports IEEE 802.11 a/b/g/n/ac/ax + BT 5.2 - 3 x 4G LTE antenna and 2 x Wi-Fi antenna - 4 x 5G antenna and 2 x Wi-Fi antenna |
| M.2 Socket | 1 x M.2 3042/3052 Key B (PCIe Gen3x1 / USB3.2 Gen1x1 mode) - Support 4G LTE/5G module 1 x M.2 2230/2260 Key E (PCIe Gen3x1 / USB2.0 mode) - Support Wifi/BT module |

Manageability / Security

| | |
|---------------|-----------------------------------|
| Manageability | WDT, Intel® In-Band Manageability |
| Security | TPM2.0 |

Power Supply

| | |
|---------------------------|--|
| DC Input | 2 x 3-pin terminal block (Phoenix type) for 6 to 36V DC input (For Basic/5LAN/DIO SKU) 2 x 3-pin terminal block (Phoenix type) for 19 to 36V DC input (For PoE SKU) - OVP, UVP, OCP, plus 80V surge protection |
| AC to DC Adaptor (Option) | AC input 100-240Vac, 1.5A 50-60Hz, DC output 19V, 3.42A, 65W Adaptor (For Basic/5LAN/DIO SKU) AC input 100-240Vac, 1.8A 50-60Hz, DC output 19V, 6.32A, 120W Adaptor (For PoE SKU) |

Storage Device

| | |
|------------|--|
| SD Slot | 1 x Micro SD card slot(SD Card specification version 3.01) |
| M.2 Socket | 1 x M.2 2280 Key M (PCIe Gen3x2) |

Mechanical

| | |
|-------------------|---|
| Dimensions | 58mm (W) x 125mm (D) x 157mm (H) |
| Indicator | 1 x NVMe Storage LED 1 x Wi-Fi / BT LED 2 x Diagnostic LED 2 x Power LED |
| Function | Power on Button with LED |
| Net Weight | TBD |
| Mounting (Option) | DIN-Rail or Wall mounting |

Environmental

| | |
|-----------------------|--|
| Operating Temperature | For Basic/5LAN/DIO SKU: -40°C ~ 70°C (-40°F~158°F) (w/ airflow 0.5~0.8m/s) For PoE SKU : -40°C ~ 50°C (-40°F~122°F) (w/ airflow 0.5~0.8m/s) |
| Storage Temperature | -40°C ~ 85°C (-40°F~185°F) |
| Humidity | -95% @ 40°C (non-condensing) |
| Vibration | Operating: 5 Grms, 5-500 Hz, 3 axes with SSD |
| ESD | Contact +/-8 KV, Air +/-15 KV |
| Shock | Operating 100G, half sine 11 ms duration with SSD |
| EMC | CE (EN61000-6-4/-2) and FCC Class A |
| Safety | LVD |

Add-on Feature / OS Support

| | |
|----------------------|---|
| Real-Time Enablement | TSN, TCC support under Ubuntu (only LAN1) |
| OS Support | Windows®, Linux |

| Order Information | SKU | Processor | Storage | Wi-Fi* | 4G LTE/5G* | LAN | PoE | DI/DO |
|-------------------|-----------|-----------|-----------|-------------|-------------|-----|-------------|-------------|
| iEP-5020G-020 | Basic SKU | x7433RE | M.2 Key M | Support | Support | 3 | Not Support | Not Support |
| iEP-5020G-021 | PoE SKU | | | Support | Support | 5 | Support | Not Support |
| iEP-5020G-022 | 5LAN-WIFI | | | Support | Not Support | 5 | Not Support | Not Support |
| iEP-5020G-023 | 5LAN-5G | | | Not Support | Support | 5 | Not Support | Not Support |
| iEP-5020G-024 | DIO SKU | | | TBD | TBD | 3 | Not Support | Support |

*The Wi-Fi, 4G LTE and 5G module kits are purchased separately.

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660