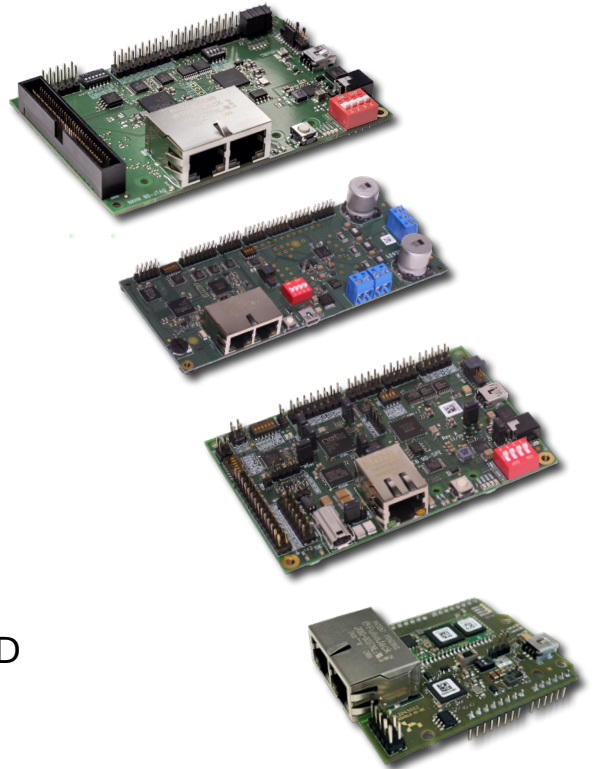


NXHX & NSHIELD

netX Software Evaluation boards

- Target system with extensive peripheral functions
- Integrated debug interface
- netX Studio CDT software development and debug environment
- Evaluation of network protocols and applications on the netX
- Economical, easy to operate and complete
- STM 32 Companion Chip Use Case with NSHIELD



NXHX Evaluation boards

The netX network controller with its 32 Bit ARM CPU provides a high degree of computing performance and comprehensive peripheral functions for stand-alone solutions in price-sensitive applications.

The simplest and most economic way of evaluating the compatibility of your prototypes to different industrial communication networks is with the netX software evaluation board. Besides a universal hardware, it also possesses an integrated debug interface and is supplied with the netX Studio CDT from Hilscher.

netX Studio further offers a comfortable development and debugging environment on top of the already incorporated toolchain. You will also receive the complete circuit diagram providing a basis for your hardware development.

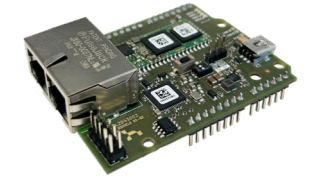
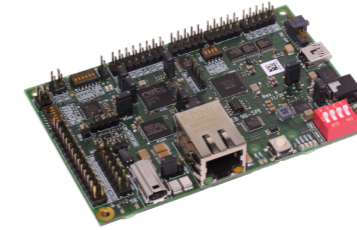
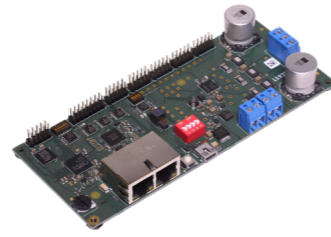
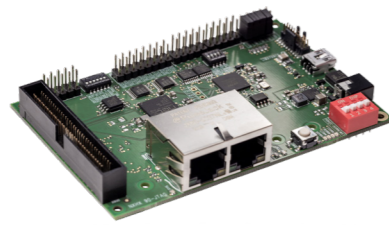
On this hardware you will later connect, via the JTAG Interface, the MIPI20/JTAG Adapter from Hilscher and test or develop with the same user interface and functionality as on the evaluation board.



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Technical Data



Technical Data	NXHX 90-JTAG	NXHX 90-MC
	netX 90 Starterkit - easy access to networks and apps	netMOTION Evaluation board - quickly to the networked drive solution
Operating temperature	±0° ... +55° C	±0° ... +55° C
Operating voltage	+24 V / 150 mA	+12 V - 43 V / depending on motor
Dimensions (L x W x H)	100 × 65 × 20 mm	155 × 65 × 22.2 mm
Network Controller	netX 90	netX 90
External Memory	4 Mbyte Quad SPI Flash	8 Mbyte SDRAM, 4 Mbyte Quad SPI Flash
PIN Connectors	Host Interface, ADC, CAN, ENDCODER, UART, MMIO*	SPM, HALL, ENCODER, MOTOR BRAKE / SUPPLY / 3-PHASES
Communication Interface	2x Ethernet 100 BASE-TX, RJ45 1x Fieldbus interface optional	2x Ethernet 100 BASE-TX, RJ45 1x Fieldbus interface optional
USB Mini-B Receptable	USB Interface for On-board Debugger / Configuration / Diagnostics	USB Interface for On-board Debugger / Configuration / Diagnostics
USB Type B Receptable	✗	✗
Push Button	Reset	Reset
DIP Switch	Bootmode, Hostmode, MMIO*	Bootmode
Jumper	✗	✗
Onboard debugger	✓	✓
Debug Interface	JTAG / TPIU	JTAG / TPIU
Inputs	4 DIP Switches	4 DIP Switches
Outputs	4 LEDs	4 LEDs
LEDs	Status / Link / Activity / Communication	Status / Link / Activity / Communication

