

NEXIOT

Your Partner in Smart Manufacturing



CODESYS



nPAC

NexAloT **P**rogrammable **A**utomation **C**ontroller

SoftPLC & SoftMotion

Future Factory In Today



What is nPAC?

nPAC

Stands for NexAloT programmable automation controller

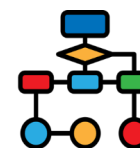
Extension

- If you need larger storage, LTE network or fieldbus modules, Expansion modules can be the last piece of the puzzle to meet all your needs.



I/O Modules

- Compared with general PLC, nPAC can also support Distributed IO and Remote IO, and it is more flexible in use.



VIC-Flow

Controller

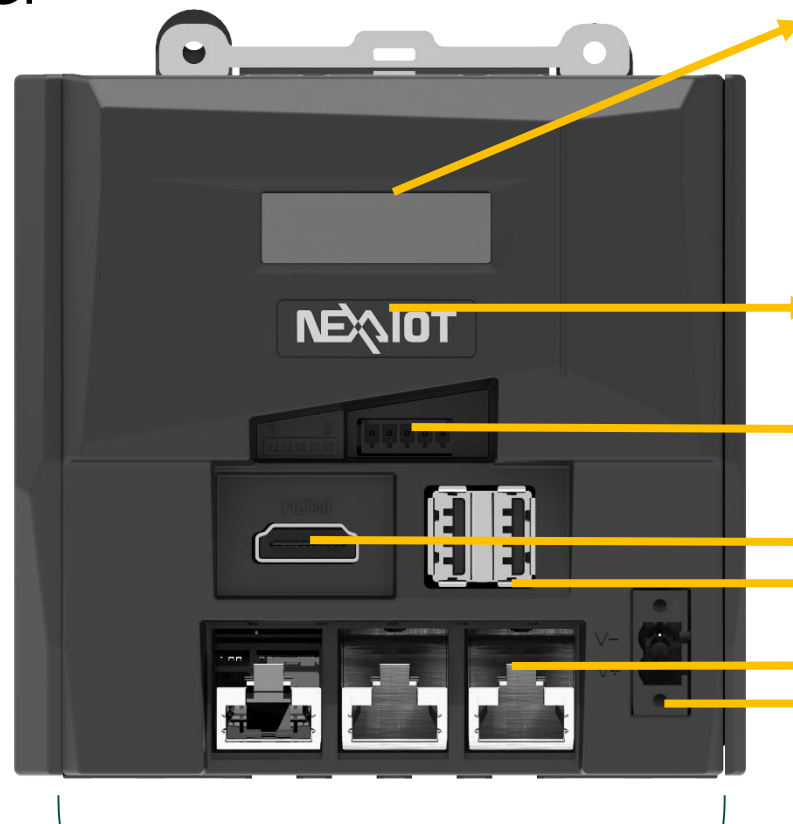
- Software and hardware integrated controller that can customize logic content through programming by VIC-Flow, CODESYS, C, C# and etc..
- nPAC is an I4.0 Ready controller that support control software and complies with IEC61131-3 PLC Open to programming PLC language

nPAC

NexAloT Programmable Automation Controller

I/O Interface - Controller

- **Dimension** : 95mm x 100mm x 76mm(W) x (D) x (H) mm
- **Mounting** : DIN Rail Mount
- **Power input** : 24V DC Input with +/- 20%
- **CPU** : Elkhart Lake - Intel ARK
- **Memory** : 4G (LPDDR4)
- **Storage** : M.2 2242(B-KEY - SATA)
- **NVRAM** : 1MB (Option)



OLED

nPAC's OLED can display user define, such as communication status, Power status, IO status, computer operation status, etc.

USB 2.0 (internal)

Battery (internal)

Serial port (RS-485/422)

HDMI

USB 3.0

LAN Port (2x Lan, 1x Fieldbus)

