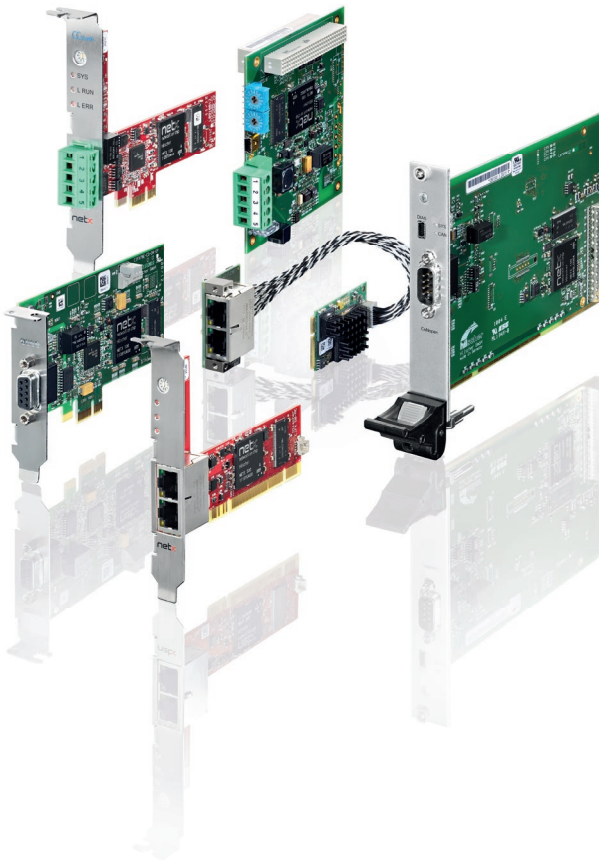
cifX

PC cards for Real-Time Ethernet and Fieldbus

- **All major industrial protocols**
- **All common PC card formats**
- **One hardware for all Real-Time Ethernet protocols**
- **Master and Slave**
- **Wide range of device drivers**
- **Same application interface for all networks**



PC cards in all formats for all protocols

The cifX PC card family is the unified standard supporting all Real-Time Ethernet and Fieldbus systems for PC based automation.

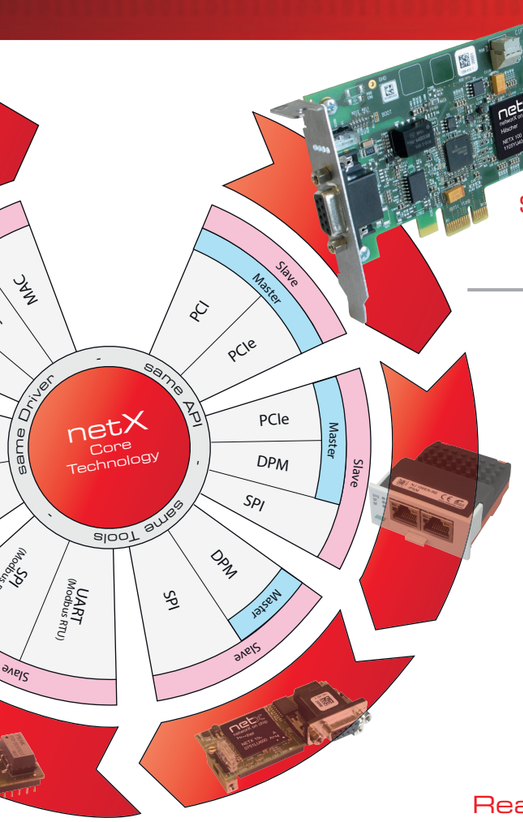
The protocol stack is executed autonomously on the PC card and process data exchange with the host is done via Dual-Port-Memory or DMA (Direct Memory Access). Thanks to the common Hilscher Platform Strategy all PC cards use the same driver and tools - independent of protocol and card format. A change of communication protocol is done by just loading a different firmware. A rotary switch delivers an easy and reliable slot assignment for the PCI- and PCI Express card types. In addition special types e.g. with integrated NVRAM, 2-channel cards or detached network interface are available.

A complete software package is always included in the scope of delivery. This package consists of one FDT-based configuration tool (IEC standard) for all products and networks, loadable firmware, documentation and a driver tool-kit.

