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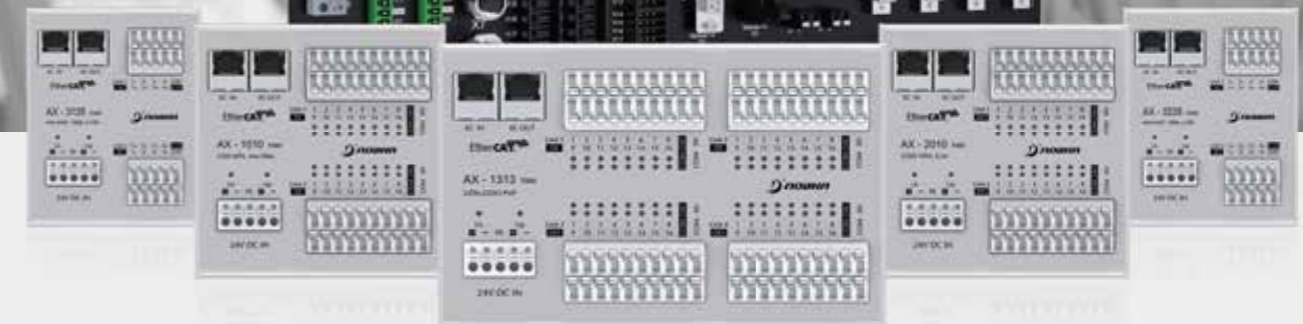
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# EtherCAT I/O Modules

IO solutions for automation control



**EtherCAT**

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V 2023 A1.0





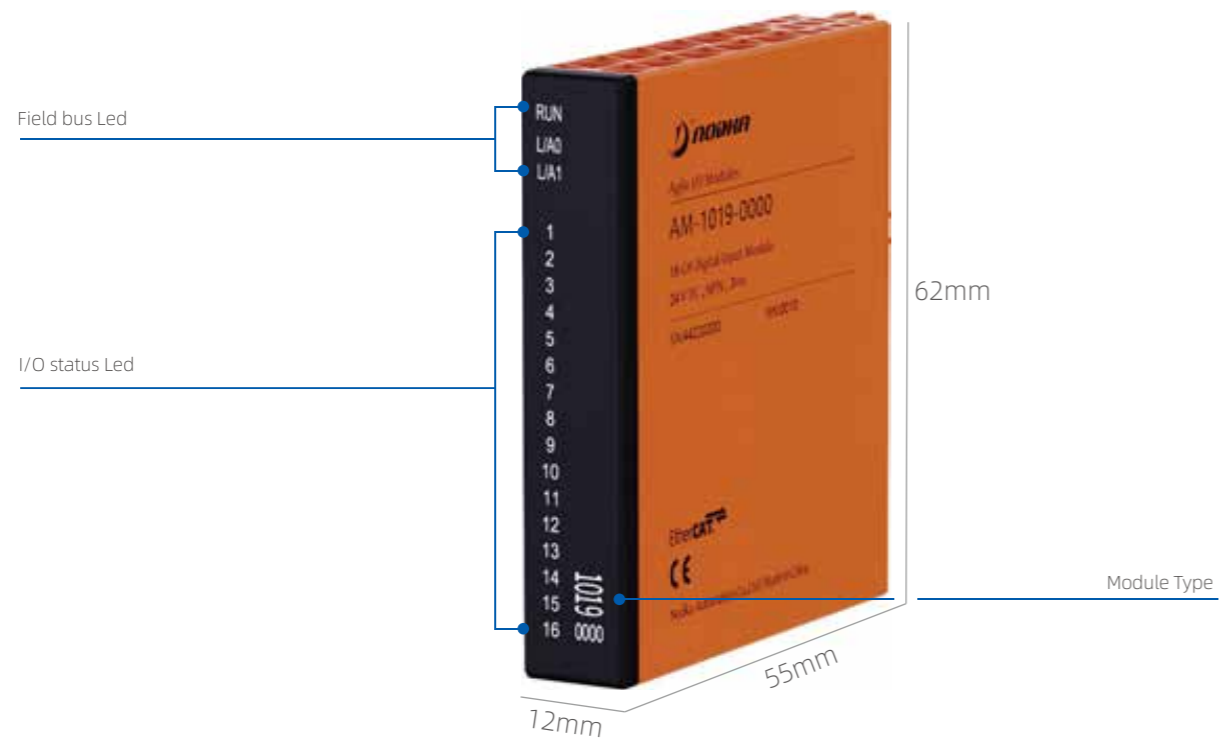
# Agile Modules I/O

## PCB Mount I/O Modules

EtherCAT I/O system solution for mass and standard production

- PCB mount for signal distribution
- Fast EtherCAT communication
- Ultra compact chassis and diversified
- Very suitable for mass production

