PROFIBUS-DP Master NX5001

Nexto Series

Doc. Code: CE114902 Revision: D

Product Description

Nexto Series is a powerful and complete serie of Programmable Logic Controllers (PLCs) with exclusive and innovative features, targeted for covering control systems requirements from medium to large applications or high performance industrial machines.

NX5001 PROFIBUS-DP Master is an advanced PROFIBUS master interface designed to be used together with Nexto Series CPUs. This module allows the access of up to 3584 input bytes and 3584 output bytes. NX5001 also supports redundancy use for application where high availability is expected.

Its main features are:

- PROFIBUS-DP Master communication protocol compatible with any PROFIBUS-DP/ DPV1 slave equipment, according to EN 50170, IEC 61158 and IEC-61784 standards
- Supports up to 125 slaves (using network repeaters)
- Redundant architecture support
- Global Control Commands support (Sync, Unsync, Freeze, Unfreeze)
- Hot swap support
- Enhanced diagnostics services
- All configuration and parameterization through MasterTool IEC XE
- One Touch Diag
- Electronic Tag on Display
- LCD and LED for diagnostic indication
- Baud rate up to 12 Mbits/s

Ordering Information

Included Items

The product package contains the following items:

- NX5001 module
- Installation guide

Product Code

The following code should be used to purchase the product:

Code	Description
NX5001	PROFIBUS-DP Master

Related Products

The following products must be purchased separately when necessary:

Code	Description
PO5063V1	PROFIBUS-DP Fieldbus Head
PO5063V5	Redundant PROFIBUS-DP Fieldbus Head
PO5064	PROFIBUS-DPV1 Head
PO5065	Redundant PROFIBUS-DPV1 Head
NX5110	PROFIBUS-DP Fieldbus Head
NX5210	Redundant PROFIBUS-DP Fieldbus Head
AL-2601	PROFIBUS Connector
AL-2602	PROFIBUS Terminator Connector
AL-2605	Terminator with Power Supply Diagnostic
AL-2303	PROFIBUS cable
AL-2431	FOCUS/ PROFIBUS Optical Repeater
AL-2432	FOCUS/ PROFIBUS Optical Repeater with Two Ports

Notes:

PO5063V1: The PROFIBUS-DP Fieldbus Head allows the connection of Ponto Series modules to PROFIBUS fieldbuses, expanding CPU's I/O system.

PO5063V5: The Redundant PROFIBUS-DP Fieldbus Head allows the connection of Ponto Series modules to redundant PROFIBUS fieldbuses.

PO5064: The PROFIBUS-DP Fieldbus Head allows the connection of Ponto Series modules to PROFIBUS fieldbuses, expanding the amount of I/O points connected to a given CPU. In addition, PO5064 also supports DPV1 communication between Ponto series modules and any other node from the PROFIBUS fieldbus.

PO5065: The Redundant PROFIBUS-DP Fieldbus Head allows the connection of Ponto Series modules to redundant PROFIBUS fieldbuses, expanding the amount of I/O points connected to a given CPU. In addition, PO5065 supports DPV1 communication between Ponto series modules and any other node from the PROFIBUS fieldbus.

NX5110: The PROFIBUS-DP Fieldbus Head allows the connection of Nexto Series modules to PROFIBUS fieldbuses, expanding CPU's I/O system. In addition, NX5110 supports DPV1 communication between Ponto series modules and any other node from the PROFIBUS fieldbus.

NX5210: The redundant PROFIBUS-DP Fieldbus Head allows the connection of Nexto Series modules to PROFIBUS fieldbuses, expanding CPU's I/O system. In addition, NX5210 supports DPV1 communication between Ponto series modules and any other node from the PROFIBUS fieldbus.

AL-2601: AL-2601 is a standard DB9 connector with standard PROFIBUS pins. It is suitable for connection to PROFIBUS devices mounted on intermediate positions at the PROFIBUS fieldbus (not on the ends of the PROFIBUS fieldbus). This connector has input and output connection to the fieldbus cable, allowing device exchange without any interruption of data transmission.

AL-2602: The termination connector is a standard DB9 connector with standard PROFIBUS pins and termination components internally mounted. It is suitable for connection to PROFIBUS devices mounted on the PROFIBUS fieldbus' ends.

AL-2605: This device is mounted at the ends of the PROFIBUS fieldbus and it replaces AL-2602. AL-2605 was developed to ensure PROFIBUS fieldbus operation even if the modules placed at the PROFIBUS fieldbus' ends are turned off or removed. The product also verifies field power supply status, delivering its diagnostics in case of failure. It's recommended for any PROFIBUS-DP fieldbus where reliability and availability are main requirements.

AL-2303: Cable for PROFIBUS fieldbus.

AL-2431 and AL-2432: Optical repeaters for interconnection of any PROFIBUS devices through fiber optics. AL-2432 has redundancy in optical media, increasing the system availability.

Innovative Features

Nexto Series brings to the user several innovations in utilization, supervision and system maintenance. These features were developed focusing a new experience in industrial automation. The list below shows some new features that the user will find in NX5001 module:

One Touch Diag ™: One Touch Diag is an exclusive feature that Nexto Series brings to PLCs. With this new concept, the user can check diagnostic information of any module present in the system directly on CPU's graphic display with one single press in the diagnostic switch of the respective module. OTD is a powerful diagnostic tool that can be used offline (without supervisor or programmer), reducing maintenance and commissioning times.

ETD – Electronic Tag on Display: Another exclusive feature that Nexto Series brings to PLCs is the Electronic Tag on Display. This new functionality brings the process of checking the tag names of any I/O pin or module used in the system directly to the CPU's graphic display. Along with this information, the user can check the description, as well. This feature is extremely useful during maintenance and troubleshooting procedures.

DHW – Double Hardware Width ™: Nexto Series modules were designed to save space in user cabinets or machines. For this reason, Nexto Series delivers two different module widths: Double Width (two backplane rack slots are required) and Single Width (only one backplane rack slot is required). This concept allows the use of compact I/O modules with a high-density of I/O points along with complex modules, like CPUs, fieldbus masters and power supply modules.

iF Product Design Award 2012: Nexto Series was the winner of iF Product Design Award 2012 in industry + skilled trades group. This award is recognized internationally as a seal of quality and excellence, considered the Oscars of the design in Europe.

