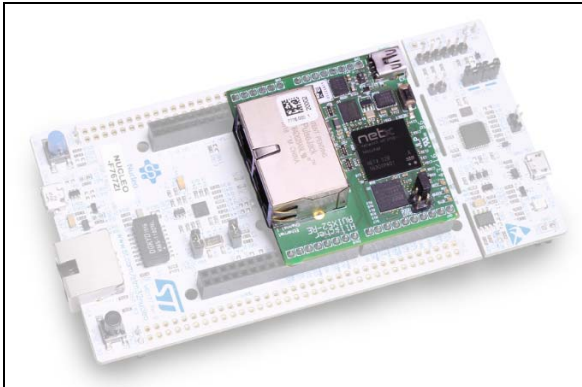

**netSHIELD industrial ethernet protocols expansion board
for STM32 Nucleo**

Data brief

**Features**

- STM32 connected via SPI to the netX system-on-chip (SoC)
- One piece of hardware for all industrial Real-time Ethernet systems
- Supports the protocols: PROFINET® IRT and RT devices, EtherCAT® Slave, Ethernet/IP™ Adapter, POWERLINK Controlled Node, Sercos® III Slave, Modbus®/TCP Client/Server
- Two RJ45 ports with Real-time Ethernet switch for line and ring topologies
- Power supply via Mini-USB connector
- Reset button
- Boot-mode jumper
- netX firmware Flash programming via USB
- netX protocol-stack firmware available as free download for evaluation
- STM32Cube expansion software available

Description

netSHIELD is an STM32 Nucleo expansion board with Arduino-compatible connectors. It is compatible with STM32 Nucleo-64 and Nucleo-144.

netSHIELD enables the user to connect an STM32-based application to all market relevant real-time Ethernet industrial networks with best-in-class real-time capabilities, like PROFINET®, Ethernet/IP™, EtherCAT® and others.

The extension board features a netX 52 system-on-chip (SoC) from Hilscher.

The netX SoC architecture is designed from the ground up for the highest demands on flexibility, determinism and performance in terms of multi-protocol capability, and low latency for short cycle times. The heterogeneous multi-core architecture features an ARM processor core coupled with a flexible communication sub system (xC) to support a variety of industrial applications.

The communication sub system, that is, the Protocol stack, runs independently on the netX SoC and requires only small memory and very limited CPU resources from the STM32 host microcontroller. A protocol-specific firmware image for the netX network controller is stored in a serial Flash memory.

This product is supplied by a third party not affiliated to STMicroelectronics. For the latest information on the specification and the package of the purchased parts, refer to the third-party website at www.hilscher.com.

Revision history

Table 1. Document revision history

Date	Revision	Changes
02-Mar-2017	1	Initial release.

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