

iEP-5010G Series Industrial IoT Controller

ASRock
— Industrial —



iEP-5010G-010

iEP-5010G-011/012/013

KEY FEATURES

- Latest and Powerful Intel® Atom® x6000E Processor (Elkhart Lake-PU)
- Fan-less and Rugged Design, Wide Temperature Operation (-40 °C to 70 °C)
- 6-36VDC Wide Range Power Inputs
- 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® x6000E Processor (Elkhart Lake-PU Platform) - Intel Atom® x6416RE, 4C, 1.7GHz, 9W - Intel Atom® x6214RE, 2C, 1.4GHz, 6W
Video	1 x HDMI 2.0b, 1 x VGA
Memory	2 x DDR4 3200MHz SO-DIMM, up to 32GB (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 iEP-5010G-011 series only
Serial Port	3 x RS-232/422/485 (9-pin D-sub connector)
USB	2 x USB 3.2 Gen1x1 2 x USB 2.0
Digital I/O	4DIs/4DOs (9-pin D-sub connector)
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 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	1 x 3-pin pluggable terminal block (Phoenix type) for 6 to 36V DC input (For iEP-5010G-010/012/013 Series) 1 x 3-pin pluggable terminal block (Phoenix type) for 19 to 36V DC input (iEP-5010G-011 Series) - 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 iEP-5010G-010/012/013 Series

Storage Device

SD Slot	1 x Micro SD card slot(SD Card specification version 3.01)
SATA(Optional)	1 x 2.5" 9.5mm SATA3 SSD (For iEP-5010G-010 only)
M.2 Socket	1 x M.2 2280 Key M (PCIe Gen3 / SATA3 mode)

Mechanical

Dimensions	58mm (W) x 125mm (D) x 157mm (H)
Indicator	1 x SATA / NVMe Storage LED, 1 x Wi-Fi / BT LED
Function	Power on Button with LED, Clear CMOS Button
Net Weight	1.3 kg
Mounting (Option)	DIN-Rail or Wall mounting

Environmental

Operating Temperature	For iEP-5010G-010/012/013 Series : -40°C ~ 70°C (-40°F~158°F) (w/ airflow 0.5~0.8m/s) For iEP-5010G-011 : -40°C ~ 50°C (-40°F~122°F) (w/ airflow 0.5~0.8m/s) -40°C ~ 85°C (-40°F~185°F)
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 and FCC Class A (EN61000-6-4/-2)
Safety	LVD

Add-on Feature / OS Support

Real-Time Enablement	TSN, TCC support under Ubuntu (only LAN1)
OS Support	Windows 10, Ubuntu 22.04 LTS

Order Information	Basic SKU	PoESKU	5LAN SKU	
	iEP-5010G-010	iEP-5010G-011	iEP-5010G-012	iEP-5010G-013
CPU	Intel Atom x6416RE 1.70 GHz SoC			
WiFi/BT	Support*	Support*	Support*	N/A
4G LTE/ 5G (with SINK)	Support** (Choose an option)	N/A	N/A	Support**
2.5" Storage	N/A	N/A	N/A	N/A
PoE	N/A	Support IEEE 802.3AF PoE for Intel I210-AT	N/A	N/A
Ethernet	2 x Intel I210-IT 1 x Intel I226-IT	2 x Intel I210-IT 1 x Intel I226-IT 2 x Intel I210-AT	2 x Intel I210-IT 1 x Intel I226-IT 2 x Intel I210-AT	2 x Intel I210-IT 1 x Intel I226-IT 2 x Intel I210-AT

*Support by additional Wifi/BT kit

**Support by additional 4G LTE/5G kit or 2.5" Storage kit

Assured Systems

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