## Dimension and signal leds



## Agile Module I/O and signal distribution board



## Agile Module I/O Products list

### Digital Input 24V DC: AM-10xx, AM-13xx

Signals	16 Channels	
NPN	AM-1019-0000 Filter: 3ms	5
	AM-1019-0001 Filter: 3ms, DC supported	5
PNP	AM-1319-0000 Type 1/3 Filter: 3ms	6
	AM-1319-0001 Type 1/3, Filter: 3ms, DC supported	6

### Digital Output 24V DC: AM-20xx, AM-23xx

Signals	16 Channels	
NPN	AM-2019-0000 Imax: 500mA, Short circuit protection	7
	AM-2019-0001 Imax: 500mA, Short circuit protection, DC supported	7
PNP	AM-2319-0000 Imax: 500mA, Short circuit protection	8
	AM-2319-0001 Imax: 500mA, Short circuit protection, DC supported	8

### Analog Input: AM-3xxx

Signals	4 Channels	8 Channels
±10V	AM-3224-0000 16 bit, ±0.1%, Single-ended, DC&SM supported	AM-3228-0000 16 bit, ±0.1%, Single-ended, DC&SM supported
0...20mA	AM-3424-0000 16 bit, ±0.1%, Single-ended, DC&SM supported	AM-3428-0000 16 bit, ±0.1%, Single-ended, DC&SM supported
4...20mA	AM-3524-0000 16 bit, ±0.1%, Single-ended, DC&SM supported	AM-3528-0000 16 bit, ±0.1%, Single-ended, DC&SM supported

### Analog Output: AM-4xxx

Signals	4 Channels	
±10V	AM-4224-0000 16 bit, ±0.1%, Single-ended, DC&SM supported	12
0...20mA	AM-4424-0000 16 bit, ±0.1%, Single-ended, DC&SM supported	13
4...20mA	AM-4524-0000 16 bit, ±0.1%, Single-ended, DC&SM supported	13

### System Config: AM-9xxx

Signals		
Power Supply	AM-9403-0000 DC24V Input, Us Output: DC3.3V, 3A	14
Slot Dummy	AM-9000 Slot Dummy Module	14
Slave Dummy	AM-9001 Slave Dummy Module	14

# AM-1019-0000 | AM-1019-0001

Digital Input | 24V DC NPN



16 x DI 24V DC NPN  
filter: 3ms



16 x DI 24V DC NPN  
filter: 3ms DC Sync

Model Name	AM-1019-0000	AM-1019-0001
Field bus	EtherCAT	
Number of inputs	16	
Power supply	24V DC(-15%/20%)	
Signal Type	NPN	
Signal voltage "0"	18V..30V	
Signal voltage "1"	0V..7V	
Input current	Typically 3mA	
Input filter	Typically 3ms	
Distributed clocks	-	Yes
Current consumption	Typically 145mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	12mmx62mmx55mm	
Weight	Approx. 23 g	
Mounting	PCB (On signal distribution board)	
Approvals	CE	
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing	

# AM-1319-0000 | AM-1319-0001

Digital Input | 24V DC PNP



16 x DI 24V DC PNP  
filter: 3 ms



16 x DI 24V DC PNP  
filter: 3 ms DC Sync

Model Name	AM-1319-0000	AM-1319-0001
Field bus	EtherCAT	
Number of inputs	16	
Power supply	24V DC(-15%/20%)	
Signal Type	PNP	
Signal voltage "0"	-3V..5V(EN61131-2, type 1/3)	
Signal voltage "1"	11V..30V	
Input current	Typically 3mA	
Input filter	Typically 3ms	
Distributed clocks	-	Yes
Current consumption	Typically 155mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	12mmx62mmx55mm	
Weight	Approx. 23 g	
Mounting	PCB (On signal distribution board)	
Approvals	CE	
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing	

# AM-2019-0000 | AM-2019-0001

Digital Output | 24V DC NPN



16 x DO 24V DC 0.5A  
NPN



16 x DO 24V DC 0.5A  
NPN DC Sync

Model Name	AM-2019-0000	AM-2019-0001
Field bus	EtherCAT	
Number of outputs	16	
Signal Type	NPN	
Load Type	Ohmic, inductive, lamp load	
Power supply	24V DC(-15%/20%)	
Output current	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	T <sub>ON</sub> : typically 15µs; T <sub>OFF</sub> : typically 300µs	
Distributed clocks	-	Yes
Current consumption	Typically 145mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	12mmx62mmx55mm	
Weight	Approx. 23 g	
Mounting	PCB (On signal distribution board)	
Approvals	CE	
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing	