Product Features

General Features

	NX5001
Backplane rack occupation	2 sequential slots
Maximum amount of PROFIBUS slaves	125
Maximum amount of cyclic input bytes per slave	244
Maximum amount of cyclic output bytes per slave	244
Maximum amount of cyclic input bytes	3584
Maximum amount of cyclic output bytes	3584
PROFIBUS-DP	Yes
Baud rate	9.6 to 12,000 Kbit/s, configurable
Redundancy support	Yes (software version 1.1.0.0 or above/ product review AE or above)
Global Control Commands support	Yes (software version 1.2.0.6 or above / product revision AD or above)
Hot swap support	Yes
Status and diagnostic indication	Display, LEDs, web pages and CPU's internal memory
One Touch Diag (OTD)	Yes
Electronic Tag on Display	Yes

Isolation **PROFIBUS interface to logic** **PROFIBUS interface to Protective earth** **Logic to protective earth**	1000 Vac / 1 minute 1000 Vac / 1 minute 1250 Vac / 1 minute
Current consumption from backplane rack power supply	400 mA
Power dissipation	2 W
IP level	IP 20
Operating temperature	0 to 60 °C
Storage temperature	-25 to 75 °C
Operating and storage relative humidity	5 to 96 %, non-condensing
Conformal coating	Yes
Standards	IEC 61131-2 CE, Electromagnetic Compatibility (EMC) and Low-Voltage Directive (LVD) RoHS 2002/95/EC
Module dimensions (W x H x D)	36.00 x 114.63 x 115.30 mm
Package dimensions (W x H x D)	44.00 x 122.00 x 147.00 mm
Weight	200 g
Weight with package	250 g

Notes:
Baud rate: Baud rate can be configured with the following communication speeds: 9.6 kbits/s, 19.2 kbits/s, 93.75 kbits/s, 187.5 kbits/s, 500 kbits/s, 1,500 kbits/s, 3,000 kbits/s, 6,000 kbits/s and 12,000 kbits/s.
Redundancy support: It's possible to design a PROFIBUS redundant fieldbus using two NX5001. This implementation is described in the section System Configurations.

Global Control Command Support: This service aims to synchronize inputs and / or outputs of a given group of PROFIBUS slaves through the Sync, Unsync, Freeze and Unfreeze commands. These commands are available on PROFIBUS-DP NX5001 master, via User Commands. The description of this service lies in the manual PROFIBUS-DP NX5001 (MU214601), Appendix C - Global Control Commands. See also Compatibility section of Appendix C, to get more details about the availability of this service and associated products (NX5001 and the MasterTool IEC XE programmer).
Maximum number of PROFIBUS slaves: NX5001 can address up to 31 slaves without repeaters and media converters. In case of more than 31 slaves, repeaters and media converters must be used.
Logic: Logic is the name for the internal interfaces such as processors, memories and backplane rack interfaces.
Conformal coating: Conformal coating protects the electronic components inside the product from moisture, dust and other harsh elements to electronic circuits.

ATTENTION:
The Global Control Commands are incompatible with support for network redundancy. So they are invalid for architectures such as those described in the next section:
- Configuration B: Redundant PROFIBUS Fieldbus
- Configuration D: Two Independent Redundant PROFIBUS Fieldbuses

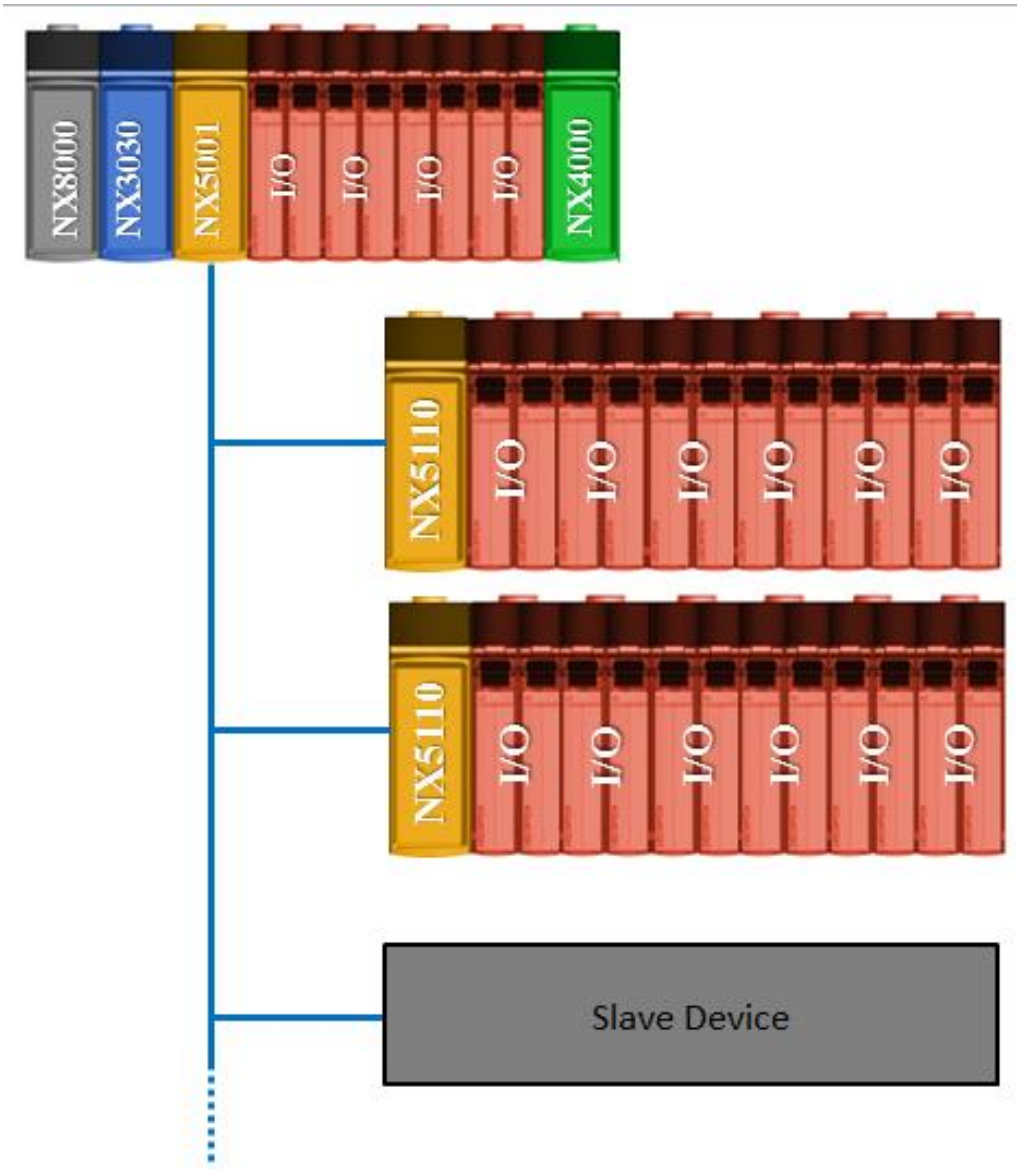
This and other information can be found in MU214601, Appendix C - Global Control Commands.