Power input : 24V

Controller

nPAC

NexAloT Programmable Automation Controller

New Product Launch |
2023 Q1

I/O Interface –VIPA I/O & Expansion

Mini-PCIE interface

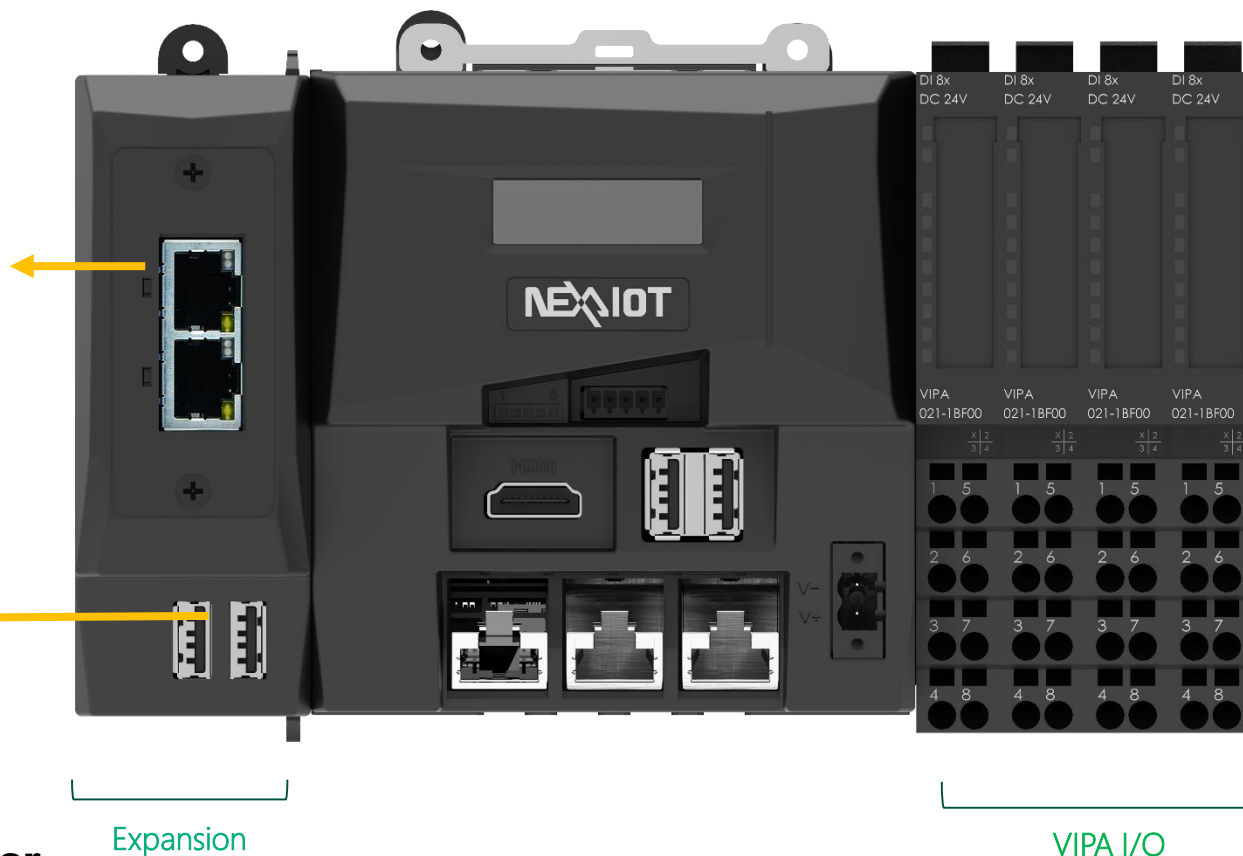
Support mSATA & PCIE x1 signals

Such as Storage, Wireless module

Fieldbus module

<PROFINET, PROFIBUS, DeviceNet,
CANopen>

USB 2.0

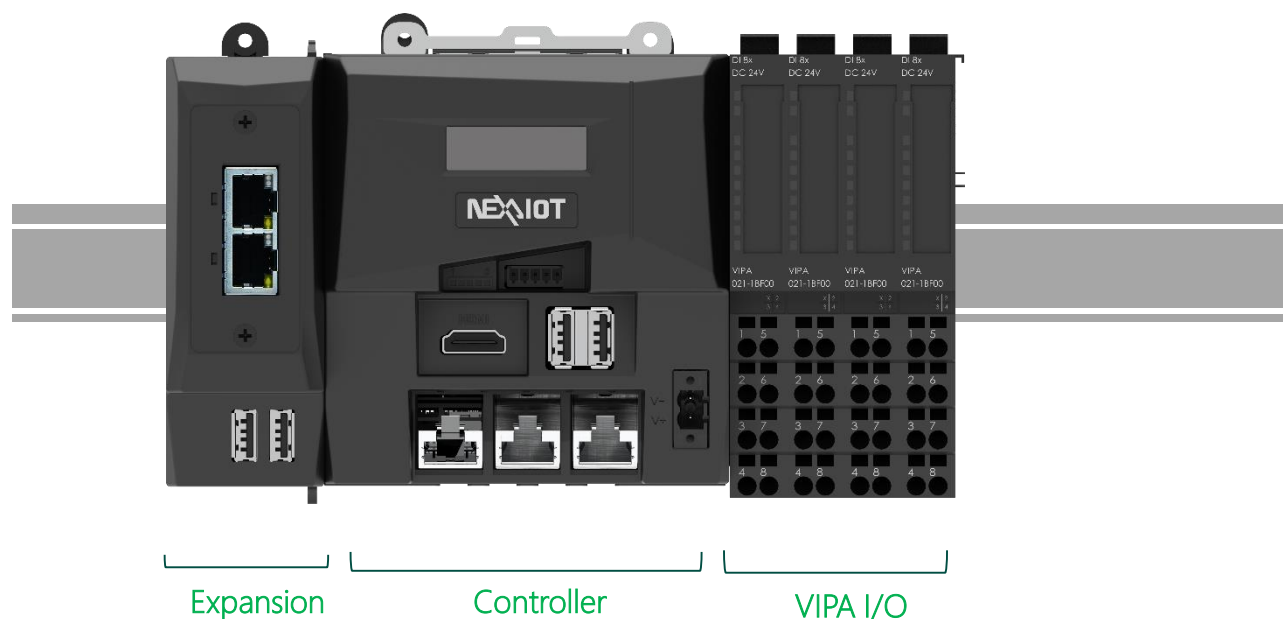


nPAC

NexAloT Programmable Automation Controller

Modularize (PCIe, VIPA I/O)

