

iEP-5010G Series Industrial IoT Controller

ASRock
— Industrial —



Basic SKU



PoE SKU
5LAN-WIFI SKU
5LAN-5G SKU

KEY FEATURES

- Latest and Powerful Intel® Atom® x6000RE Processor (Elkhart 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/5LAN/5G 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® x6000RE Processor (Elkhart Lake Platform) - iEP-5010G: Intel Atom® x6425RE, 4C, 1.9GHz, 12W - iEP-5011G: 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 (RJ45 8P8C) 1 x Intel® I226-IT, Support TSN (RJ45 8P8C) 2 x Intel® I210-AT for PoE SKU/5LAN SKU (RJ45 8P8C)
Ethernet/PoE (Option)	2 x Intel® I210-AT (RJ45 8P8C), PoE output max.15.4W/port, each port supports IEEE 802.3AF PoE. (For PoE SKU)
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 Basic/5LAN SKU) 1 x 3-pin pluggable 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 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)
SATA (Option)	1 x 2.5" 9.5mm SATA3 SSD (For Basic SKU 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	Basic SKU: 1.43kg PoE SKU: 1.75kg 5LAN SKU: 1.65kg
Mounting (Option)	DIN-Rail or Wall mounting

Environmental

Operating Temperature	For Basic/5LAN 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 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	SKU	Processor	2.5 Storage	WiFi*	4G LTE/5G*	LAN	PoE
iEP-5010G-010	Basic SKU	X6425RE	Support by additional kits	Support	Support	3	Not Support
iEP-5011G-010		X6214RE					
iEP-5010G-011	PoE SKU	X6425RE	Not Support	Support	Not Support	5	Support
iEP-5011G-011		X6214RE					
iEP-5010G-012	5LAN-WIFI	X6425RE	Not Support	Support	Not Support	5	Not Support
iEP-5011G-012		X6214RE					
iEP-5010G-013	5LAN-5G	X6425RE	Not Support	Not Support	Support	5	Not Support
iEP-5011G-013		X6214RE					

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

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