System Configurations

Suggested configurations using NX5001 are shown below:

Configuration A: Simple PROFIBUS Fieldbus

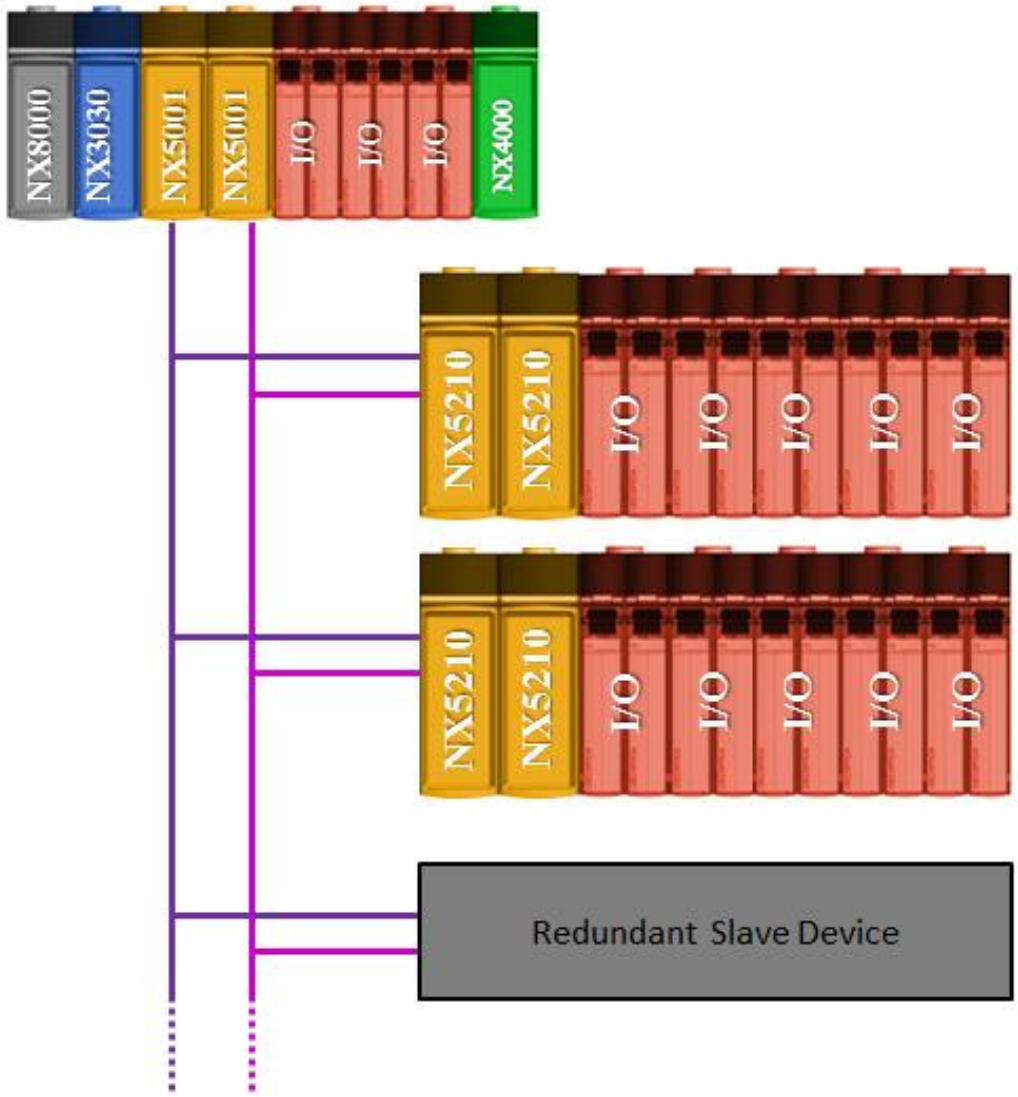
Basic configuration contains one NX5001 connected to a Nexto Series CPU on the same rack and PROFIBUS slaves connected through PROFIBUS fieldbus.