Due to own network controller netX a 10-year guarantee of delivery is granted.

hilscher
COMPETENCE IN COMMUNICATION

cifX - Communication for PC based Automation



Same Function - Same API - Same Tools

The Hilscher Platform Strategy provides the whole range of communication solutions to the user – from standardized PC card up to the integration of the multi-protocol chip netX. All solutions – whether Master or Slave – have the same interface to the application and use the same tools.

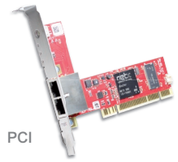
After single integration of the application interface the change to a different hardware format or a different physical host interface is a purely hardware optimization process without fundamental changes of the software structure.

Real-Time Ethernet & Fieldbus protocols

As specialist for industrial communication Hilscher offers the largest selection of protocols used in the factory automation. Besides traditional Fieldbus all major Real-Time Ethernet protocols are available - and that‘s as Master or Slave.

Widest range of device drivers

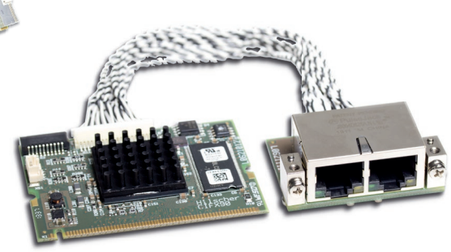
For a quick and easy integration Hilscher offers a wide range of device drivers. Besides a C-Toolkit free of charge, drivers for all relevant operating systems as well as soft-PLC driver from 3rd party suppliers are available.


PCI


PCI Express


Low Profie PCIe


Compact PCI


Mini PCI


Mini PCI Express


PC/104


PCI 104

NVRAM included

Especially for compact Box PCs Hilscher offers specific types with integrated NVRAM for secure data storage. The user can freely access the non volatile memory via standard device driver. Thus in case of a voltage loss his key data will remain available. NVRAM is available for:

- Mini PCI Express - incl. 128 kByte MRAM
- Low Profile Express - incl. 128 kByte MRAM

Detached network interface

For flexible usage in encapsulated systems all embedded PC cards provide a detached network interface. Available for:

- Mini PCI - incl. 15-cm cable
- Mini PCI Express - incl. 15-cm cable
- PC/104 - optional 15-cm cable
- PCI-104 - optional 15-cm cable

Universal PC card

The Hilscher PC cards cifX are based on the multi-protocol chip netX 100 and are designed as so called universal cards. Means the same card can be used as Master or as Slave, respectively one hardware supports all Real-Time Ethernet systems - all using the same application interface. A change of functionality is done by just loading an appropriate firmware and adding a software license for the master.

Technical Data / Product Overview

Technical Data

Parameter	Value
Weight	max. 150 g
CE Sign	yes
Certification	RoHS, Reach, UL
Emission	EN 55011:2009 + A1:2010, CISPR 11, Class A
Galvanic Isolation	potential free isolated

Parameter	Value
\ET	extended temperature range
\MR	128 kByte MRAM
\F	detached network interface
Dual-Port-Memory	16 kByte, 8-/16 bit
LED Indicators	SYS, COM 0, COM 1, Link, Rx/Tx

Article	System Interface	Operating Voltage	Operating Temperature	Dimensions (LxHxW)
CIFX 50-XX	PCI, 33 MHz, DPM, IO-DMA	3,3 V / typ. 650 mA	-20 ... +55°C / -20 ... +70°C	120,0 x 86,0 x 18,5 mm
CIFX 50E-XX	PCI Express, One-Lane-Port	3,3 V / typ. 800 mA	-20 ... +55°C / -20 ... +70°C	120,0 x 86,0 x 18,5 mm
CIFX 70E-XX	Low Profile PCI Express, One-Lane-Port	3,3 V / typ. 800 mA	-20 ... +65°C	119,0 x 69,0 x 18,5 mm
CIFX 80-XX	Compact PCI, 33 MHz, DPM, IO-DMA	3,3 V / typ. 650 mA	-20 ... +70°C	162,5 x 100,0 x 20,0 mm
CIFX 90-XX\F	Mini PCI, 33 MHz, DPM, IO-DMA	3,3 V / typ. 650 mA	-20 ... +70°C	60,0 x 45,0 x 9,5 mm
CIFX 90E-XX\F	Mini PCI Express, One-Lane-Port	3,3 V / typ. 800 mA	-20 ... +55°C / -20 ... +70°C	51,0 x 30,2 x 11,0 mm
CIFX 104-XX*	PC/104, 33 MHz, DPM	3,3 V / typ. 650 mA	-20 ... +70°C	97,0 x 91,0 x 24,0 mm
CIFX 104C-XX*	PCI 104, 33 MHz, DPM, IO-DMA	3,3 V / typ. 650 mA	-20 ... +70°C	97,0 x 91,0 x 24,0 mm

