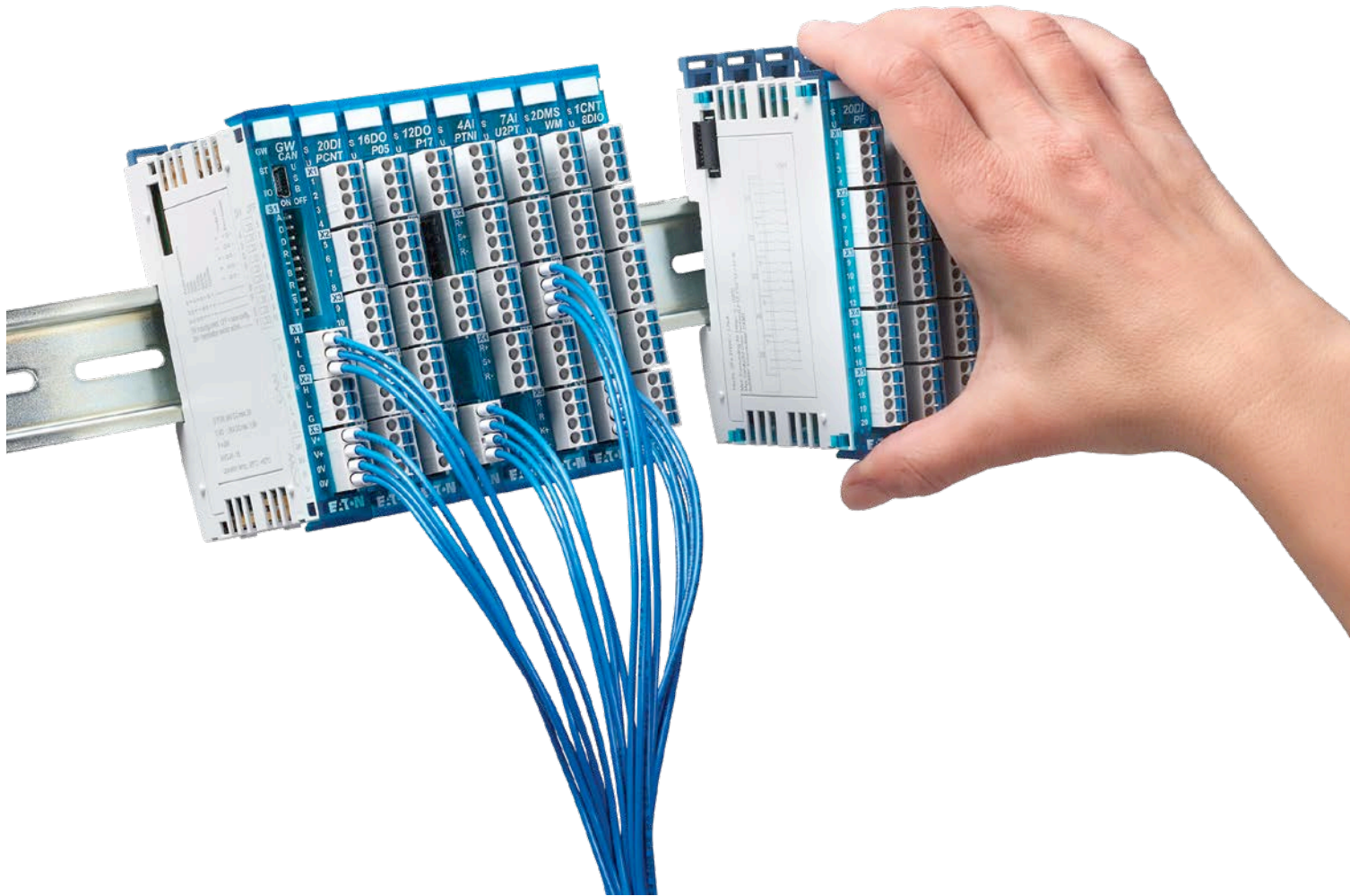


XN300
Slice card modular I/O system

Big efficiency. Small package.