# AM-2319-0000 | AM-2319-0001

Digital Output | 24V DC PNP



16 x DO 24V DC 0.5A  
PNP



16 x DO 24V DC 0.5A  
PNP DC Sync

Model Name	AM-2319-0000	AM-2319-0001
Field bus	EtherCAT	
Number of outputs	16	
Signal Type	PNP	
Load Type	Ohmic, inductive, lamp load	
Power supply	24V DC(-15%/20%)	
Output current	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	T <sub>ON</sub> : typically 15µs; T <sub>OFF</sub> : typically 300µs	
Distributed clocks	-	Yes
Current consumption	Typically 145mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	12mmx62mmx55mm	
Weight	Approx. 23 g	
Mounting	PCB (On signal distribution board)	
Approvals	CE	
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing	

# AM-3224-0000 | AM-3228-0000

Analog Voltage Input | -10V..+10V



4 × AI(Single-ended), ±10V,  
16 bit



8 × AI(Single-ended), ±10V,  
16 bit

Model Name	AM-3224-0000	AM-3228-0000
Field bus	EtherCAT	
Analog inputs	4(single-ended)	8(single-ended)
Power supply	24V DC(-15%/+20%)	
Signal voltage	-10V..+10V	
Resolution	16 bit	
Internal resistance	~10MΩ	
Input filter cut-off frequency	10KHz	
Conversion time	~200μs	~400μs
Bit width in process image	Input 16 bits	
Measure error	< 0.1%(at 0°C .. +55°C, relative to the full scale value)	
Current consumption	Typically 165mA	
Distributed clocks	Yes	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	12mm×62mm×55mm	
Weight	Approx. 25 g	
Mounting	PCB (On signal distribution board)	
Approvals	CE	
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing	

# AM-3424-0000 | AM-3428-0000

Analog Current Input | 0..20mA



4 × AI(Single-ended) 0..20mA  
16 bit



8 × AI(Single-ended) 0..20mA  
16 bit

Model Name	AM-3424-0000	AM-3428-0000
Field bus	EtherCAT	
Analog inputs	4(single-ended)	8(single-ended)
Power supply	24V DC(-15%/+20%)	
Signal voltage	0mA..20mA	
Resolution	16 bit	
Internal resistance	~200Ω	
Input filter cut-off frequency	10KHz	
Conversion time	~200μs	~400μs
Bit width in process image	Input 16 bits	
Measure error	< 0.1%(at 0°C .. +55°C, relative to the full scale value)	
Current consumption	Typically 165mA	
Distributed clocks	Yes	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	12mm×62mm×55mm	
Weight	Approx. 25 g	
Mounting	PCB (On signal distribution board)	
Approvals	CE	
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing	

# AM-3524-0000 | AM-3528-0000

Analog Current Input | 4..20mA



4 x AI(Single-ended) 4..20mA  
16 bit



8 x AI(Single-ended) 4..20mA  
16 bit

Model Name	AM-3524-0000	AM-3528-0000
Field bus	EtherCAT	
Analog inputs	4(single-ended)	8(single-ended)
Power supply	24V DC(-15%/+20%)	
Signal voltage	4mA..20mA	
Resolution	16 bit	
Internal resistance	~200Ω	
Input filter cut-off frequency	10KHz	
Conversion time	~200μs	~400μs
Bit width in process image	Input 16 bits	
Measure error	< 0.1%(at 0°C .. +55°C, relative to the full scale value)	
Current consumption	Typically 165mA	
Distributed clocks	Yes	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	12mm×62mm×55mm	
Weight	Approx. 25 g	
Mounting	PCB (On signal distribution board)	
Approvals	CE	
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing	

# AM-4224-0000

Analog Voltage Output | -10..+10V



4 x AO(Single-ended) -10..+10V  
16 bit

Model Name	AM-4224-0000
Field bus	EtherCAT
Analog outputs	4(single-ended)
Power supply	24V DC(-15%/+20%)
Signal voltage	-10V..+10V
Resolution	16 bit
Load	>2KΩ(short-circuit proof)
Conversion time	~200μs
Measure error	< 0.1%(at 0°C .. +55°C, relative to the full scale value)
Current consumption	Typically 165mA
Distributed Clocks	Yes
Electrical isolation	500V(EtherCAT/field voltage)
Work temperature	-25°C .. +60°C
Storage temperature	-40°C .. +85°C
Relative humidity	95%(Non condensing)
Dimensions(W x H x D)	12mm×62mm×55mm
Weight	Approx. 24 g
Mounting	PCB (On signal distribution board)
Approvals	CE
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing

# AM-4424-0000 | AM-4524-0000

Analog Current Output | 0/4..20mA



4 × AO(Single-ended) 0..20mA  
16 bit



4 × AO(Single-ended) 4..20mA  
16 bit

Model Name	AM-4424-0000	AM-4524-0000
Field bus	EtherCAT	
Analog outputs	4(single-ended)	
Power supply	24V DC(-15%/+20%)	
Signal voltage	0mA..20mA	4mA..20mA
Resolution	16 bit	
Load	<500Ω(short-circuit proof)	
Conversion time	~200μs	
Measure error	< 0.1%(at 0°C .. +55°C, relative to the full scale value)	
Current consumption	Typically 165mA	
Distributed Clocks	Yes	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	12mm×62mm×55mm	
Weight	Approx. 24 g	
Mounting	PCB (On signal distribution board)	
Approvals	CE	
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing	

# AM-9xxx

System Config



Us power supply,  
24VDC IN, 3.3V/3A OUT



Slot dummy Module



Slave dummy Module

Model Name	AM-9403-0000	AM-9000-0000	AM-9001-0000
Voltage input	24V DC(-15%/+20%)	-	-
Current input	< 1mA + load	-	-
Short circuit proof	Yes	-	-
Current output	3A	-	-
Short circuit current	4A	-	-
Electrical isolation	-	-	-
Work temperature	-25°C .. +60°C		
Storage temperature	-40°C .. +85°C		
Relative humidity	95%(Non condensing)		
Dimensions(W x H x D)	12mm×62mm×55mm		
Weight	Approx. 28 g	Approx. 15 g	Approx. 15 g
Mounting	PCB (On signal distribution board)		
Approvals	CE		
Degree of protection	AM module: IP20 AM system: depend on signal distribution board and housing		



## Dynamic signal distribution - SMT printer application case



Signal resources: 48DI+48DO+8AI+4AO

- Classify and allocate signals for peripheral devices in dynamic connectors with different pin numbers and codes.
- Avoids the need for time-consuming connection of individual wires. Coded components reduce the unit costs and the risk of wiring error.
- Production efficiency increased from 4 units/day to 16 units/day.

## Dynamic D1500T — 16/32DIO distributed solution



分布式16DIO

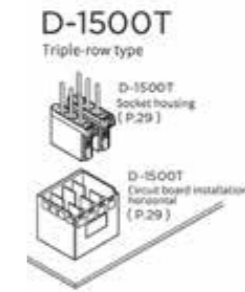
As machines become smaller, a large number of signal lines passing through drag chains cause low installation and maintenance efficiency.

- Use a distributed solution to connect local signals to modules
- Only one Ethernet cable passes through the drag chain
- Simplify the number of wiring
- Simplify the electrical control cabinet

## Dynamic D1500T — 16/32DIO distributed solution



Distributed 32DIO



Use Dynamic 1500T modular connectors to quickly connect 2/3-wire sensors and actuators.

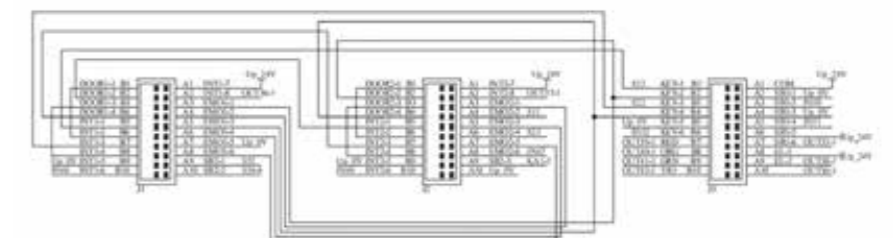
Compared to eCon connectors, it has a more compact, reliable, and efficient connection.

## AM + Dynamic distributed solution user case



In addition to completing the local signal allocation of the machine equipment, the coupling logic relationships of different peripherals are also completed on the PCB. In addition, there is no secondary wiring workload for onboard relays.

- Effectively reduce wiring workload
- Significantly reduce wiring error rate
- Greatly simplify the number of wiring



## M12 circular connector cabinet installation solution



- The I/O module and M12 connector are integrated on the signal distribution board.
- Replace the original circular connector with two single-point wiring from the terminal block to the I/O module.
- Install the signal distribution board directly on the cabinet panel, no wiring required for installation.

## AM + CPC circular connector distributed solution



Design the SMEMA interface directly on the signal distribution to complete the local interface circuit installation without wiring.

Compared to the dual wiring from the central electrical cabinet I/O to the CPC connector, it significantly improves production efficiency and reduces equipment complexity.



- Significantly reduce wiring workload
- Greatly reduce wiring error rate
- Greatly simplify the number of wiring

## 1. Select the required modules

Select the modules that have already been developed.