New Product Launch |
2023 Q1



nriPAC

NexAloT Programmable Automation Controller

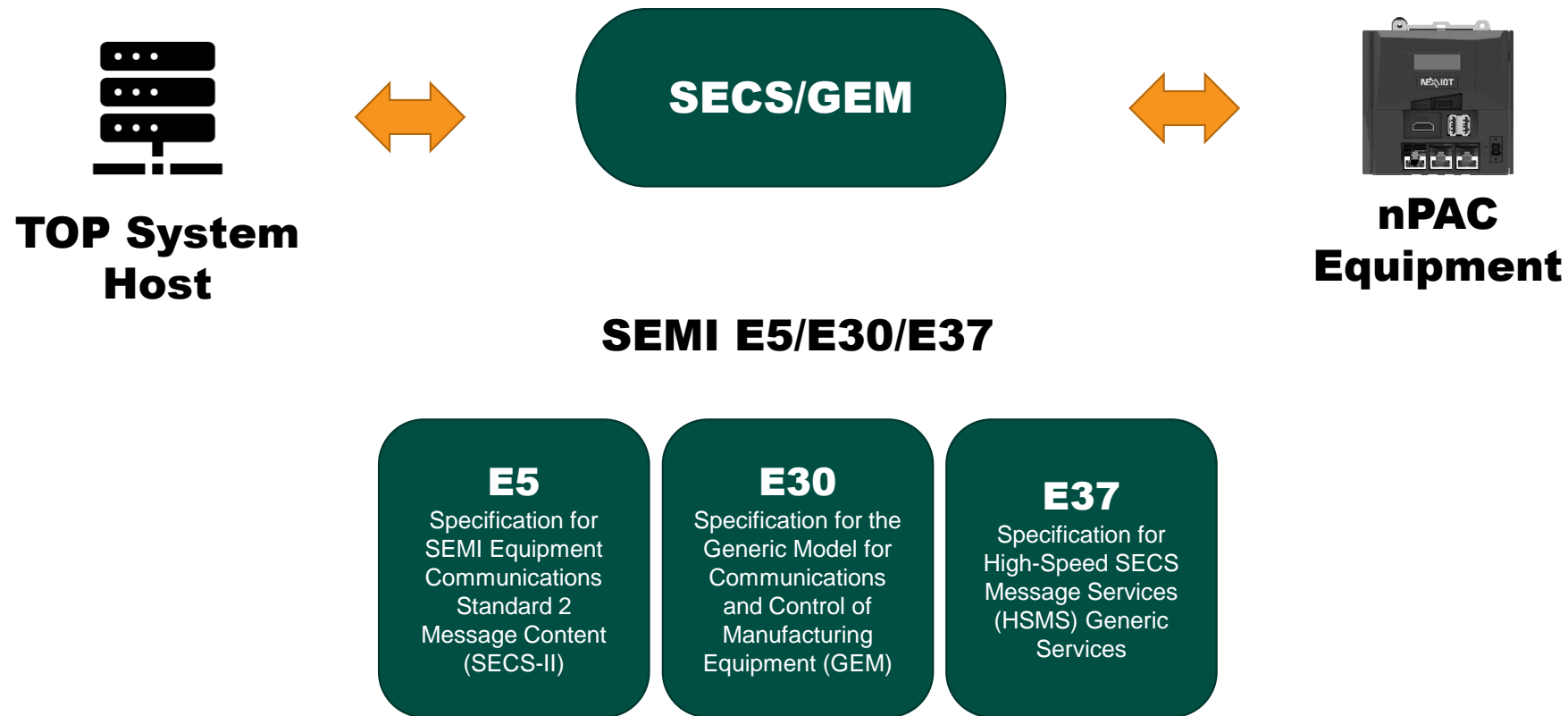
2022
I4.0 Tech DAY

VIPA modules :

<ul style="list-style-type: none">IM 053EC - EtherCAT slave	Remote
<ul style="list-style-type: none">PM 007-0AA00 - Power modulePM 007-1AB00 - Power modulePM 007-1AB10 - Power module	Power
<ul style="list-style-type: none">SM 032-1BB30 - Analog outputSM 032-1BB40 - Analog outputSM 032-1BB70 - Analog inputSM 032-1BD30 - Analog input	AI/AO
<ul style="list-style-type: none">SM 032-1BD40 - Digital outputSM 032-1BD70 - Digital outputSM 032-1CB30 - Digital inputSM 032-1CB40 - Digital input	DI/DO
<ul style="list-style-type: none">FM 050-1BA10 - CounterFM 050-1BB40 - Frequency measurementFM 050-1BS00 - EncoderFM 054-1BA00 - Stepper motor moduleFM 054-1CB00 - DC motorFM 054-1DA00 - Pulse Train Output	Function

NEXIOT

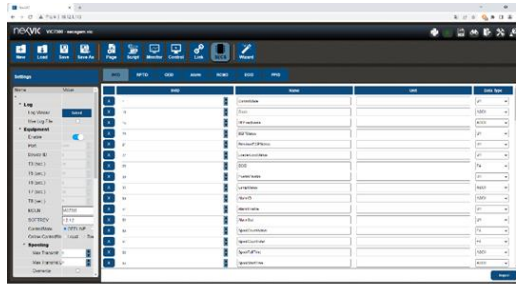
nPAC applied to SEMI-SECS/GEM



nPAC

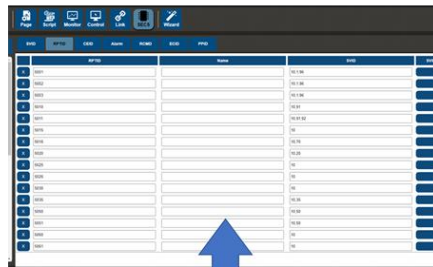
NexAloT Programmable Automation Controller

nPAC applied to SEMI-SECS/GEM



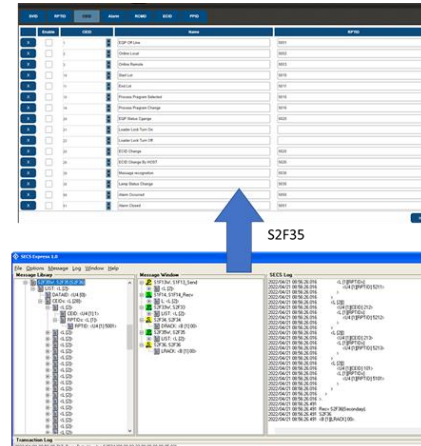
The screenshot shows the 'SVID Table' configuration window in the nPAC software. It features a table with columns for SVID, Name, and other parameters. A left-hand menu contains various configuration options like 'Log', 'Equipment', 'SVID', 'SECS', 'GEM', 'SEMI', 'S2F', 'S6', 'S7', 'S8', 'S9', 'S10', 'S11', 'S12', 'S13', 'S14', 'S15', 'S16', 'S17', 'S18', 'S19', 'S20', 'S21', 'S22', 'S23', 'S24', 'S25', 'S26', 'S27', 'S28', 'S29', 'S30', 'S31', 'S32', 'S33', 'S34', 'S35', 'S36', 'S37', 'S38', 'S39', 'S40', 'S41', 'S42', 'S43', 'S44', 'S45', 'S46', 'S47', 'S48', 'S49', 'S50', 'S51', 'S52', 'S53', 'S54', 'S55', 'S56', 'S57', 'S58', 'S59', 'S60', 'S61', 'S62', 'S63', 'S64', 'S65', 'S66', 'S67', 'S68', 'S69', 'S70', 'S71', 'S72', 'S73', 'S74', 'S75', 'S76', 'S77', 'S78', 'S79', 'S80', 'S81', 'S82', 'S83', 'S84', 'S85', 'S86', 'S87', 'S88', 'S89', 'S90', 'S91', 'S92', 'S93', 'S94', 'S95', 'S96', 'S97', 'S98', 'S99', 'S100'.