Eaton's robust line of slice card modular I/O systems



EATON

Powering Business Worldwide

Plug into performance

XN300—the slice card modular I/O system for the machine building industry

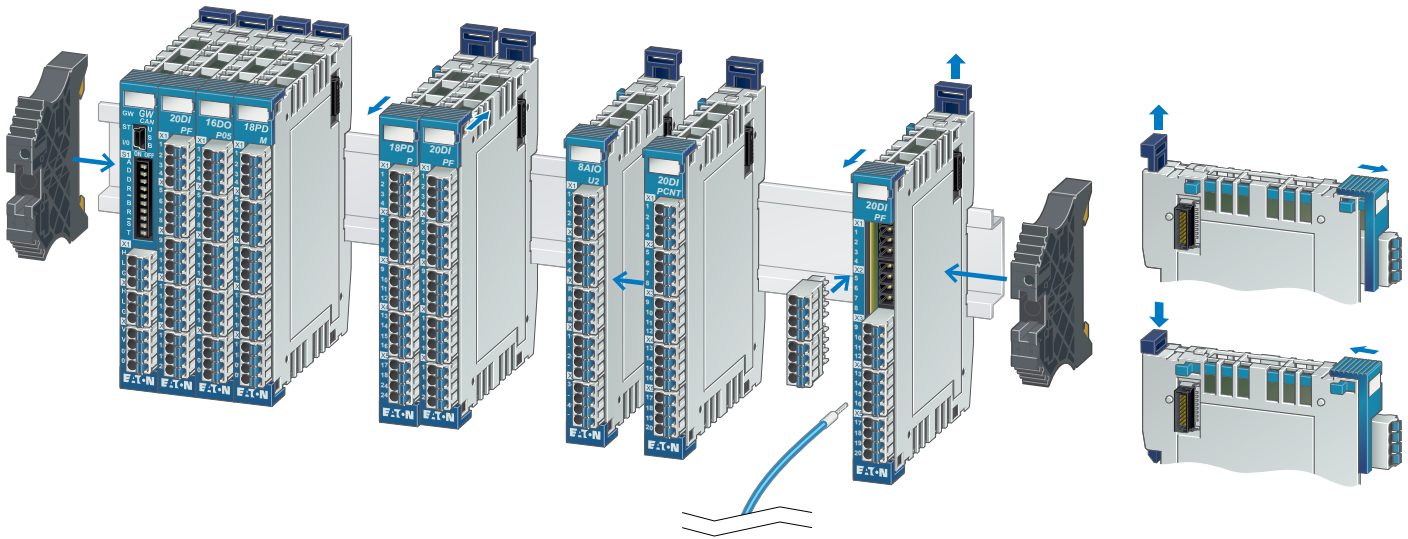
Eaton's ultra-compact, slice card-based XN300 modular I/O system features a high channel density plug-in connection system and can be combined with HMI PLC products in order to create the ideal system solution for your applications.

The secret? Application-oriented functions that result in lower device costs and combine optimum performance with compact dimensions.

All this is combined with a sleek design and a convenient installation concept that makes handling easier and allows users to pre-assemble their I/O stations and the components they will be connecting.

Moreover, the plug-in terminal system and the way in which signals are clearly identified make commissioning easier and round off the system's characteristics, making it the perfect solution for the needs of machine building applications meant for mass production.