Configuration B: Redundant PROFIBUS Fieldbus

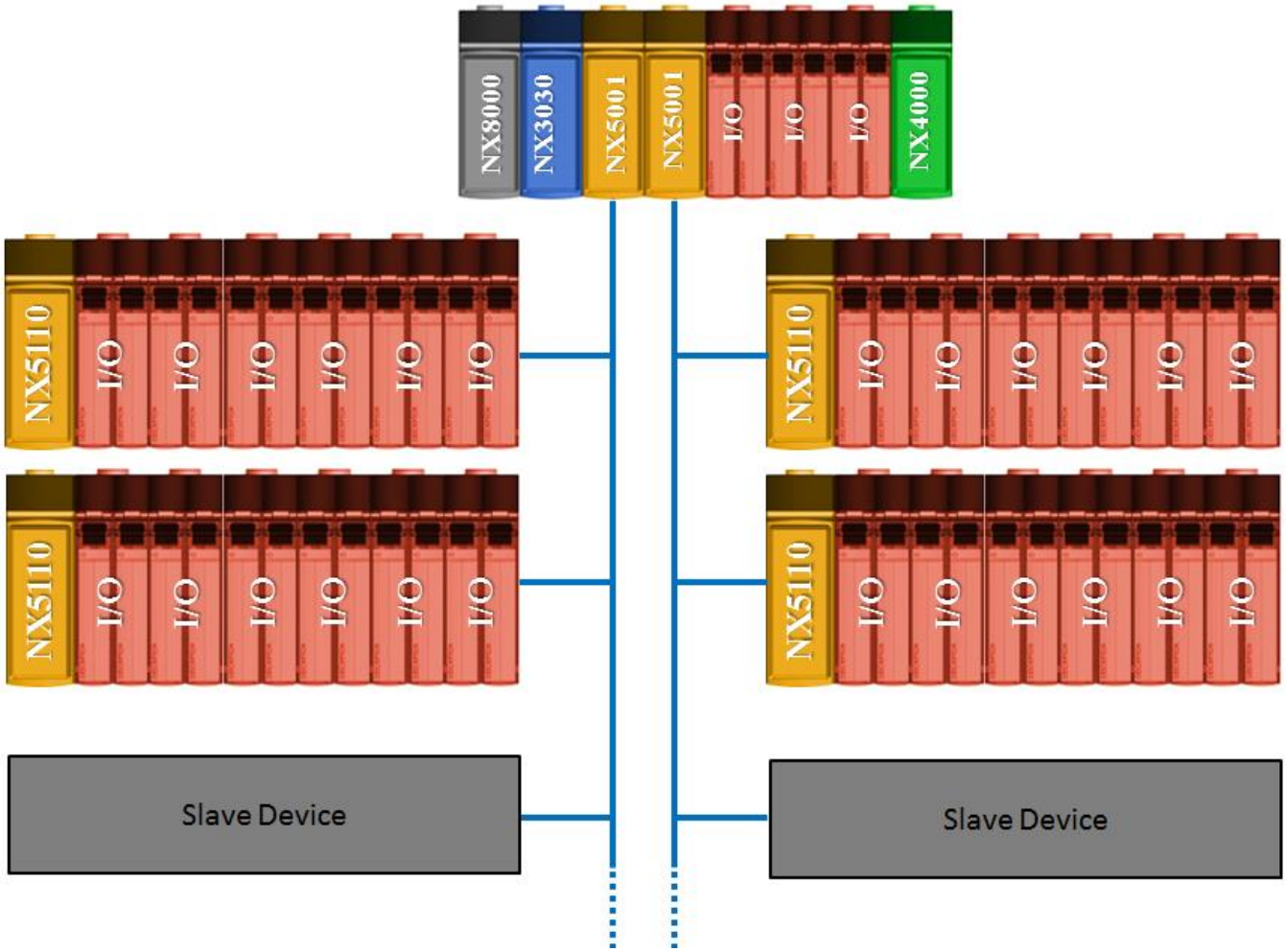
Configuration B has one redundant PROFIBUS fieldbus. In this case, two NX5001 are connected to a Nexto Series CPU on the same rack.

The redundant PROFIBUS fieldbus endures a failure in one of the two redundant fieldbuses, offering more availability, required in critical applications.



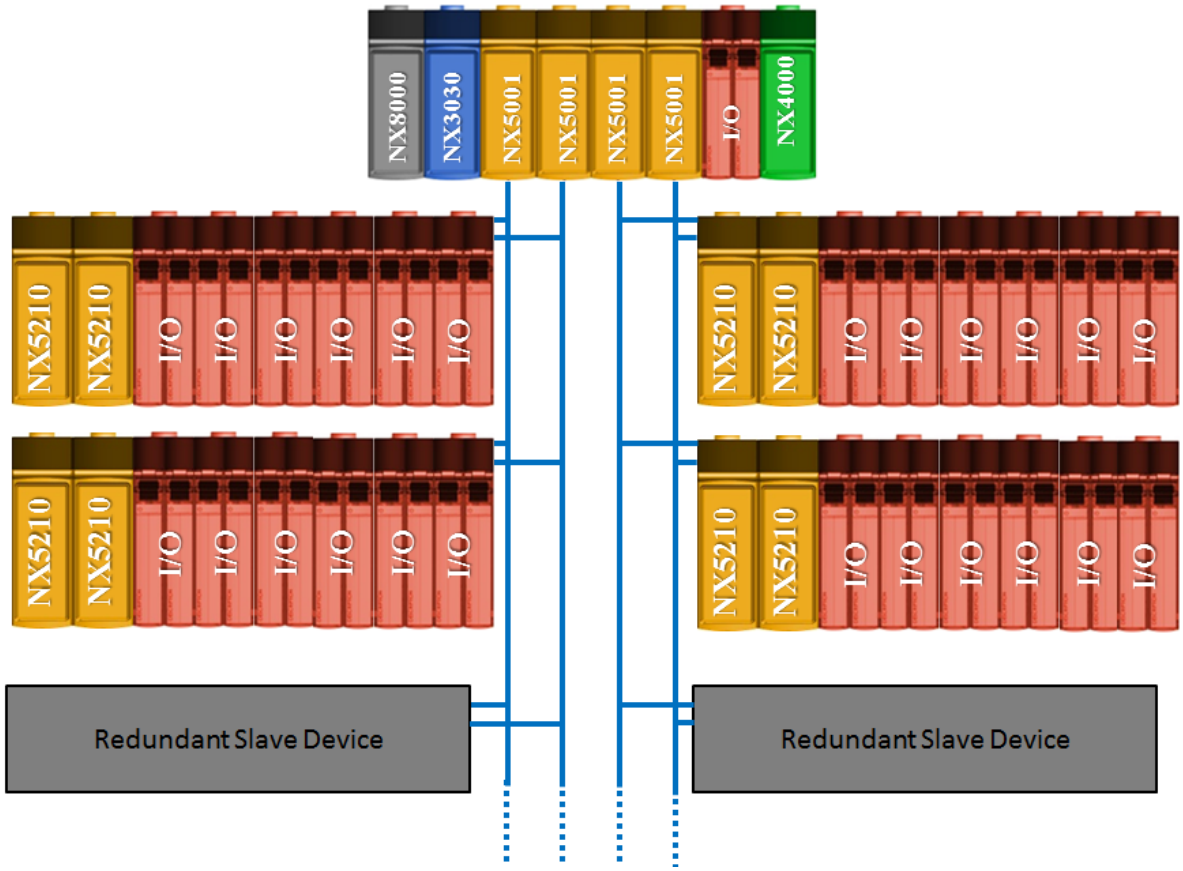
Configuration C: Two Independent Simple PROFIBUS Fieldbuses

Configuration C has two NX5001 connected to a Nexto CPU on the same rack. Each NX5001 is connected to an independent PROFIBUS fieldbus. In this case there's no redundancy. The architecture is shown below.