## 2. Propose special module requirements

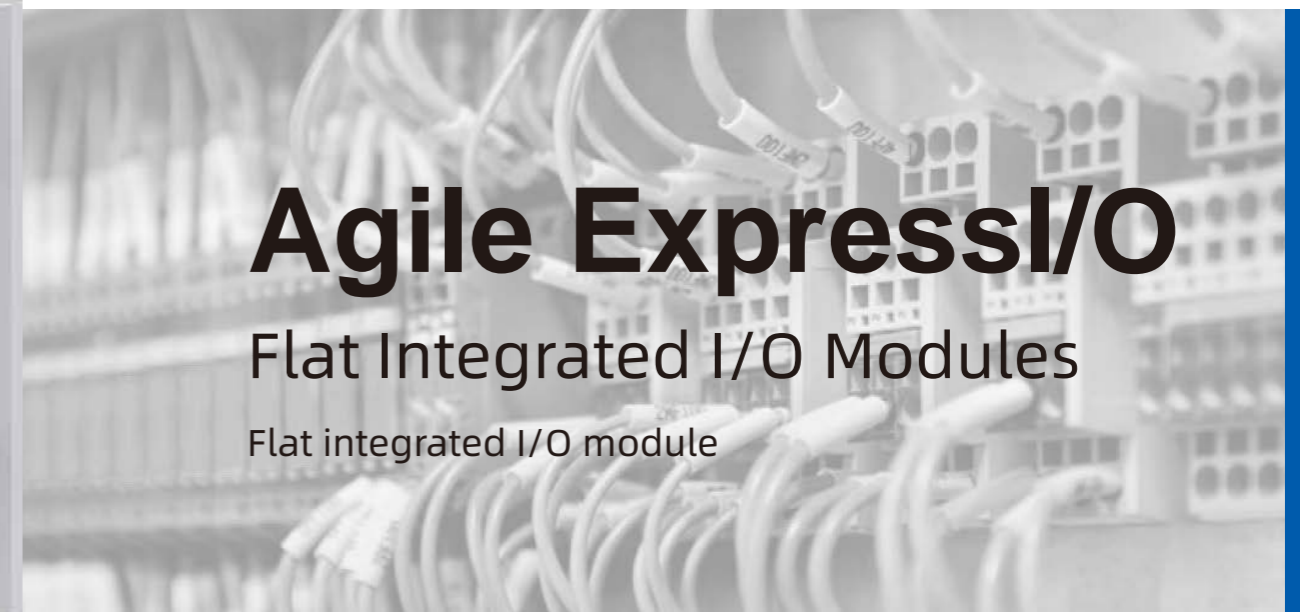
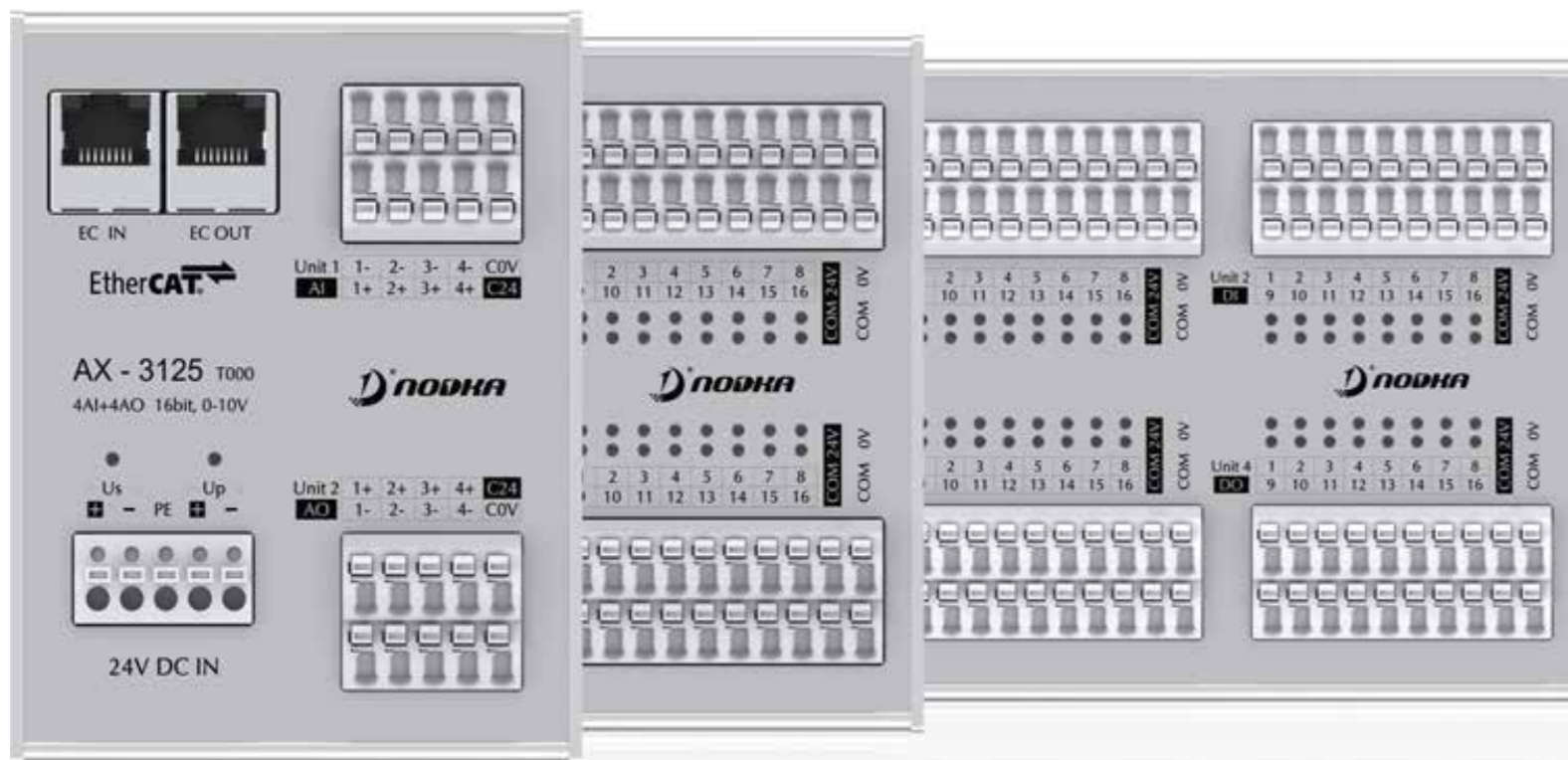
Propose special module requirements and provide demand specifications for us to develop special.



