

nPAC 2000 Series

Intel Elkhart Lake x6212RE Processor



Main Features

- Onboard Intel Elkhart Lake x6212RE Processor, 1.20 GHz
- 1 x HDMI (Resolution : 1920 x 1080, Isolation)
- 2 x Intel® I210-IT GbE LAN ports; support WoL, teaming and PXE
- 2 x USB 3.0 ports
- 1 x RS485/RS422(Isolation)
- 1 x HDMI (Resolution : 1920 x 1080, Isolation)
- 2 x RJ45 Connector with LAN speed and Link/Active LEDs (3 x RJ45 Connector Fieldbus optional)
- Support -15°C~60°C operating temperature

Product Overview

Powered by Intel Atom® x6212RE processor, 1.20 GHz (formerly codenamed "Elkhart Lake"), nPAC 2000 presents IoT controller for factory automation. Up to 4G LPDDR4 memory, the nPAC 2000 supports operating temperature from -15 °C~60°C with typical DC input 24V. The nPAC 2000 has high integration ability with 1 x COM port (RS232/422/485), 2 x USB 3.0 ports and 2 x RJ45 connector with LAN speed and Link/Active LED which makes it a reliable connection with devices in factory automation applications, IoT applications and communication applications. nPAC 2000 is definitely the top choice for M2M intelligent system as a factory automation controller.

Specifications

CPU Support

- Onboard Intel Atom® x6212RE Processor, 1.20 GHz

Main Memory

- 1 x LPDDR4-2133 4GB

Display Option

- 1 x HDMI (Resolution : 1920 x 1080)

I/O Interface

- 2 x USB 3.0 ports
- 1 x RS485/RS422(Isolation)
- 1 x HDMI (Resolution : 1920 x 1080, Isolation)
- 2 x RJ45 Connector with LAN speed and Link/Active LEDs (3 x RJ45 Connector Fieldbus optional)

I/O Interface - Internal

- 1 x USB 2.0 ports

Storage Device

- 1 x M.2 2242 SATA Key B

Power Requirements

- +24V DC Input with reverse power protection +/- 20 %
- 5-pin Phoenix contact connector for RS485/422

Dimensions

- 95mm (W) x 100mm (D) x 76mm (H)

OLED

- Display content can be defined by the user
- First row and second row can put 20 ASCII codes

Construction

- PC/ABS chassis and Aluminum extrusion heat sink

Environment

- Operating temperature: Ambient with air flow: -15°C to 60°C (according to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14)
- Storage temperature: -40°C to 85°C
- Relative humidity: 95 %, no condensation
- Shock protection:
 - M.2: 10G @ half sine, 11ms(operation) , IEC60068 2-27
- Vibration protection w/ M.2 & SSD condition:
 - Random: 1Grms @ 5~500 Hz, IEC60068-2-64
 - Sinusoidal: 1Grms @ 5~500 Hz, 1 oct/min, 1hr/axis IEC60068-2-6

Certifications

- CE approval
 - EN61326 1
 - EN61000 6-2
 - EN61000 6-4
 - EN61131 2
- FCC Class A

Support OS

- Windows10 Enterprise (64-bit)



Ordering Information

Model name	P/N	Spec				
		OS	CPU	Storage	Lan Port Amount	Software
nPAC 2000-E01	10P1020000X0	-	-	-	2x Lan Port	-
nPAC 2000-E02	10P1020005X0	-	-	-	3x Lan Port	-
nPAC 2000-E01GW	10P1020001X0	Windows 10	Intel Elkhart Lake -x6212RE	128G	2x Lan Port	VIC-Flow
nPAC 2000-E01CDS	10P1020002X0	Windows 10	Intel Elkhart Lake -x6212RE	128G	2x Lan Port	CODESYS SoftPLC
nPAC 2000-E02CDS	10P1020003X0	Windows 10	Intel Elkhart Lake -x6212RE	128G	3x Lan Port	CODESYS SoftPLC