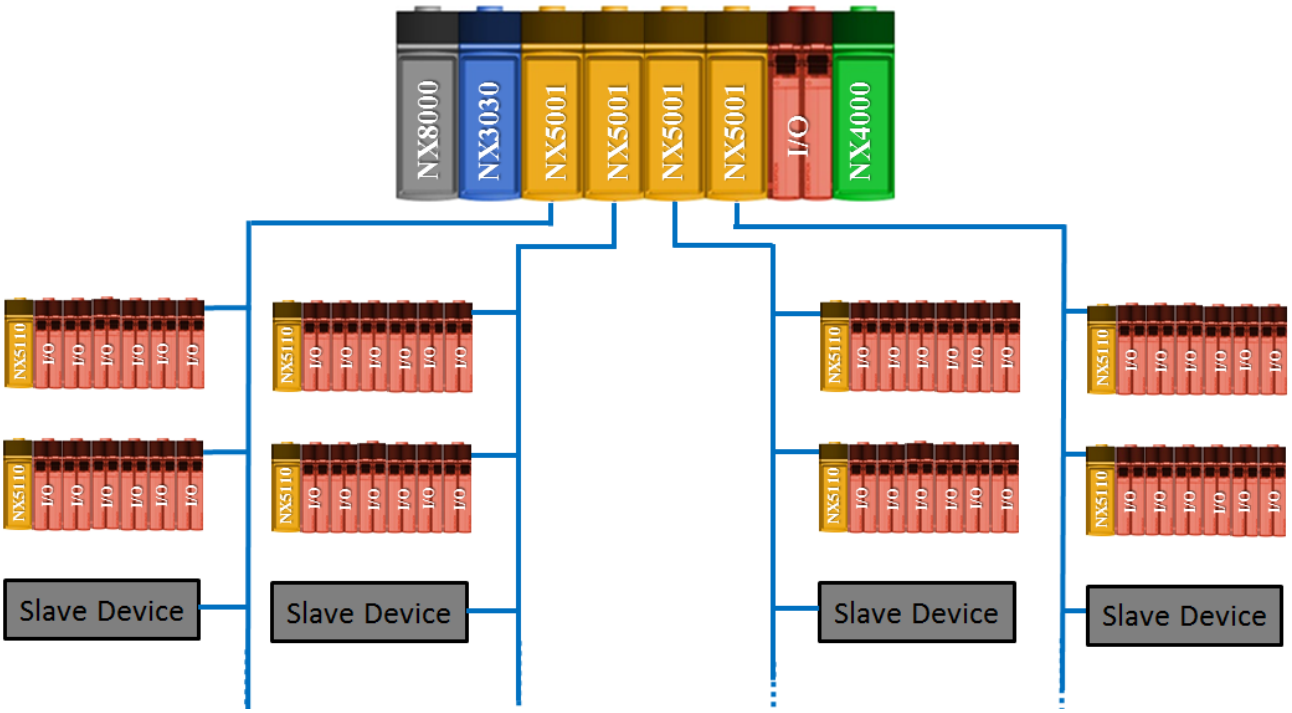
Configuration D: Two Independent Redundant PROFIBUS Fieldbuses

Configuration D is the most complex configuration supported by Nexto Series. It is the redundant version of configuration C. As shown in the picture below, there are two independent redundant PROFIBUS fieldbuses.



Configuration E: Four Independent Simple PROFIBUS Fieldbuses

Configuration E has four NX5001 connected to a Nexto CPU on the same rack. Each NX5001 is connected to an independent PROFIBUS fieldbus. In this case there's no redundancy. The architecture is shown below.



Software Features

Nexto Series brings to the user the MasterTool IEC XE, a powerful tool that provides a complete interface for programming all Nexto Series' modules. This means that there is no additional software required to configure the PROFIBUS slaves. All settings are done in the same software used for programming Nexto CPUs.

Another important feature is that all PROFIBUS slaves parameterization are sent to NX5001 through Nexto CPU, so it doesn't require any special cable for its configuration.

Compatibility with Other Products

NX5001 doesn't have any incompatibility with Nexto Series Modules and MasterTool IEC XE. The following table describes the main Altus' products compatible with NX5001.

The table below show information about compability between NX5001 and MasterTool IEC XE tool of Nexto Series.