SVID Table



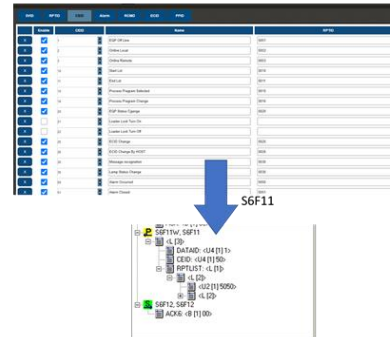
The screenshot shows the 'RPTID Table' configuration window in the nPAC software. It features a table with columns for RPTID, Name, and other parameters. A left-hand menu contains various configuration options like 'Log', 'Equipment', 'SVID', 'SECS', 'GEM', 'SEMI', 'S2F', 'S6', 'S7', 'S8', 'S9', 'S10', 'S11', 'S12', 'S13', 'S14', 'S15', 'S16', 'S17', 'S18', 'S19', 'S20', 'S21', 'S22', 'S23', 'S24', 'S25', 'S26', 'S27', 'S28', 'S29', 'S30', 'S31', 'S32', 'S33', 'S34', 'S35', 'S36', 'S37', 'S38', 'S39', 'S40', 'S41', 'S42', 'S43', 'S44', 'S45', 'S46', 'S47', 'S48', 'S49', 'S50', 'S51', 'S52', 'S53', 'S54', 'S55', 'S56', 'S57', 'S58', 'S59', 'S60', 'S61', 'S62', 'S63', 'S64', 'S65', 'S66', 'S67', 'S68', 'S69', 'S70', 'S71', 'S72', 'S73', 'S74', 'S75', 'S76', 'S77', 'S78', 'S79', 'S80', 'S81', 'S82', 'S83', 'S84', 'S85', 'S86', 'S87', 'S88', 'S89', 'S90', 'S91', 'S92', 'S93', 'S94', 'S95', 'S96', 'S97', 'S98', 'S99', 'S100'.

RPTID Table



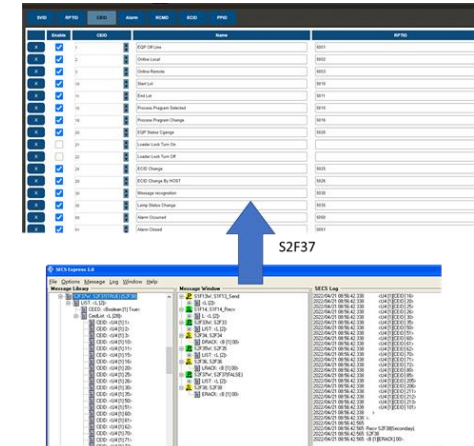
The screenshot shows the 'CEID Table' configuration window in the nPAC software. It features a table with columns for CEID, Name, and other parameters. A left-hand menu contains various configuration options like 'Log', 'Equipment', 'SVID', 'SECS', 'GEM', 'SEMI', 'S2F', 'S6', 'S7', 'S8', 'S9', 'S10', 'S11', 'S12', 'S13', 'S14', 'S15', 'S16', 'S17', 'S18', 'S19', 'S20', 'S21', 'S22', 'S23', 'S24', 'S25', 'S26', 'S27', 'S28', 'S29', 'S30', 'S31', 'S32', 'S33', 'S34', 'S35', 'S36', 'S37', 'S38', 'S39', 'S40', 'S41', 'S42', 'S43', 'S44', 'S45', 'S46', 'S47', 'S48', 'S49', 'S50', 'S51', 'S52', 'S53', 'S54', 'S55', 'S56', 'S57', 'S58', 'S59', 'S60', 'S61', 'S62', 'S63', 'S64', 'S65', 'S66', 'S67', 'S68', 'S69', 'S70', 'S71', 'S72', 'S73', 'S74', 'S75', 'S76', 'S77', 'S78', 'S79', 'S80', 'S81', 'S82', 'S83', 'S84', 'S85', 'S86', 'S87', 'S88', 'S89', 'S90', 'S91', 'S92', 'S93', 'S94', 'S95', 'S96', 'S97', 'S98', 'S99', 'S100'.

CEID Table



The screenshot shows the 'SVID Table' configuration window in the nPAC software. It features a table with columns for SVID, Name, and other parameters. A left-hand menu contains various configuration options like 'Log', 'Equipment', 'SVID', 'SECS', 'GEM', 'SEMI', 'S2F', 'S6', 'S7', 'S8', 'S9', 'S10', 'S11', 'S12', 'S13', 'S14', 'S15', 'S16', 'S17', 'S18', 'S19', 'S20', 'S21', 'S22', 'S23', 'S24', 'S25', 'S26', 'S27', 'S28', 'S29', 'S30', 'S31', 'S32', 'S33', 'S34', 'S35', 'S36', 'S37', 'S38', 'S39', 'S40', 'S41', 'S42', 'S43', 'S44', 'S45', 'S46', 'S47', 'S48', 'S49', 'S50', 'S51', 'S52', 'S53', 'S54', 'S55', 'S56', 'S57', 'S58', 'S59', 'S60', 'S61', 'S62', 'S63', 'S64', 'S65', 'S66', 'S67', 'S68', 'S69', 'S70', 'S71', 'S72', 'S73', 'S74', 'S75', 'S76', 'S77', 'S78', 'S79', 'S80', 'S81', 'S82', 'S83', 'S84', 'S85', 'S86', 'S87', 'S88', 'S89', 'S90', 'S91', 'S92', 'S93', 'S94', 'S95', 'S96', 'S97', 'S98', 'S99', 'S100'.