*= available in the variants: \F, -R, -R\F

System bus / Article	Universal Card (Master & Slave)	AS-i 2)	CANopen	CC-Link 1)	DeviceNet	PROFIBUS	EtherCAT	EtherNet/IP	POWERLINK 1)	Modbus	PROFINET	Sercos	SERCOS III 1)	NVRAM	2-Channel
PCI CIFX 50	✓	✓	✓	✓	✓	✓ 5)	✓	✓	✓	✓	✓	✓	✓	–	✓ 4)
PCI Express CIFX 50E	✓	✓	✓	✓	✓	✓ 5)	✓	✓	✓	✓	✓	✓	✓	–	✓ 4)
Low Profile PCIe CIFX 70E	✓	–	✓	–	✓	✓ 5)	✓	✓	✓	✓	✓	✓	✓	✓ 3)	–
Compact PCI CIFX 80	✓	–	✓	–	✓	✓ 5)	✓	✓	✓	✓	✓	✓	✓	–	–
Mini PCI CIFX 90	✓	–	✓	✓	✓	✓ 5)	✓	✓	✓	✓	✓	✓	✓	–	–
Mini PCIe CIFX 90E	✓	–	✓	✓	✓	✓ 5)	✓	✓	✓	✓	✓	✓	✓	✓ 3)	✓ 4)
PC/104 CIFX 104	✓	–	✓	✓	✓	✓ 5)	✓	✓	✓	✓	✓	✓	✓	–	–
PCI 104 CIFX 104C	✓	–	✓	✓	✓	✓ 5)	✓	✓	✓	✓	✓	✓	✓	–	–

1) Slave only
2) Master only
3) NVRAM available for all protocols
5) also MPI

4) 2-Channel card available in following combinations.
PCI: 2ASM, 2DP, 2CO, 2DN, 2DP\CO, 2DP\DN, 2CO\DN
PCI Express: 2ASM, 2DP, 2CO, 2DN, 2DP\CO, 2DP\DN, 2CO\DN
Mini PCI Express: 2DP, 2CO, 2DN, 2DP\CO 2DP\DN, 2CO\DN

Note: *All technical data is preliminary and may be changed without further notice.*

Headquarters

Germany
Hilscher Gesellschaft für Systemautomation mbH
Rheinstrasse 15
65795 Hattersheim
Phone: +49 (0) 6190 9907-0
Fax: +49 (0) 6190 9907-50
E-Mail: info@hilscher.com
Web: www.hilscher.com

Distributors

More information at www.hilscher.com

Subsidiaries

China
Hilscher Systemautomation (Shanghai) Co. Ltd.
200010 Shanghai
Phone: +86 (0) 21-6355-5161
E-Mail: info@hilscher.cn

France
Hilscher France S.a.r.l.
69500 Bron
Phone: +33 (0) 4 72 37 98 40
E-Mail: info@hilscher.fr

India
Hilscher India Pvt. Ltd.
Pune, Delhi, Mumbai
Phone: +91- 8888 750 777
E-Mail: info@hilscher.in

Italy
Hilscher Italia S.r.l.
20090 Vimodrone (MI)
Phone: +39 02 25007068
E-Mail: info@hilscher.it

Japan
Hilscher Japan KK
Tokyo, 160-0022
Phone: +81 (0) 3-5362-0521
E-Mail: info@hilscher.jp

Korea
Hilscher Korea Inc.
Seongnam, Gyeonggi, 463-400
Phone: +82 (0) 31-789-3715
E-Mail: info@hilscher.kr

Switzerland
Hilscher Swiss GmbH
4500 Solothurn
Phone: +41 (0) 32 623 6633
E-Mail: info@hilscher.ch

USA
Hilscher North America, Inc.
Lisle, IL 60532
Phone: +1 630-505-5301
E-Mail: info@hilscher.us

07/2015 GB