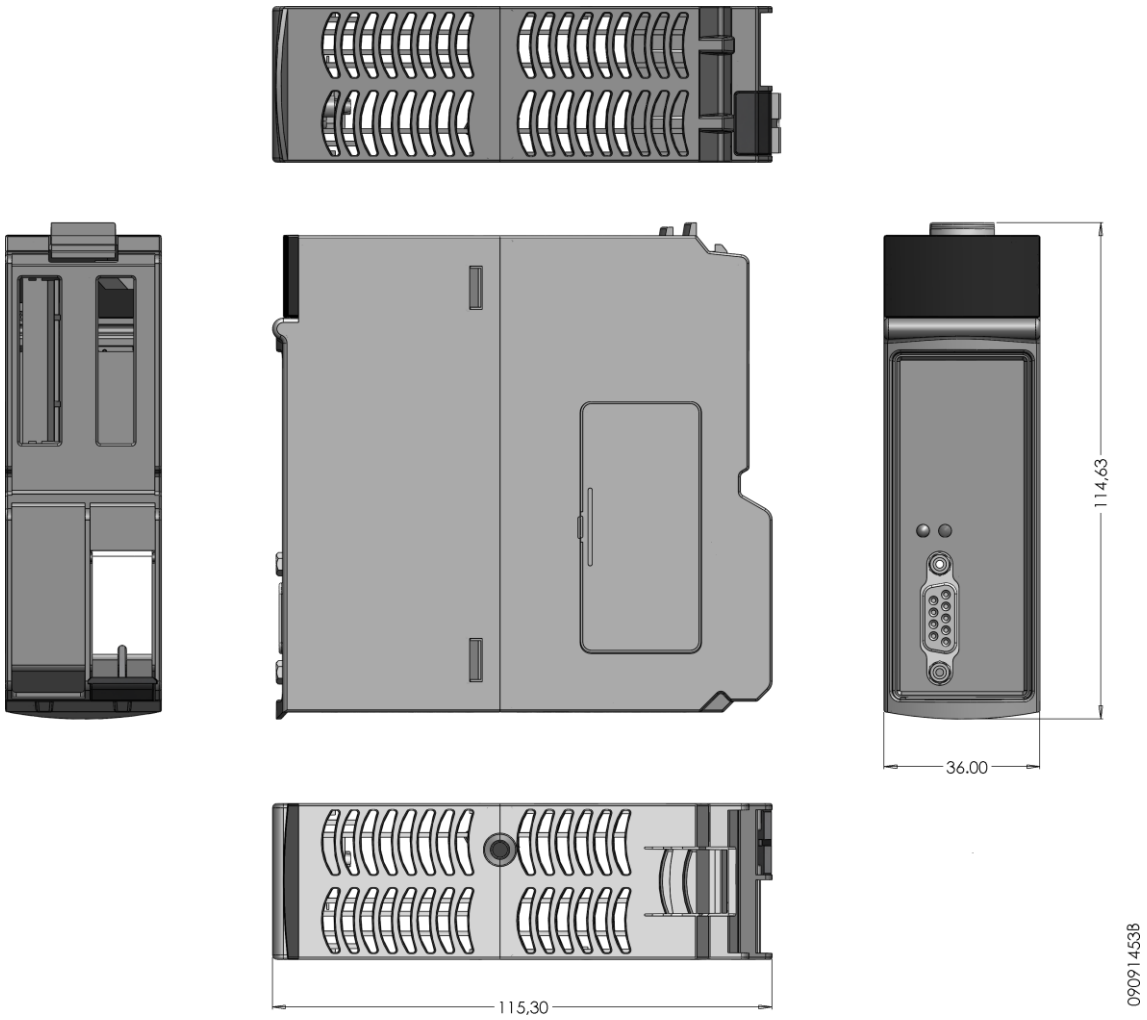
NX5001			Compatible Software Version
Versão	**Revision**	**Feature**	**MasterTool IEC XE**
1.2.0.6	AP	Global Control Command (Sync/Freeze)	2.01 or higher

The table below indicates the compatibility of the main Altus products with NX5001 module.

	Software version	Product revision
PO5063	1.35 or higher	DS or higher
PO5063V1	2.07 or higher	AV or higher
PO5064	1.02 or higher	AI or higher
PO5063V5	5.07 or higher	AV or higher
PO5065	1.02 or higher	AI or higher
PO5063V4	4.35 or higher	AU or higher
NX5110	1.0.0.12	AD or higher
NX5210	1.0.0.12	AD or higher

Physical Dimensions

Dimensions in mm.



Installation

Electrical Installation

The figure bellow illustrates the electrical installation of the PROFIBUS-DP Master NX5001 installed in a Nexto rack.

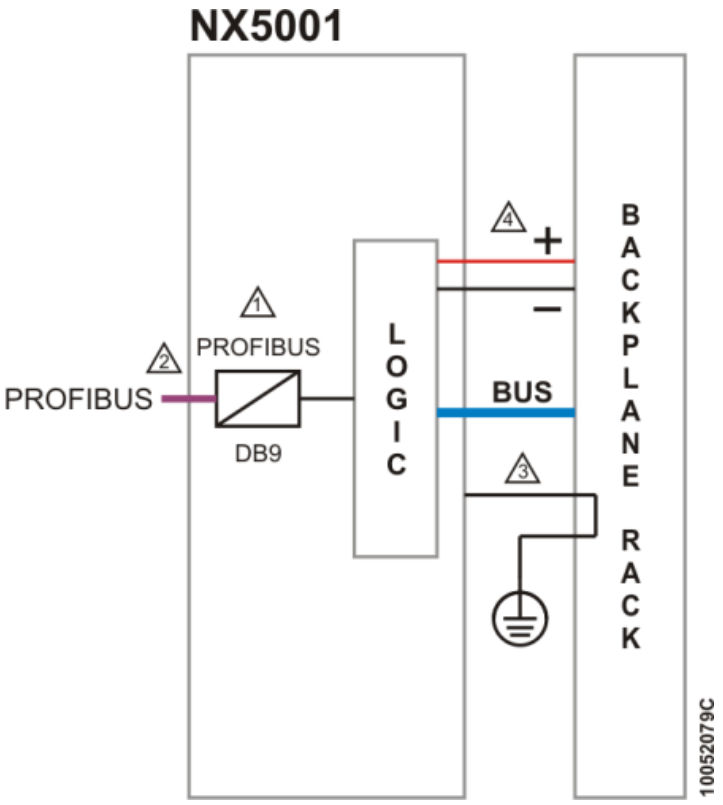


Diagram Notes:

1 – Standard interface for connection to PROFIBUS fieldbus. Pin 1 of DB9 connector is connected to the protective earth signal from Nexto backplane rack.

2 – Use the AL-2303 cable to the PROFIBUS fieldbus and one of the following connectors:

AL-2601 is a connector without internal termination for PROFIBUS fieldbus and can be used to connect any PROFIBUS module in a position where termination is not required.

AL-2602 is a connector with internal termination for PROFIBUS fieldbus. It must be used in PROFIBUS fieldbus modules located at PROFIBUS fieldbus ends. Altus also offers a second option to cover requirements where reliability and availability are the main requirements. For these cases, AL-2605 must be placed in each PROFIBUS fieldbus ends and all PROFIBUS modules must use connectors without internal termination, such as AL2601. More information about AL-2605 can be found at AL-2605 Characteristic Information - CE104705.

It's mandatory to use always two PROFIBUS fieldbus terminations. Each termination must be placed at each PROFIBUS fieldbus end.

3 – The module is connected to earth through the Nexto Series backplane racks.

4 – NX5001 is powered by the Nexto Series power supply connected on the same backplane rack. NX5001 doesn't require any other external power supply.

Mechanical Assembly

The mechanical mounting of this module is described at Nexto Series User Manual – MU214600. There is no particular issue on the installation of this module.