## 3. Design signal distribution board

Users have the option to develop their own signal distribution board based on the design guide.





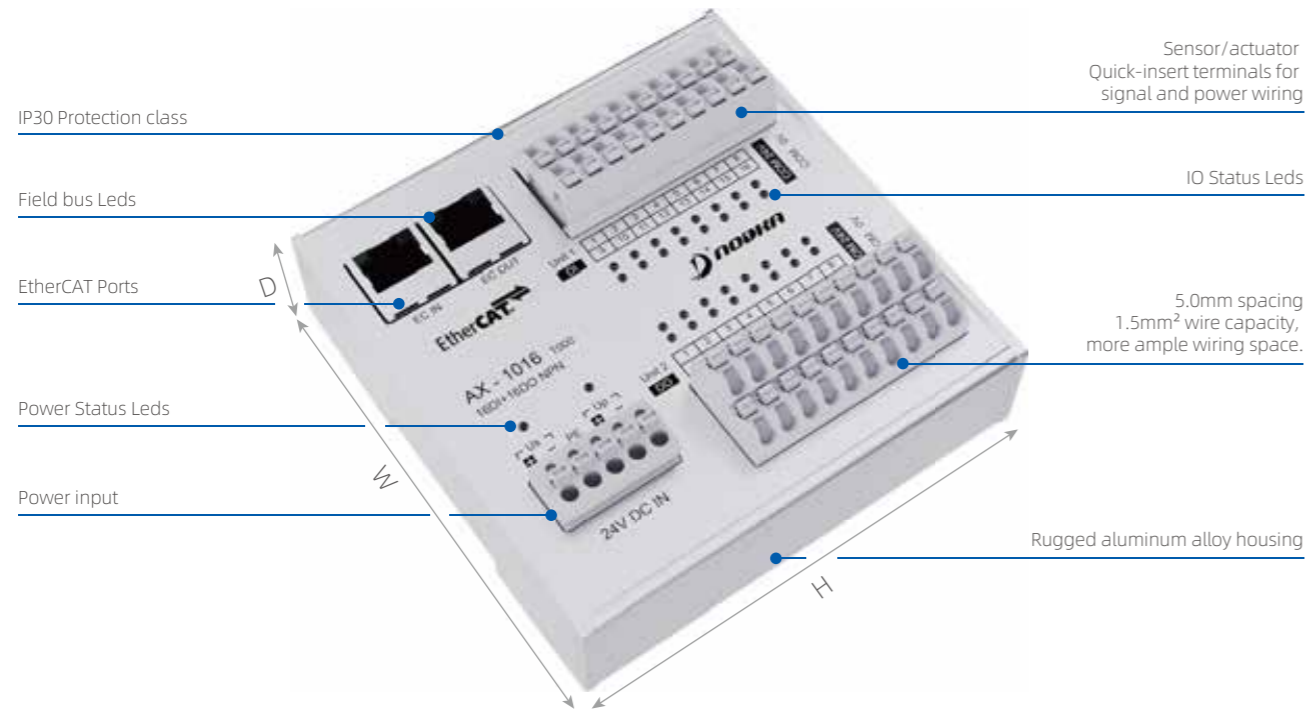
# Agile Express I/O

## Flat Integrated I/O Modules

Flat integrated I/O module

- Rugged aluminum alloy housing
- High reliable spring terminal
- Independent power supply for signals and peripherals
- DIN-Rail mount