Equipment sends Event Report



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SEMI E5/E30/E37

E5

Specification for
SEMI Equipment
Communications
Standard 2
Message Content
(SECS-II)

E30

Specification for the
Generic Model for
Communications
and Control of
Manufacturing
Equipment (GEM)

E37

Specification for
High-Speed SECS
Message Services
(HSMS) Generic
Services

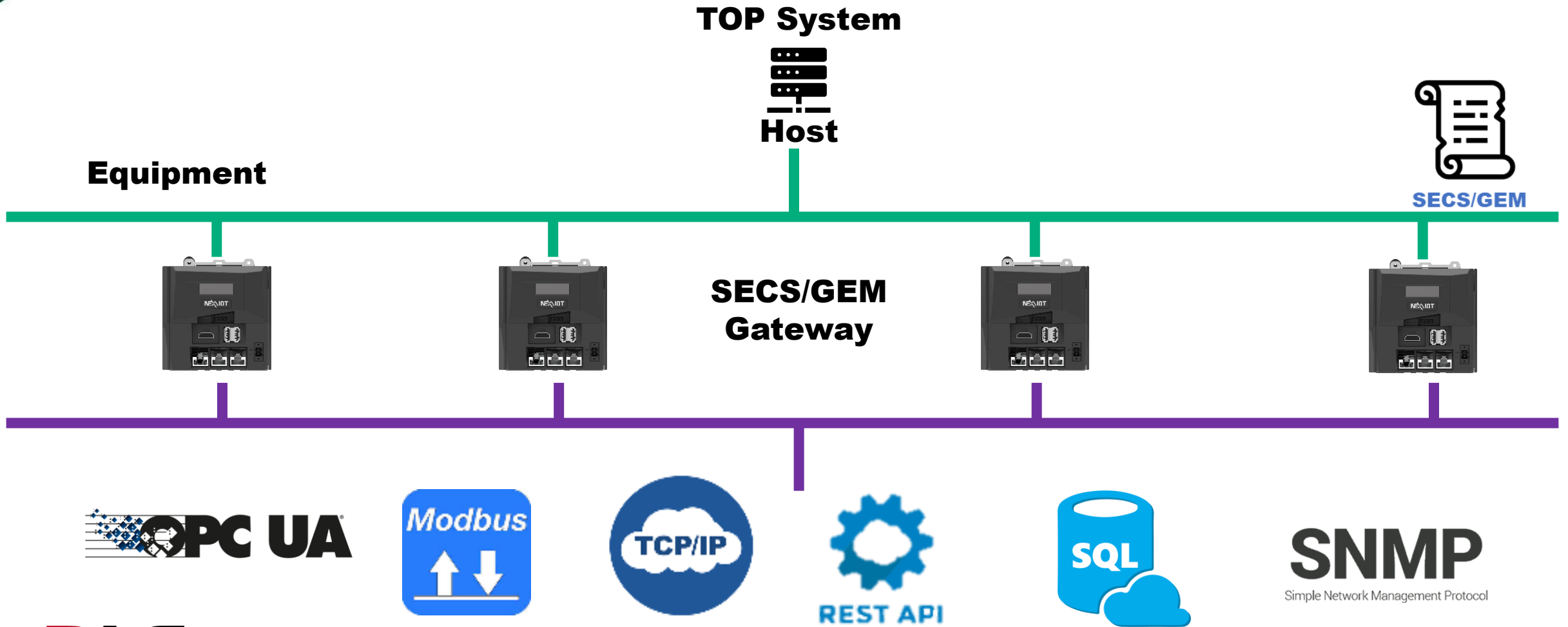


**nPAC
Equipment**

nPAC

NexAloT Programmable Automation Controller

nPAC applied to SEMI-SECS/GEM



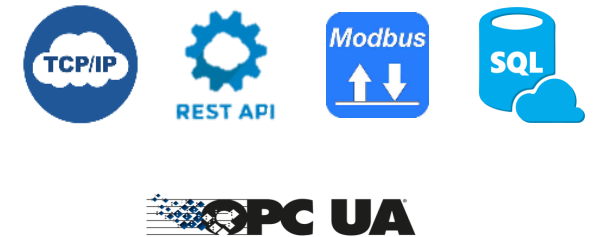
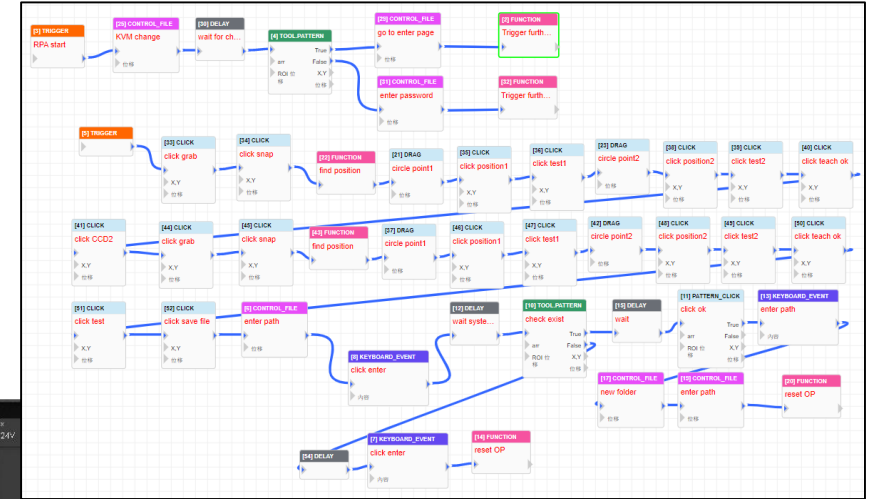
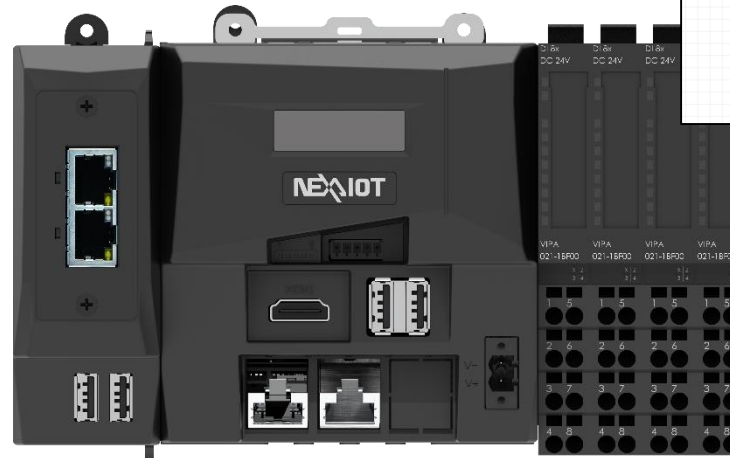
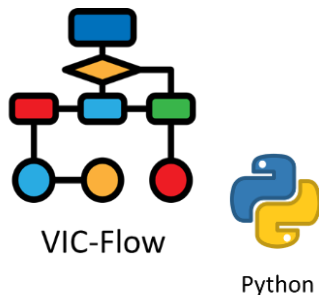
nPAC

NexAloT Programmable Automation Controller

Standard Components of nPAC

Standard

- VIC-Flow flow chart controller that provides **flexible development** tools such as VIC-Flow and Python, allowing users to easily develop unique functions **by themselves incl. AI model**.