Configuration

NX5001 PROFIBUS-DP Master User Manual - MU214601 must be consulted for information about module configuration.

Process Data

The process data are the variables used for access and module control. The table below contains all variables used by NX5001.

Process data	Description	Type	Update
User Command - Byte 0	Enables or disables the module features	%QB (Read/ Write)	Always
User Command - Byte 1	Reserved for internal use	%QB (Read/ Write)	Always
Reserved	Reserved for internal use	%IB (Read)	Always
Global Control Command - Status	Global Control Command's Status	%IB (Read)	Always
Reserved	Reserved for internal use	%IW (Read)	Always

Note:
Update: This field indicates if the respective process data is updated by CPU and NX5001. If it is set as Always, it means that the process data is always updated.

Module Parameters

Name	Description	Standard value
%Q Start Address of Module Diagnostics Area	Defines the start address of the module diagnostics.	-
%Q Start Address of Slave Diagnostics Area	Defines the start address of the slave diagnostics.	-
Net Redundancy	Enables or disables the PROFIBUS net redundancy.	False
Failure Mode	Enables or disables the switchover in case of module failure.	True
Use Specific Diagnostics to Slave	Indicates if it uses the specific diagnostics to slave	False

Notes:
Failure Mode: This parameter is only valid when there is PROFIBUS master redundancy, i.e. in projects where there is half-cluster redundancy (further details on Nexto Series CPUs User Manual – MU214605).
Standard value: MasterTool IEC XE programmer fills it automatically, but allows the user to edit its initial offset. The limit depends on the CPU supported model (details at Nexto Series CPUs User Manual – MU214605).

Utilization

User Commands

The NX5001 module provides two control variables (User Command Byte-0 and User Command Byte 1) for user command.

The bit 0 of User Command - Byte 0, Enable Interface, which can be used to enable or disable the master.

Bits 4 to 7 of User Command – Byte 0 are responsible by trigger the Global Control Commands.

User Command – Byte 1 it's the variable responsible to define for each PROFIBUS Slave Groups will receive the Global Control Commands.

More information about User Commands can be found at NX5001 PROFIBUS-DP Master User Manual – MU214601.

User Status

Bytes 0.2 and 3 are reserved for internal use. Byte 1 indicates whether the global command can be sent or not.

More information about the User stats is in Master User Manual PROFIBUS-DP NX5001 - MU214601.

Maintenance

Altus recommends that all module's connections be checked and that all dust or any kind of dirt at the module's enclosure be removed at least every 6 months.

NX5001 offers five important features to assist the user during maintenance: Electronic Tag on Display, One Touch Diag, Status and Diagnostics Indicators, web page with complete status and diagnostics list and status and diagnostics mapped to internal memory.

Electronic Tag on Display and One Touch Diag

Electronic Tag on Display and One Touch Diag are important features that provides for the user the option to check the tag, description and diagnostics related to a given module directly on the CPU display.

Electronic Tag on Display and One Touch Diag are easy-to-use features. To check the tag and diagnostics of a given module, it's required only one short press (shorter than 1 s) on its diagnostic switch. After pressing once, CPU will start to scroll tag information and diagnostic information of the module. To access the respective description for the module just long press (longer than 1 s) the diagnostic switch of the respective module.

More information about Electronic Tag on Display can be found at Nexto Series User Manual – MU214600.

Status and Diagnostic Indicators

All Nexto slave modules have a display with the following symbols: D, E, 0, 1 and numeral characters. The states of the symbols D, E, 0, 1 are common for all Nexto series slave modules, these states can be consulted in the table below.

The meaning of the numeral characters can be different for specific modules. NX5001 doesn't use these segments.

NX5001 also has two LEDs used to indicate diagnostics related to the PROFIBUS interface.

ST and ER LEDs

The PROFIBUS-DP Master NX5001 has two LEDs at the front panel to indicate the diagnostics of PROFIBUS interface. The table below describes the meaning of each LED state.

ST LED	ER LED	Description	Cause
Off	Off	Module off Hardware failure	No Power supply. Hardware failure
On	Off	Communication with slaves was established	Communication with all slaves was established.
On	Blinking intermittent	There are present and absent slaves in the PROFIBUS fieldbus	Some PROFIBUS slaves are exchanging I/O with the Master NX5001, others aren't. Error in PROFIBUS termination.
Off	On	No activity in the PROFIBUS fieldbus	Loss of communication with all slaves. PROFIBUS cable isn't connected. PROFIBUS cable is defective. Error in PROFIBUS termination.
Blinking intermittent	Off	NX5001 received configuration	The Master NX5001 received the settings from CPU, but the communication hasn't been released by the application. Configuration has no slaves declared NX5001 is operating in Passive mode
Blinking 4x	Off	NX5001 is not configured	NX5001 didn't receive the slave's settings and PROFIBUS fieldbus settings from CPU.
On	On	NX5001 initialization	The Master NX5001 was connected to the bus or restarted.

D and E States

D	E	Description	Causes	Solution	Priority
Off	Off	Display fail or module off	-	Check if the module is completely connected to the rack and if the rack is supplied by an external power supply	-
On	Off	Normal use	-		9 (Lowest)
Blinking 1x	Off	Active Diagnostic	There is at least one active diagnostic related to the module NX5001	Check which is the active diagnostic. More information can be found at Maintenance section of this document	8
Blinking 2x	Off	CPU in STOP mode	-	Check if CPU is in RUN mode. More information can be found on CPU's documentation	7
Blinking 3x	Off	Reserved	-		6
Blinking 4x	Off	Non fatal fault	Failure in some hardware or software component, which does not have impact on the basic functionality of the product	Check the module diagnostic information. If it is a hardware fault, provide the replacement of this part. If it is a software fault, please contact the Technical Support	5
Off	Blinking 1x	Parameterization error	NX5001 isn't parameterized or didn't receive the new parameterization		4
Off	Blinking 2x	Loss of master	Loss of communication between module and CPU	Check if the module is completely connected to the backplane rack Check if CPU is in RUN mode	3
Off	Blinking 3x	Reserved	-		2
Off	Blinking 4x	Fatal hardware fault	-		1 (Highest)

Note:

Fatal hardware fault: Please contact Altus support team in case of fatal hardware fault.