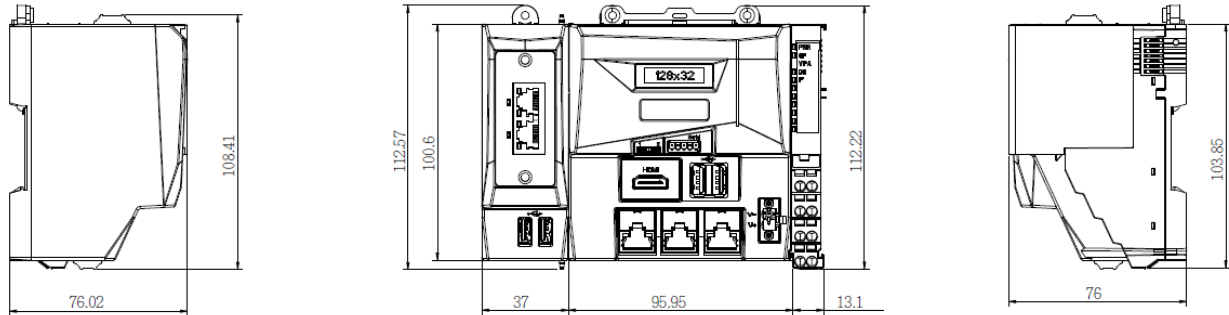
Expansion Module (Left side)

- **nPAC 2000-EX01 (P/N: 10P1020004X0)**
Extension Module, 1 x mini-PCIe (1x mSATA optional) socket support optional fieldbus/mSATA/Wi-Fi/4G LTE/3.5G modules
- **FBI90E-COM (P/N: 10J50090E15X0)**
CANOpen Master, Universal FBI module kit
- **FBI90E-DNM (P/N: 10J50090E10X0)**
DeviceNET Master, Universal FBI module kit
- **FBI90E-ECM (P/N: 10J50090E19X0)**
EtherCAT Master, Universal FBI module kit
- **FBI90E-EPM (P/N: 10J50090E20X0)**
Ethernet/IP Master, Universal FBI module kit
- **FBI90E-PBM (P/N: 10J50090E09X0)**
PROFIBUS Master, Universal FBI module kit
- **FBI90E-PNM (P/N: 10J50090E21X0)**
ProfiNET Master, Universal FBI module kit

Slice I/O Module (Right side)

- **Power module (P/N: 7900000116X00)**
Power supply DC 24 V, Reverse polarity protection
- **Power module (P/N: 7900000064X00)**
Power supply DC 24 V for bus supply 5 V, 2 A, Reverse polarity protection
- **Digital input (P/N: 7900000065X00)**
8x DI, DC 24 V
- **Digital output (P/N: 7900000137X00)**
8x DO, DC 24 V, 0.5 A, NPN
- **Analog input (P/N: 7900000117X00)**
4x AI, 12 Bit, Voltage 0...10 V
- **Analog output (P/N: 7900000118X00)**
4x AO, 12 Bit, Voltage 0...10 V
- **Counter module (P/N: 7900000072X00)**
1x Counter 32 Bit (AB), DC 5 V, Up to 2 MHz (difference signal)

Dimension Drawing



Optional Adapter

- **Adapter (P/N: 7400060067X00)**
Power adapter 60W/24V
- **Power cord - US (P/N: 603POW0431X00)**
US standard 18AWG 3C 60°C L=1800mm
- **Power cord - EU (P/N: 603POW0432X00)**
EU standard H03VV-F 0.75mm² 3C L=1800mm
- **Power cord - UK (P/N: 603POW0433X00)**
UK standard H03VV-F 0.75mm² 3C L=1800mm

NVRAM (Inside)

- **NISK-NVRAM (P/N: 10JKNVRAM01X0)**
1MB NVRAM mini-PCIe Module

Optional CODESYS Software

Standard License

- **CODESYS SoftPLC license (P/N: 86SWCDS3000X0)**
SoftPLC Runtime
(nPAC 2000-E01CDS / nPAC 2000-E02CDS are included)
- **CODESYS SoftPLC w/ TargetVisu license (P/N: 86SWCDS3100X0)**
Runtime and Visualization function
- **CODESYS SoftMotion license(P/N: 86SWCDS3001X0)**
SoftMotion Runtime
- **CODESYS SoftMotion w/ TargetVisu license(P/N: 86SWCDS3101X0)**
SoftMotion Runtime and Visualization function

Extra Upgrade License

- **SoftMotion license only (P/N: 86SWCDS3U11X0)**
Upgrade from SoftPLC to SoftMotion
- **TargetVisu license only (P/N: 86SWCDS3U01X0)**
CODESYS Runtime support Visualization function
- **WebVisu license (P/N: 86SWCDS3U02X0)**
CODESYS Runtime support Web Visualization function
- **Activation Dongle USB (P/N: 6014500032X00)**
CODESYS Runtime License Activation Dongle USB