Technical Data	NXEB-90-SPE	NSHIELD 90-RE
	netX Evaluation board - for 10 Mbps Single-Pair-Ethernet Solutions	netX 90 Expansion board - for STM 32 Nucleo 64/144
Operating temperature	±0° ... +55° C	0 ... +30 °C
Operating voltage	+24 V / 150 mA	5 V DC
Dimensions (L x W x H)	100 × 65 × 20 mm	70.2 × 53.4 × 23.6 mm
Network Controller	netX 90	netX 90
External Memory	8 Mbyte SDRAM, 4 Mbyte Quad SPI Flash	8 Mbyte SDRAM, 8 Mbyte Quad SPI Flash
PIN Connectors	SPM, UART, MII, MMIO, ADC	ARDUINO® Uno V3 compatible plug pin header
Communication Interface	1x Ethernet 100 BASE-TX, RJ45 1x Ethernet 10 BASE-T1L IEC63171-6 1x Fieldbus interface optional	2x Ethernet 100 BASE-TX, RJ45, 1x Fieldbus interface optional
USB Mini-B Receptable	USB Interface for On-board Debugger / Configuration / Diagnostics	USB Interface for On-board Debugger / Configuration / Diagnostics
USB Type B Receptable	✗	✗
Push Button	Reset	Reset
DIP Switch	Bootmode	✗
Jumper	✗	Power select
Onboard debugger	✓	✓
Debug Interface	JTAG / TPIU	JTAG / TPIU
Inputs	4 DIP Switches	✗
Outputs	4 LEDs	4 LEDs
LEDs	Status / Link / Activity / Communication	Status / Link / Activity / Communication

* MMIO = Multiplex Matrix Pins could be used as standard IOs, PWM, GPIO, Fieldbus, SPI, UART, CAN, I2C, Trigger

Note: All technical data may be changed without further notice.



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Product Information

Product Overview

Product Overview - Evaluation boards

NXHX 90-JTAG 7833.000 netX 90 Software Evaluation board with JTAG
NXHX 90-MC 7833.100 netX 90 Motor Control Demoboard
NXEB 90-SPE 7832.300 netX 90 Evaluation board with 10BASE-T1L PHY
NSHIELD 90-RE 7836.000, netX 90 Expansion board for STM Nucleo 64/144

Accessories Fieldbus Interface

NXHX-DP 7923.410 PROFIBUS Interface (RS-485)
NXHX-CO 7923.500 CAN/CANopen Interface
NXHX-DN 7923.510 DeviceNet Interface
NXHX-RS 7923.010 RS-232 Interface
NXHX-CC 7923.740 CC-Link Interface

Product Overview - Accessories Host Interface NXHX

	90-JTAG	90-MC	90-SPE	NSHIELD
NXHX-IO 7703.010 16 Digital Inputs (DIL Switch) & Outputs (LED)	✗	✗	✗	✗
NXHX-SDR 7703.020 32-bit SDRAM with 64 MBit	✗	✗	✗	✗
NXHX-SDRSPM 7703.080 16-bit SDRAM with 64 MBit; SPM Interface	✓	✗	✗	✗
NXHX-FTDI 7703.050 USB Desktop Adapter for SPM Interface	✓	✗	✗	✗
NXHX 52-RE 7773.000 netX 52 Host Interface Board	✗	✗	✗	✗

Product Overview - Accessories App Interface NXHX

	90-JTAG	90-MC	90-SPE	NSHIELD
NXHX-ENC 7924.000 BiSS/EnDat/SSI encoder interface adapter	✓	✓	✗	✗
NXHX-DH 7924.100 Digital halls/quadrature encoder interface adapter	✗	✓	✗	✗
NXHX-IOL 7923.640 IO-Link Interface	✓	✗	✗	✗



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