0, 1 and Numeral Characters

The segments 0 and 1 should be normally off. These two segments will start to blink when the module is on the Diagnostic Mode (Electronic Tag on Display and One Touch Diag).

The Numeral Characters aren't used in this module.

Web Page with Complete Status and Diagnostic List

Another way to access diagnostic information on Nexto Series is via web pages. Nexto Series CPU's has an embedded web pages server that provides all Nexto status and diagnostic information, which can be accessed using a simple browser.

More information about web page with complete status and diagnostic list can be found at Nexto Series CPUs User Manual – MU214605.

Diagnostics Mapped to Variables

All NX5001's diagnostics can be accessed through variables that can be handled by the user application or even forwarded to a supervisory system using a communication channel. There are two different ways to access diagnostics in the user application: using symbolic variables with AT directive or addressing memory. Altus recommends use symbolic variables for diagnostic accessing. The table below shows all available diagnostics for NX5001 and their respective memory address, description, symbolic variable and string that will be shown on the CPU graphical display and web.

Direct Representation Variable		Diagnostic Message	Symbolic Variable DG_modulename.tGeneral.	Description
Variable	**Bit**			
%QB(n)	**0..7**	Reserved		
%QB(n+1)	**0**	MODULE W/ DIAGNOSTICS	bActiveDiagnostics	TRUE – Module has active diagnostics
		NO DIAG		FALSE – Module doesn't have active diagnostic
	1	MODULE W/ FATAL ERROR	bFatalError	TRUE – Fatal error
		-		FALSE – No fatal error
	2	CONFIG. MISMATCH	bConfigMismatch	TRUE – Parameterization error
		-		FALSE – Parameterization ok
	3	WATCHDOG ERROR	bWatchdogError	TRUE – Watchdog has been detected
		-		FALSE – No watchdog
	4	OTD SWITCH ERROR	bOTDSwitchError	TRUE – Module's OTD switch failure
		-		FALSE – OTD switch ok
	5	-	bBusCommunicationError	TRUE – Error in bus communication
				FALSE – No error in bus communication
	6..7	Reserved		
%QB(n+2)	**0..7**	Reserved		
%QB(n+3)	**0..7**	Reserved		
%QB(n+4)	**0**	Reserved		
	1	ABSENT CONFIG	bNX5001NoCfg	TRUE – NX5001 didn't receive the configuration from CPU
				FALSE – NX5001 received CPU configuration
	2..3	Reserved		
	4	-	bStsEnableInterface	TRUE - NX5001 is enabled by user command
				FALSE – NX5001 was disabled by user command
	5	Reserved		
	6	-	bStsMstRedundEnable	TRUE – Master redundancy is enabled (control operand)
				FALSE –Master redundancy is not enabled (control operand)
	7	Reserved		

%QB(n+5)	**0**	PB SLAVE UNCONFIGURED	bSlaveNotConfigured	TRUE – At least one slave isn't parameterized
		-		FALSE – All slaves are parameterized
	1	PB SLAVE NOT PRESENT	bSlaveNotPresent	TRUE – At least one absent slave in the fieldbus
		-		FALSE – All slaves are present in the fieldbus
	2	PB SLAVE W/ DIAG.	bSlaveWithDiagnostic	TRUE – At least one slave with active diagnostics
		-		FALSE – No slaves with active diagnostics
	3..4	Reserved		
	5	COMM. FAILURE	bPbusCommFail	TRUE – PROFIBUS communication failed
		-		FALSE – PROFIBUS fieldbus is operational
	6..7	Reserved		

Notes:
Direct Representation Variable: "n" is the address defined in the field %Q Start Address of Diagnostic Area on the NX5001's configuration screen – Modules Parameters tab in the MasterTool IEC XE.
Symbolic Variable: Some symbolic variables serve to access diagnostics. This diagnostics are stored into the addressing memory, then the AT directive is used to map the symbolic variables in the addressing memory. The directive AT is a reserved word in the MasterTool IEC XE that uses this directive to declares the diagnostics automatically on a symbolic variables. All symbolic variables declared automatically can be found inside of Diagnostics object.

Manuals

For correct application and utilization NX5001 PROFIBUS-DP Master User Manual - MU214601 must be consulted.

For further technical details, configuration, installation and programming of Nexto Series, the table below should be consulted.

The table below is only a guide of some relevant documents that can be useful during the use, maintenance, and programming of NX5001. The complete and updated table containing all documents of Nexto Series can be found at Nexto Series User Manual – MU214600.

Document Code	Description	Language
CE114000 **CT114000** **CS114000**	Nexto Series – Technical Characteristics Série Nexto – Características Técnicas Serie Nexto – Especificaciones y Configuraciones	English Portuguese Spanish
MU214600 **MU214000** **MU214300**	Nexto Series User Manual Manual de Utilização Série Nexto Manual Del Usuario Nexto	English Portuguese Spanish
MU214601 **MU214001** **MU214301**	NX5001 PROFIBUS-DP Master User Manual Manual de Utilização Mestre PROFIBUS-DP NX5001 Manual del Usuario Maestro PROFIBUS-DP NX5001	English Portuguese Spanish
MU214605 **MU214100** **MU214305**	Nexto Series CPUs User Manual Manual de Utilização UCPs Série Nexto Manual del Usuario UCPs Serie Nexto	English Portuguese Spanish
MU299609 **MU299048** **MU299800**	MasterTool IEC XE User Manual Manual de Utilização MasterTool IEC XE Manual del Usuario MasterTool IEC XE	English Portuguese Spanish
MU299026	Manual de Utilização da Rede PROFIBUS	Portuguese
MU209010	Configuração da Remota PROFIBUS – Série Ponto	Portuguese
MU209508	Manual de Utilização Cabeça PROFIBUS PO5063V1 e Cabeça Redundante PROFIBUS PO5063V5	Portuguese
MU219511 **MU209511**	PO5064 PROFIBUS Head and PO5065 Redundant PROFIBUS Head Utilization Manual Manual de Utilização Cabeça PROFIBUS PO5064 e Cabeça Redundante PROFIBUS PO5065	English Portuguese
MU209020	Manual de Utilização Rede HART sobre PROFIBUS	Portuguese
MU204631	Manual de Utilização do Repetidor Ótico / FOCUS PROFIBUS	Portuguese