Designed for your needs



Compact

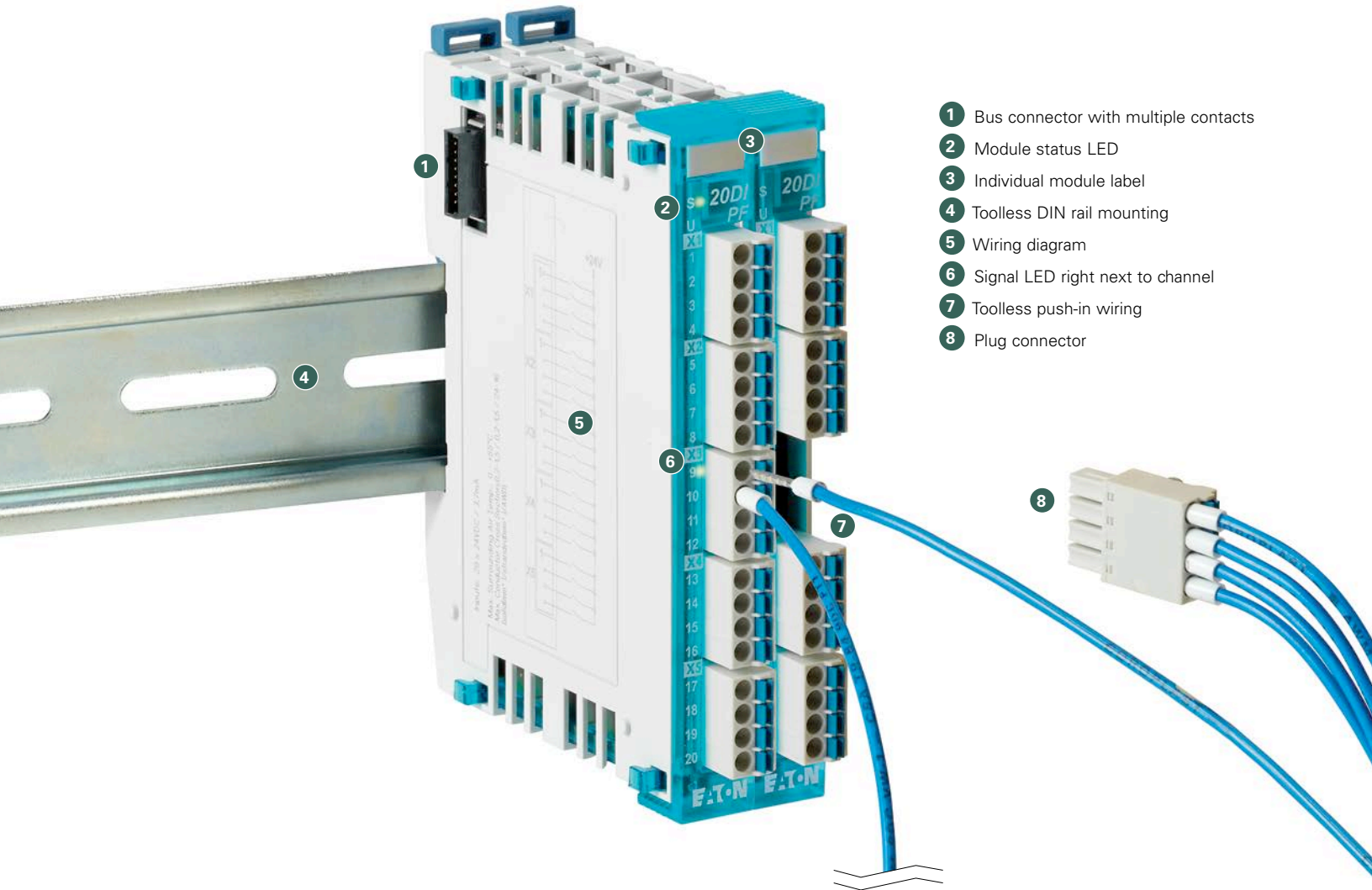
Space is always at a premium—especially when it comes to the machine building industry. Of course, this should come as no surprise in a sector where the drive toward miniaturization is resulting in the use of even more compact components. Or, to put it another way, every cubic centimeter counts. That is why the housings used in the XN300 system can accommodate up to 20 channels, with push-in terminal technology and status displays, on a front area of 12.5 x 102 mm and a height of 72 mm.

Simple

Time is money. The XN300 system has been developed with this in mind, which is why the installation work for it can be broken down into ideal and efficient steps that allow for pre-assembly and save a significant amount of time. This can be seen, for instance, in the system's use of plug-in terminals and in how it makes it possible to conveniently split installation work into two different steps (putting together a block and then installing it on a mounting rail).

Efficient

The various modules are functionally designed for practical applications, minimizing the amount of devices needed. This not only goes easy on your wallet, but also reduces the amount of space required.