- Rich Protocols and communications support



nNAC

NexAloT Programmable Automation Controller

Standard Components of nPAC



nPAC

NexAIoT Programmable Automation Controller

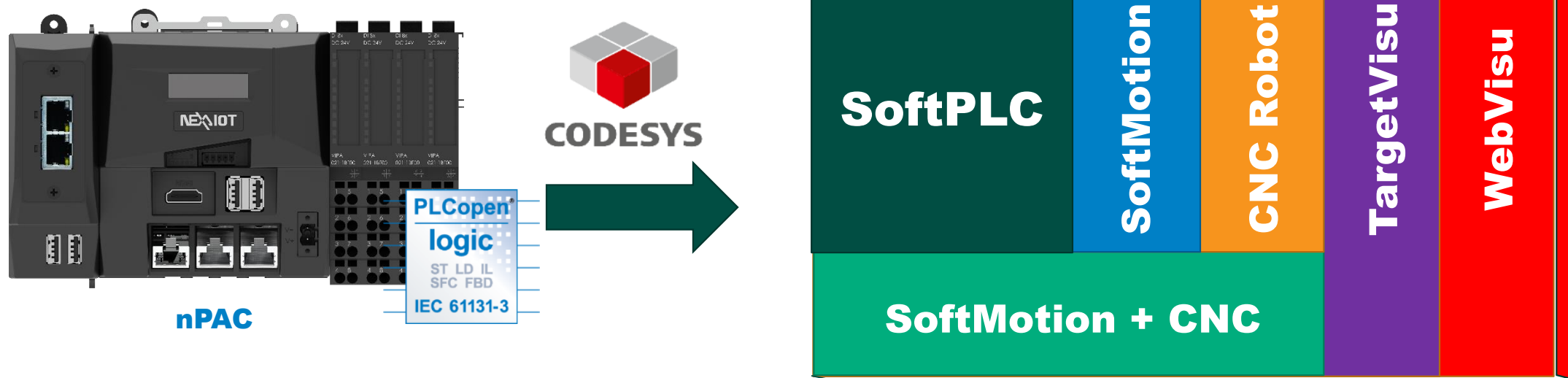
Model Select



	SKU1 (Lan*2)	SKU2 (Lan*2 + Fieldbus)
Barebone (without storage)	nPAC2000-E01	nPAC2000-E02
Windows + VIC-flow + Storage 128G	nPAC2000-E01GW	N/A
Windows + CODESYS SoftPLC + Storage 128G	nPAC2000-E01CDS	nPAC2000-E02CDS
Option Expansion Module (Left side)	1 x Mini-PCle (1x mSATA optional) socket support optional fieldbus/mSATA/Wi-Fi/4G LTE/3.5G modules	
Option NVRAM(Inside)	1MB NVRAM Mini-PCle Module	



Optional components for nPAC and CODESYS



Standard

- CODESYS SoftPLC
- CODESYS SoftPLC + TargetVisu
- CODESYS SoftMotion
- CODESYS SoftMotion + TargetVisu
- CODESYS SoftMotion + CNC

Extra Upgrade

- SoftPLC to SoftMotion Upgrade
- SoftMotion to SoftCNC Upgrade
- TargetVisu Upgrade
- WebVisu Upgrade