## Dimension and signal leds



(W×H×D)  
105×84×45mm



(W×H×D)  
105×104×45mm



(W×H×D)  
105×164×45mm

## Agile Express I/O Products list

### AX-1xxx | Digital Input - Quick wiring terminal

Signals	32 Channels		64 Channels			
24V DC NPN	AX-1010-T000 32×DI, filter: 3ms	23	AX-1016-T000 16×DI, filter: 3ms 16×DO, Imax: 0.5A	25	AX-1013-T000 32×DI, filter: 3ms 32×DO, Imax: 0.5A	27
	AX-1020-T000 32×DI, filter: 10µs	23	AX-1026-T000 16×DI, filter: 10µs 16×DO, Imax: 0.5A	25	AX-1023-T000 32×DI, filter: 10µs 32×DO, Imax: 0.5A	27
24V DC PNP	AX-1310-T000 32×DI, filter: 3ms	24	AX-1316-T000 16×DI, filter: 3ms 16×DO, Imax: 0.5A	26	AX-1313-T000 32×DI, filter: 3ms 32×DO, Imax: 0.5A	28
	AX-1320-T0T00000 32×DI, filter: 10µs	24	AX-1326-T000 16×DI, filter: 10µs 16×DO, Imax: 0.5A	26	AX-1323-T000 32×DI, filter: 10µs 32×DO, Imax: 0.5A	28

### AX-2xxx | Digital Output - Quick wiring terminal

Signals	32 Channels	
24V DC NPN	AX-2010-T000 32×DO, Imax: 0.5A	29
24V DC PNP	AX-2320-T000 32×DO, Imax: 0.5A	29

### AX-3xxx | Analog Input and Output - Quick wiring terminal

Signals	8 Channels			
0...10V 16bit	MKX-3125-T000 4×AI, 0...10V 4×AO, 0...10V	30	MKX-3125-T042 2×AI, 0...10V+2×AI, 0...20mA 4×AO, 0...10V	30
-10...+10V 16bit	MKX-3225-T000 4×AI, -10...10V 4×AO, -10...10V	30		

# AX-1010-T000 | AX-1020-T000

Digital Input | 24V DC NPN



32×DI 24V DC NPN  
filter: 3ms



32×DI 24V DC NPN  
filter: 10µs

Model Name	AX-1010-T000	AX-1020-T000
Field bus	EtherCAT	
Number of inputs	32	
Power supply	24V DC(-15%/20%)	
Signal Type	NPN	
Signal voltage "0"	18V..30V	
Signal voltage "1"	0V..7V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically 10µs
Distributed clocks	-	
Current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	105mm×104mm×45mm	
Weight	300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	

# AX-1310-T000 | AX-1320-T000

Digital Input | 24V DC PNP



32通道输入 24V DC PNP  
滤波3ms



32通道输入 24V DC PNP  
滤波10µs

Model Name	AX-1310-T000	AX-1320-T000
Field bus	EtherCAT	
Number of inputs	32	
Power supply	24V DC(-15%/20%)	
Signal Type	PNP	
Signal voltage "0"	-3V..5V(EN61131-2, type 1/3)	
Signal voltage "1"	11V..30V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically 10µs
Distributed clocks	-	
Current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	105mm×104mm×45mm	
Weight	300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	

# AX-1016-T000 | AX-1026-T000

Digital Input and Output | 24V DC NPN



16 × DI 24V DC NPN filter: 3ms  
16 × DO 24V DC NPN 0.5A



16 × DI 24V DC NPN filter: 10µs  
16 × DO 24V DC NPN 0.5A

Model Name	AX-1016-T000	AX-1026-T000
Number of inputs	16	
Power supply	24V DC(-15%/20%)	
Signal Type	NPN	
Signal voltage "0"	18V..30V	
Signal voltage "1"	0V..7V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically 10µs
Number of Outputs	16	
Output signal Type	NPN	
Output current per channel	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	Typically T <sub>ON</sub> : 15µs; T <sub>OFF</sub> : 300µs	
Distributed clocks	-	
Current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	105mm×104mm×45mm	
Weight	300 g	
Mounting	DIN-Rail	
Approval	CE	
Degree of protection	IP30	

# AX-1316-T000 | AX-1326-T000

Digital Input and Output | 24V DC PNP



16 × DI 24V DC PNP filter: 3ms  
16 × DO 24V DC PNP 0.5A



16 × DI 24V DC PNP filter: 10µs  
16 × DO 24V DC PNP 0.5A

Model Name	AX-1316-T000	AX-1326-T000
Number of inputs	16	
Power supply	24V DC(-15%/20%)	
Signal Type	PNP	
Signal voltage "0"	-3V..+5V	
Signal voltage "1"	11V..30V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically 10µs
Number of Outputs	16	
Output signal Type	PNP	
Output current per channel	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	Typically T <sub>ON</sub> : 15µs; T <sub>OFF</sub> : 300µs	
Distributed clocks	-	
Current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	105mm×104mm×45mm	
Weight	300 g	
Mounting	DIN-Rail	
Approval	CE	
Degree of protection	IP30	