- 1 Bus connector with multiple contacts
- 2 Module status LED
- 3 Individual module label
- 4 Toolless DIN rail mounting
- 5 Wiring diagram
- 6 Signal LED right next to channel
- 7 Toolless push-in wiring
- 8 Plug connector

Convenient and easy to wire

A plug-in connection system makes it possible to quickly connect and replace modules, which in turn makes it much easier to commission and service machines. Each module can accommodate up to 20 channels, which are distributed among five plug connectors as required for the application at hand.

Accessories include keying pins designed to ensure that plugs will not be mixed up.

The push-in terminals have the following conductor cross-sections:

Connection specifications

- Solid wire
 - 24–16 AWG
- Stranded wire with insulated ferrule
 - 24–18 AWG
- Stranded wire with uninsulated ferrule
 - 24–16 AWG

Neat and easy to keep track of

A clear functional layout makes it possible to easily keep track of things despite the modules' high channel density:

- Mechanical latches can be easily accessed—even after a module is installed
- Labels for individual identification
- Individually programmable user LEDs can be used as slot-specific indicators
- Each module has a status LED that shows its communication status
- The signal state for each wire is shown right next to where the wire is connected
- Different signal colors make it easy to identify functions (green = input, yellow = output, red = fault)

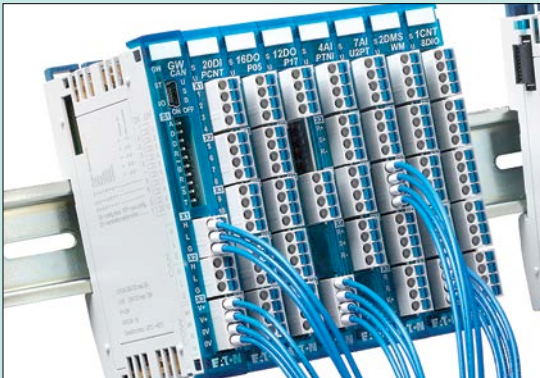
Solution-oriented and multifunctional

The devices' application-oriented functions reduce the number of slice cards required. This means, for instance, that digital outputs can be powered and fused in groups, as well as switched off centrally. In addition, digital inputs can perform additional counter functions, while analog modules include additional functions such as a reference voltage, temperature measuring, cold-junction compensation, etc.

With the XN300, you can rest assured knowing that you will find the ideal configuration for the exact system solution you want.

Simply better organized

CANopen standard and performance

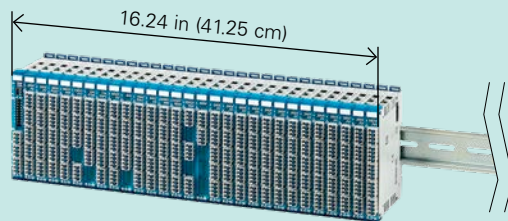


The CANopen® gateway is used to integrate the I/O system into the corresponding automation solution at the fieldbus level. Fast backplane communications enable fast response times of less than 1 ms in CANopen system environments.

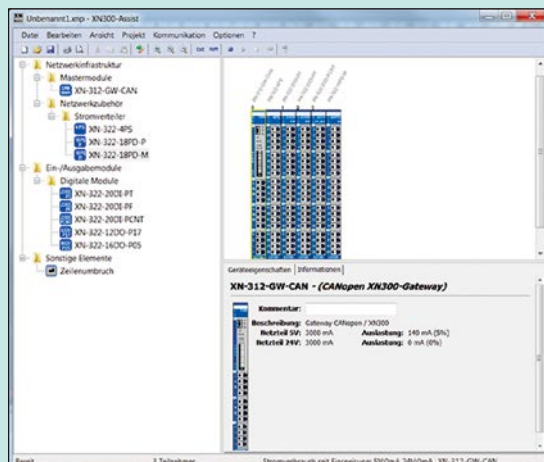
When using a station configuration with a maximum of 32 nodes, access to a maximum of 640 channels can be easily organized.

This performance data makes the XN300 I/O system perfect for even the most demanding of applications.

Total width with 32 modules



Ideal assistance: XN300 Assist



Offline functions, including the ability to configure and test systems, generate a bill of material, and create device specifications are just as helpful during commissioning and installation as online "signal state reading and setting" functions.