I/O Specifications

The facts

High-performance bus

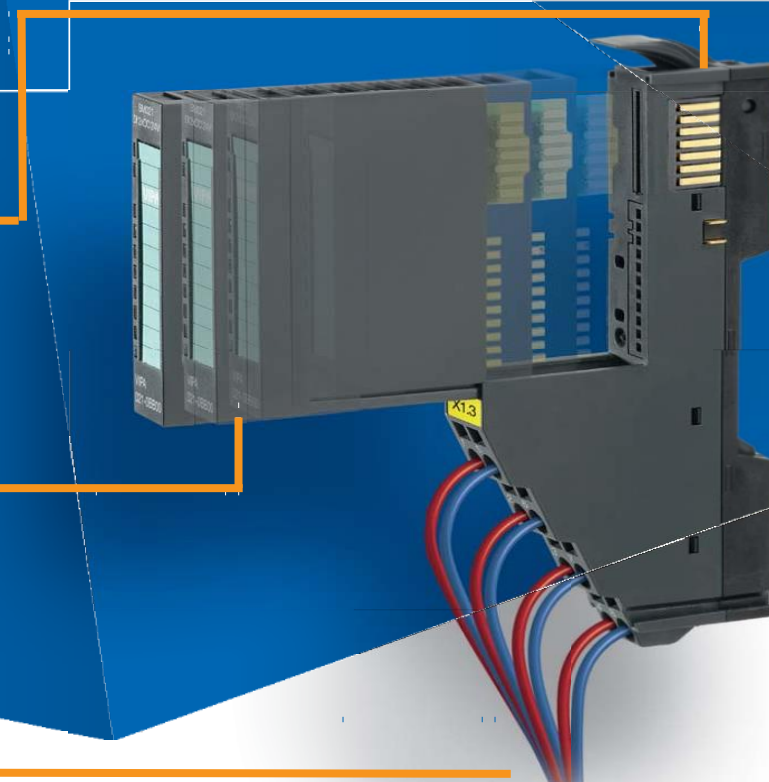
- Transmission rates of up to 48 Mbit/s
- Very fast reaction time of up to 20µs
- One terminal module for all signal and function modules

Easy installation and servicing

- Easy mounting by safe slice mechanism
- Click connection for fast mounting and easy shielding
- Error protection due to coding
- Unique two stage concept consisting of terminal modules and electronic modules allowing simple and fast maintenance

Space saving connection technology

- Space saving staircase-shaped wiring with cage clamps
- Easy exchange of modules due to unique wiring concept
- High modularity due to 2, 4 and 8 channel modules



Significantly simplified ordering process



Clear status and diagnosis monitoring



Clever, user friendly labeling

Extension I/O Specifications-Interface modules



Fieldbus coupler

053-1CA00	CAN coupler
053-1DN00	DeviceNet coupler
053-1DP00	PROFIBUS coupler
053-1EC00	EtherCAT coupler
053-1IP00	EtherNet/IP coupler
053-1MT00	Modbus TCP coupler
053-1PN00	PROFINET coupler

