Downloads NSHIELD 52-RE

General description of NSHIELD 52-RE

Three steps to success

1. Program the Protocol Stack firmware of your choise into netSHIELD flash memory, using the netHOST utility
2. Mount netSHIELD onto your Nucleo board
3. Import STM32Cube Expansion projects into your System Workbench for STM32 workspace and start the evaluation

Refer to the netSHIELD USER Guide for more information

Documentation

Major documents

Title	Document type	Document title	Content	Date	Language	File type
Host application examples using loadable firmware (Revision 1)	Application note	Host application examples using loadable firmware	Application example for embedded and Windows targets.	2017-03	EN	PDF
netSHIELD NSHIELD 52-RE (Revision 1)	User manual	netSHIELD NSHIELD 52-RE	Description of the netSHIELD extension board NSHIELD 52-RE for Arduino™-compatible host devices.	2017-03	English	PDF

Document	Content	Download
cifX API Manual	API Manual: Explanation of cifX function library. • The cifX API is the function library for application programmers, who use netX (e.g. netSHIELD) as a companion chip to access industrial protocols. • It can be directly used with the netX STM32Cube Expansion	CIFX API
Protocol API Manuals	Links to all Hilscher supported industrial protocols and the respective Protocol API manuals Please check availability of the desired protocol for netX 52, if netSHIELD is used.	Technologies

Further reading

Document	Content	Download
Dual Port Memory Interface	The structure and specification of the Dual Port Memory (parallel or serial connected), which acts as interface between netX (netSHIELD) and a host controller.	Dual-port memory interface
Serial Dual Port Memory Interface	Specific information for serial (SPI) connection between netX and a host controller	Serial dual-port memory
cifX Toolkit	Description and usage of the cifX Toolkit. • The cifX Toolkit is the base component, running on the host controller • must be adapted to the host hardware • The netX STM32Cube Expansion contains an adapted cifX Toolkit as Middleware component for STM32 Microcontrollers	cifX/netX Toolkit (NXDRV-TKIT)
netX 52	netX 52 chip specific information • Technical Reference Manual	netX 52

PC Utilities

Tool	Purpose	Download
netHost	download protocol firmware into the flash of netSHIELD • netHOST.exe is a windows executable and part of the "netX Diagnostic and Remote Access" packet.	netX Diagnostic and Remote Access
USB drivers	USB drivers for netX51/52 (M01) (V1.2.10.0) netHOST (netXTransport and netXMarshaller)	Downloads NSHIELD 52-RE
Bootwizard	erase, read an write flash memory on netSHIELD • Bootwizard is necessary to program the Second Stage Bootloader (SSBL) into the flash memory • netSHIELD "NSHIELD 52-RE" is shipped with SSBL already programmed • Boozwizard is *not* used to program the protocol firmware into the flash. For this purpose, the utility netHOST is used	netX Bootwizard

netX Firmware

Protocol Stacks

Limited evaluation versions of netX protocol stack firmware. One of these binaries must be downloaded into the flash memory file system of netSHIELD. For this purpose, the utility netHOST is used.

netSHIELD can hold only one protocol firmware at a time. These limited protocol stack evaluation firmware versions will stop communication after 1 hour of operation. A reset anew the 1 hour operation phase.

Please contact your Hilscher sales contact or visit https://www.hilscher.com in case of demand for full versions or other protocol stacks like SERCOS, Open Modbus/TCP, PROFIBUS, CANopen etc.

Protocol	Version	Download
PROFINET	V4.2.0.17	PROFINET_LFW_LIMITED_netX52_V4.2.0.17.zip
EtherCAT	V4.7.0.4	EtherCAT_LFW_LIMITED_netX52_V4.7.0.4.zip
Ethernet/IP	V3.3.0.8	EtherNetIP_LFW_LIMITED_netX52_V3.3.0.8.zip
POWERLINK	V3.3.0.2	POWERLINK_LW_LIMITED_netX52_V3.3.0.2.zip

Second Stage Bootloader

The "Second Stage Boot Loader" is a basic netX system loader, started by the netX ROM loader, and designed to create a file system in the flash memory on netSHIELD and a standard Hilscher netX dual port memory interface.

The SSBL binray file must be programmed into the flash memory of netSHIELD by using the Bootwizard utility.

Download
Second Stage Boot Loader

STM32Cube Expansion

Adapted cifX Toolkit for STM32 Microcontrollers from ST Microelectronics. The packet contains also example applications for PROFINET, EtherCAT and Ethernet/IP.
This packet is supplied by Hilscher for evaluation purposes without warranty. Please note the disclaimer!

Please refer to the Loadable Firmware Host Examples Section for the latest STM32CubeExpansion Packet.

File	Modified
STM32CubeExpansion_netX_F7_F4_V1.3.0.1.zip	2018-12-12 by Dirk Fischer

Older Versions:

File	Modified
STM32CubeExpansion_netX_F7_F4_V1.3.0.0.zip	2018-12-12 by Dirk Fischer
STM32CubeExpansion_netX_F7_F4_V1.2.0.1.zip	2018-12-12 by Dirk Fischer
STM32CubeExpansion_netX_F7_F4_V1.2.0.0.zip	2018-12-12 by Dirk Fischer
STM32CubeExpansion_netX_F7_F4_V1.1.0.0.zip	2018-12-12 by Dirk Fischer
STM32CubeExpansion_netX_F7____V1.0.0.0.zip	2018-12-12 by Dirk Fischer

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Further Information

STM32 Microcontrollers, evaluation boards and Software are offered by the third party ST Microelectronics, not affiliated to Hilscher Gesellschaft für Systemautomation.

Topic	Link
netSHIELD @ ST	http://www.st.com/i-nucleo-netx
STM32Cube Expansion @ ST	http://www.st.com/i-cube-netx
STM32 Microcontrollers	http://www.st.com/stm32
STM32 Nucleo evaluation boards	http://www.st.com/stm32nucleo
STM32Cube Expansions	http://www.st.com/x-cube

Terms and Conditions

Topic	Download
Hilscher terms and conditions	TermsAndConditionsForGermany.pdf GeneralTermsAndConditionsOfSaleForUSA.pdf
Hilscher STM32Cube Expansion Disclaimer	README_DISCLAIMER.txt

File	Modified
stm32cube.png	2017-02-13 by Dirk Fischer
README_DISCLAIMER.txt	2017-02-15 by Dirk Fischer
USB Diagnostic Driver.zip	2017-02-15 by Dirk Fischer
TermsAndConditionsForGermany.pdf	2017-03-09 by Dirk Fischer
GeneralTermsAndConditionsOfSaleForUSA.pdf	2017-03-09 by Dirk Fischer
PROFINET_LFW_LIMITED_netX52_V4.2.0.17.zip	2017-03-09 by Dirk Fischer
EtherNetIP_LFW_LIMITED_netX52_V3.3.0.8.zip	2017-03-09 by Dirk Fischer
EtherCAT_LFW_LIMITED_netX52_V4.7.0.4.zip	2018-01-08 by Dirk Fischer
POWERLINK_LW_LIMITED_netX52_V3.3.0.2.zip	2018-02-02 by Dirk Fischer
README.txt	2018-03-07 by Dirk Fischer

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