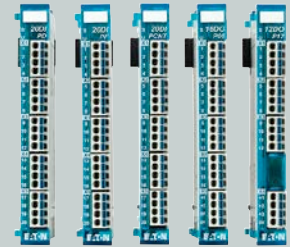
The XN300 system at a glance



Gateway modules

The XN-312-GW-CAN gateway is part of the basic XN300 portfolio and supports all I/O components for the system. The XN300 backplane is used to transmit data between the gateway and the various I/O modules.

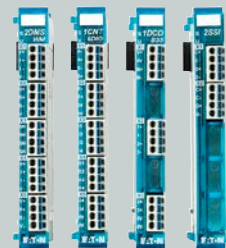
- Direct connection to the components in the XN300 system
- Minimal width with easy-to-use push-in connection technology
- Clear separation between diagnostic, configuration and connection functions
- LED indicators for system diagnostics
- The address and baud rate can be set with DIP switches; a bus termination resistor can be connected
- Communication with XN300 Assist via Mini-USB



Digital modules

XN-322 digital modules provide the following advantages as input/output and relay modules:

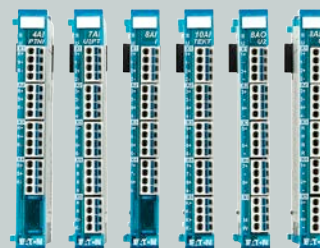
- Compact connection space
- LEDs with different colors in order to show the various possible states
- State signals directly at the point of connection
- Modules with and without potential isolation
- Outputs powered in groups
- Input modules with counter function



Technology modules

The following XN-322 specialty modules are an integral part of the XN300 portfolio:

- Weigh module
- RS-422/TTL-Counter module
- Motor driver modules



Analog modules

XN-322 analog modules are available as input/output and multifunctional modules.

- A wide variety of configuration options
- Modules with mixed functions
- Temperature measurement using thermocouples or resistance sensors (Pt, Ni, KTY)

XN300

General overview



Gateway modules

Gateway	
XN-312-GW-CAN	CANopen

Input/output modules

Digital input	
XN-322-20DI-PD	20 inputs, P, 24 Vdc, 5.0 ms
XN-322-20DI-PF	20 inputs, P, 24 Vdc, 0.5 ms
XN-322-20DI-PCNT	20 inputs, P, 24 Vdc, 2/4 CNT, 25 kHz
Digital output	
XN-322-16DO-P05	16 outputs, sourcing, 24 Vdc, 0.5 A, kf
XN-322-12DO-P17	12 outputs, sourcing, 24 Vdc, 1.7 A, kf
Analog input	
XN-322-7AI-U2PT	6 inputs, +/-10 V, 1 Pt/KTY, Uref
XN-322-8AI-I	8 inputs, 0/4-20 mA
XN-322-10AI-TEKT	8 inputs, thermocouple, 2 KTY
XN-322-4AI-PTNI	4 inputs, Pt/Ni/KTY/R, 2- / 3-wire
Analog output	
XN-322-8AO-U2	8 outputs, +/-10 V
Analog input/output	
XN-322-8AI0-U2	4 inputs/4 outputs, +/-10 V, Uref

Specialty modules

Technology modules	
XN-322-2DMS-WM	Weigh module, 2 strain gauges, 24-bit
XN-322-1DCD-B35	DC motor driver, 12-30 V, brushed, 3.5 A
XN-322-1CNT-8DIO	Counter, 1 CNT, 125 kHz, 16-bit, 4 DO, 4 DI
XN-322-2SSI	Serial, 2 SSI, RS-422, 32-bit

Power feeder and distribution modules

Power feeder modules	
XN-322-4PS-20	Power feeder, 4 x 24 Vdc/2 A, kf
XN-322-18PD-M	Power distribution, 18 channels, GND
XN-322-18PD-P	Power distribution, 18 channels, VCC

We make what matters work.*

* At Eaton, we believe that power is a fundamental part of just about everything people do. Technology, transportation, energy and infrastructure—these are things the world relies on every day. That's why Eaton is dedicated to helping our customers find new ways to manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. To improve people's lives, the communities where we live and work, and the planet our future generations depend upon. Because that's what really matters. And we're here to make sure it works.

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