CANopen®

DeviceNet™

PROFI®
BUS

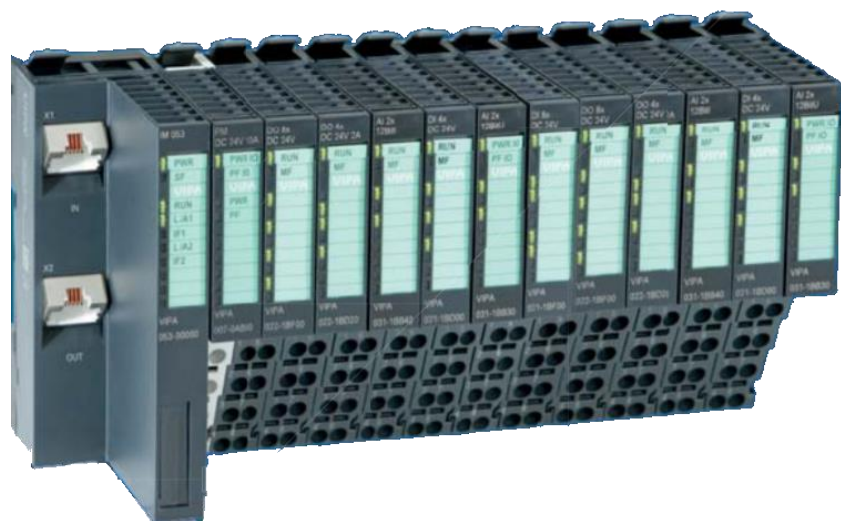
EtherCAT®

EtherNet/IP™

Modbus
TCP/IP

PROFI
INDUSTRIAL ETHERNET
NET

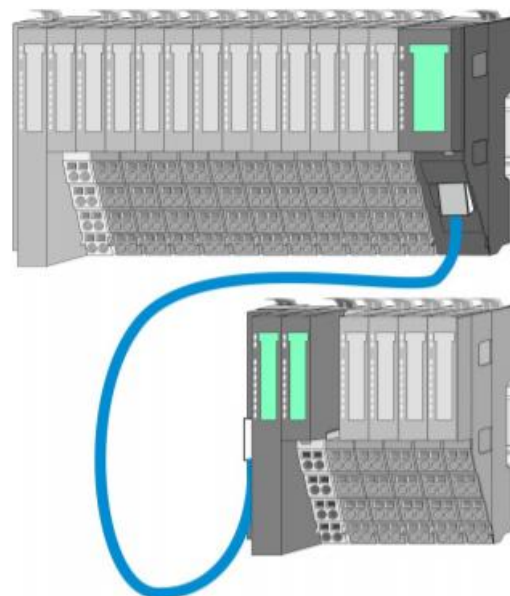
I/O Specifications



Power supply modules

007-1AB00	DC24V10A
007-1AB10	DC24V4A, 2.DC24V+5V/2A
007-0AA00	DC24V

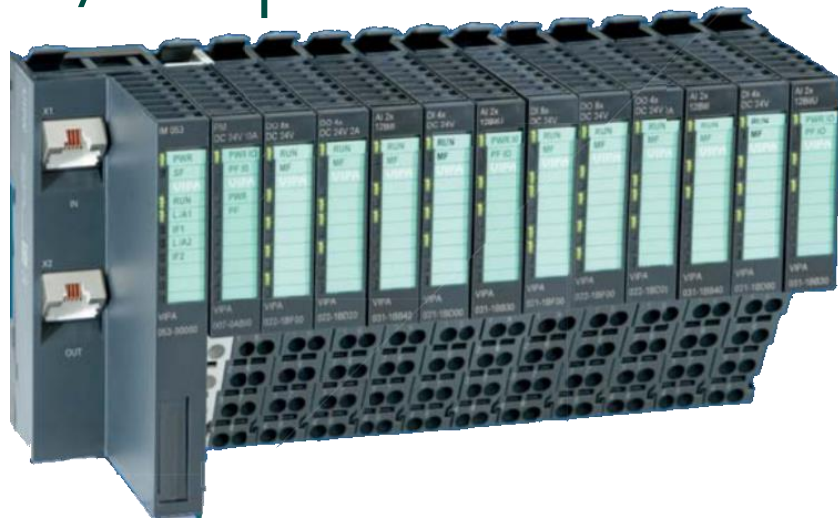
Line extension



Function and communication modules

040-1BA00	RS232C, ASCII,STX/ETX,3964R,Modbus,PtP
040-1CA00	RS422/485, ASCII,STX/ETX,3964R,Modbus,PtP
050-1BA00	1x32Bit(AB)DC24V, DO1xDC24V0,5A
050-1BA10	1x32Bit(AB)DC5V2MHz
050-1BB00	2x32Bit(AB)DC24V
050-1BB30	2x32Bit(AB)DC24V_ECO
050-1BB40	2x24BitDC24V600kHz, Frequency measurement
050-1BS00	1xSSI,RS422,8...32 Bit, 1xDI, 1xCO, 1xCI
054-1BA00	1xStepper_24V1,5A, 1CH(2DO),Feedback(2DI)
054-1CB00	2xDC_Mot_24V1,5A, 2CH(2DO),Feedback(2DI)
054-1DA00	1xPulseTrain_RS422, 0-1000kHz,24VDC,Feedback(2DI)
060-1AA00	Line Extension, Extention module Master
061-1BA00	Line Extension, Extention module Slave

I/O Specifications



Digital Input modules

021-1BB00	DI2xDC24V
021-1BB10	DI2XDC24V2μs...4ms
021-1BD00	DI4xDC24V
021-1BD10	DI4XDC24V2μs...4ms
021-1BD40	DI4xDC24V_3-wire
021-1BD50	DI4xDC24VNPN
021-1BD70	DI4xDC24V, Time stamp
021-1BF00	DI8xDC24V
021-1BF01	DI8xDC24V 0,5ms
021-1BF50	DI8xDC24VNPN
021-1DF00	DI8xDC24V, Diagnosis
021-1SD00	DI4xDC24V_Safety

Digital Output modules

022-1BB00	DO2xDC24V0,5A
022-1BB90	DO2xDC24V0,5A, PWM
022-1BD00	DO4xDC24V0,5A
022-1BD20	DO4xDC24V2A
022-1BD50	DO4xDC24V0,5ANPN
022-1BD70	DO4xDC24V0,5A, Time stamp
022-1BF00	DO8xDC24V0,5A
022-1BF50	DO8xDC24V0,5ANPN
022-1DF00	DO8xDC24V0,5A, Diagnosis
022-1HB10	DO2xRELAIS, DC30V/AC230V/3A
022-1HD10	DO4xRELAIS, DC30V/AC230V/1,8A
022-1SD00	DO4xDC24V0,5A_Safety

Analog Input modules

031-1BB10	AI2x12Bit_0(4)...20mA_ISO, 2-wire isolated
031-1BB30	AI2x12Bit_0...10V
031-1BB40	AI2x12Bit_0(4)...20mA
031-1BB60	AI2x12Bit_0(4)...20mA, 2-wire
031-1BB70	AI2x12Bit_+-10V
031-1BB90	AI2x16Bit_Thermocouple
031-1BD30	AI4x12Bit_0...10V
031-1BD40	AI4x12Bit_0(4)...20mA
031-1BD70	AI4x12Bit_+-10V
031-1BD80	AI4x16Bit_R_RTD, 2x3/4-wire
031-1BF60	AI8x12Bit_0(4)...20mA
031-1BF74	AI8x12Bit_+-10V
031-1CA20	AI1x16Bit_DMS, 1x4/6-wire
031-1CB30	AI2x16Bit_0...10V
031-1CB40	AI2x16Bit_0/4...20mA
031-1CB70	AI2x16Bit_+-10V
031-1CD30	AI4x16Bit_0...10V
031-1CD35	AI4x16Bit_0...10V
031-1CD40	AI4x16Bit_0/4...20mA
031-1CD45	AI4x16Bit_0/4...20mA
031-1CD70	AI4x16Bit_+-10V
031-1LB90	AI2x16Bit_Thermocouple
031-1LD80	AI4x16Bit_R_RTD, 2x3/4-wire
031-1PA00	AI1x3Ph 230/400V 1A, SLIO_Energy measuring clamp

Analog Output modules

032-1BB30	AO2x12Bit_0...10V
032-1BB40	AO2x12Bit_0(4)...20mA
032-1BB70	AO2x12Bit_+-10V
032-1BD30	AO4x12Bit_0...10V
032-1BD40	AO4x12Bit_0(4)...20mA
032-1BD70	AO4x12Bit_+-10V
032-1CB30	AO2x16Bit_0...10V
032-1CB40	AO2x16Bit_0(4)...20mA
032-1CB70	AO2x16Bit_+-10V
032-1CD30	AO4x16Bit_0...10V
032-1CD40	AO4x16Bit_0(4)...20mA
032-1CD70	AO4x16Bit_+-10V

Summarize

- Latest generation 12th Elkhart lake CPU
- Users can freely choose development software (standard built-in VIC-Flow)
- Provides a flexible extension interface
- Rich and scalable I/O
- Accept ODM custom development (Needs MOQ)



NEXAIOT

Your Partner in Smart Manufacturing

掃一下 發現更多



新漢智能 In Action-智...



詳情請洽工作人員



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Service : iAutomation@nexaiot.com