# AX-1013-T000 | AX-1023-T000

Digital Input and Output | 24V DC NPN



32 × DI 24V DC NPN filter: 3ms  
32 × DO 24V DC NPN 0.5A



32 × DI 24V DC NPN filter: 10µs  
32 × DO 24V DC NPN 0.5A

Model Name	AX-1013-T000	AX-1023-T000
Number of inputs	32	
Power supply	24V DC(-15%/20%)	
Signal Type	NPN	
Signal voltage "0"	18V..30V	
Signal voltage "1"	0V..7V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically 10µs
Number of Outputs	32	
Output signal Type	NPN	
Output current per channel	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	Typically T <sub>ON</sub> : 15µs; T <sub>OFF</sub> : 300µs	
Distributed clocks	-	
Current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	105mm×164mm×45mm	
Weight	500 g	
Mounting	DIN-Rail	
Approval	CE	
Degree of protection	IP30	

# AX-1313-T000 | AX-1323-T000

Digital Input and Output | 24V DC PNP



32 × DI 24V DC PNP filter: 3ms  
32 × DO 24V DC PNP 0.5A



32 × DI 24V DC PNP filter: 10µs  
32 × DO 24V DC PNP 0.5A

Model Name	AX-1313-T000	AX-1323-T000
Number of inputs	32	
Power supply	24V DC(-15%/20%)	
Signal Type	PNP	
Signal voltage "0"	-3V..+5V	
Signal voltage "1"	11V..30V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically 10µs
Number of Outputs	32	
Output signal Type	PNP	
Output current per channel	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	Typically T <sub>ON</sub> : 15µs; T <sub>OFF</sub> : 300µs	
Distributed clocks	-	
Current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	105mm×164mm×45mm	
Weight	500 g	
Mounting	DIN-Rail	
Approval	CE	
Degree of protection	IP30	

# AX-2010-T000 | AX-2320-T000

Digital Output | 24V DC NPN/PNP



32 x DO 24V DC NPN  
0.5A



32 x DO 24V DC PNP  
0.5A

Model Name	AX-2010-T000	AX-2320-T000
Field bus	EtherCAT	
Number of outputs	32	
Power supply	24V DC(-15%/20%)	
Signal Type	NPN	PNP
Output current per channel	Max. 0.5A (short-circuit proof)	
Switching times	Typically $T_{ON}$ : 15 $\mu$ s; $T_{OFF}$ : 300 $\mu$ s	
Reverse voltage protection	Yes	
Distributed clocks	-	
Current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Work temperature	-25°C .. +60°C	
Storage temperature	-40°C .. +85°C	
Relative humidity	95%(Non condensing)	
Dimensions(W x H x D)	105mmx104mmx45mm	
Weight	300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	

# AX-3125-T000 | AX-3125-T042 | AX-3225-T000

Digital Input and Output | 24V DC



4 x AI 0..10V 16 bit  
4 x AO 0..10V 16 bit



2 x AI 0..10V  
2 x AI 0..20mA  
4 x AO 0..10V 16 bit



4 x AI  $\pm$ 10V  
4 x AO  $\pm$ 10V

Model Name	AX-3125-T000	AX-3125-T042	AX-3225-T000
Number of voltage Inputs	4(single-ended)	2(single-ended)	4(single-ended)
Input signal voltage	0V..+10V	0V..10V	-10V..+10V
Number of current inputs	-	2(single-ended)	-
Input signal current	-	0mA..20mA	-
Resolution	16 bit		
Measure error	< 0.1% (0°C .. +55°C, relative to the full scale value)		
Conversion time	~200 $\mu$ s		
Internal resistance	~10M $\Omega$ (Voltage)	~10M $\Omega$ (Voltage), 200 $\Omega$ (Current)	~10M $\Omega$ ((Voltage)
Number of Outputs	4 (single-ended)	4 (single-ended)	4 (single-ended)
Output signal Type	0V..+10V	0V..+10V	-10V..+10V
current consumption	Typically 100mA	Typically 100mA	Typically 120mA
Distributed Clocks	-		
Electrical isolation	500V(EtherCAT/field voltage)		
Work temperature	-25°C .. +60°C		
Storage temperature	-40°C .. +85°C		
Relative humidity	95%(Non condensing )		
Dimensions(W x H x D)	105mmx84mmx45mm		
Weight	300 g		
Mounting	DIN-Rail		
Approvals	CE		
Degree of protection	IP30		