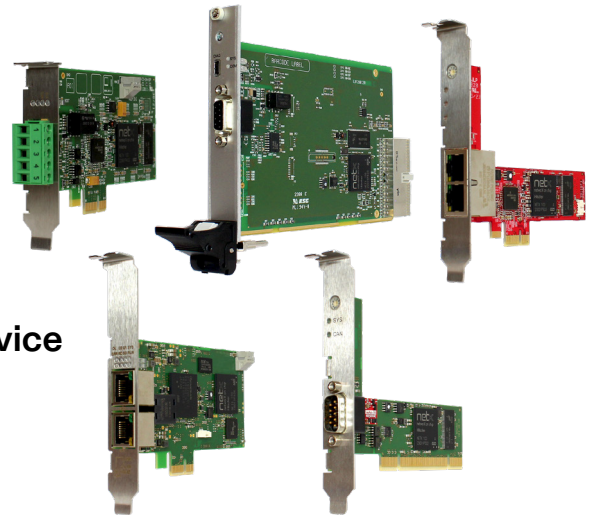


PC Cards

Industrial communication for all networks

- PC Cards in **Compact PCI, PCI, PCI Express** and **Low Profile PCI Express** format
- All major industrial protocols as **Controller or Device**
- **Cybersecure PC Cards** based on netX 90 SoC
- High operating temperature up to **70 °C**
- External **rotary switch** for PCI bus address setting
- Same API for all types: **Dual-Port-Memory**



Available formats

	CIFX 50	CIFX 80	CIFX 50E
Card format	PCI	Compact PCI	PCI Express
Mounting / Keying	PCI x4 slot (3.3 V)	Compact PCI slot (3.3 V)	PCI Express x1 slot (3.3 V)
Controller / Device	Controller und Device	Controller und Device	Controller und Device
Security ready	-	-	-
	CIFX 70E	CIFX PCIE90	CIFX LPCIE90
Card format	Low Profile PCI Express	PCI Express	Low Profile PCI Express
Mounting / Keying	PCI Express x1 slot (3.3 V)	PCI Express x1 slot (3.3 V)	PCI Express x1 slot (3.3 V)
Controller / Device	Controller und Device	Device	Device
Security ready	-	✓	✓



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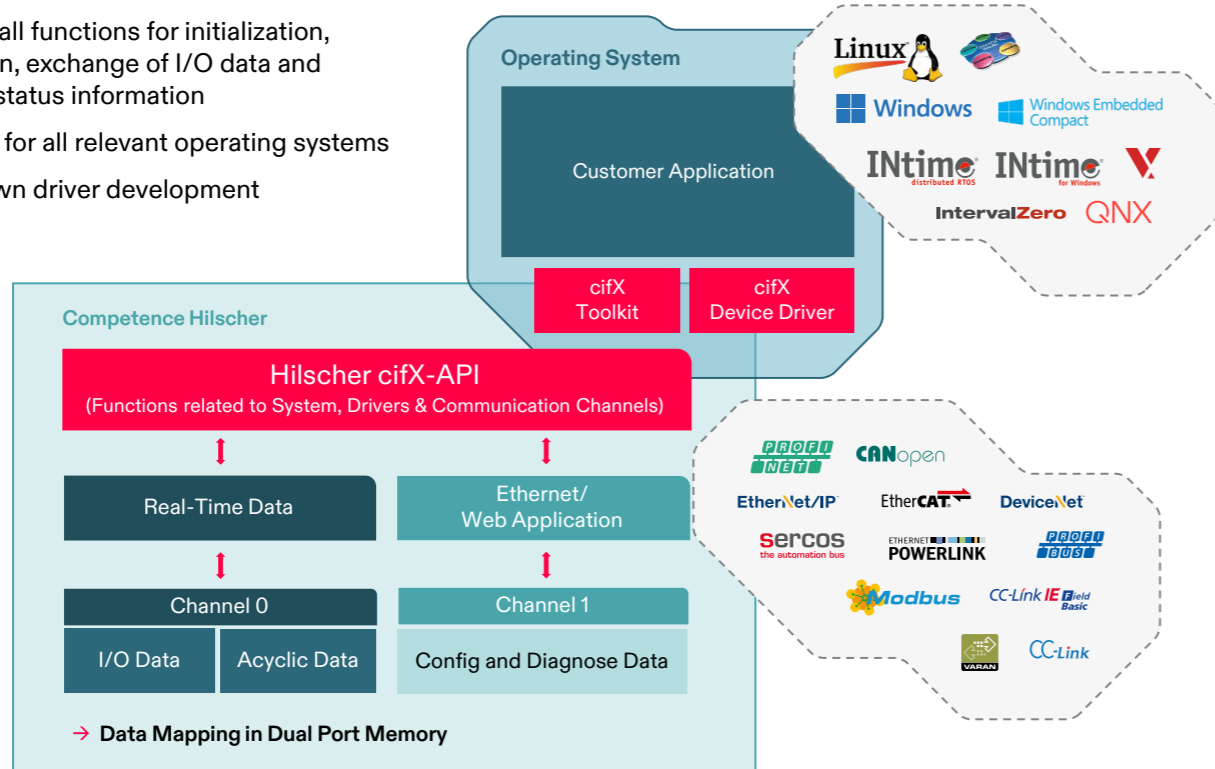
PC Cards

One-Stop-Shop for industrial communication



Wide range of device drivers

- » Standard user interface (cifX API) for all device drivers
- » With contains all functions for initialization, parametrisation, exchange of I/O data and acquisition of status information
- » Device drivers for all relevant operating systems
- » C-toolkit for own driver development



Configuration Tools

Communication Studio

One configuration and diagnosis toolchain for all networks

- » Offline configuration
 - Selecting and configuring a driver, device assignment
 - Configuring the fieldbus
- » Online commissioning
 - Connecting the device
 - Downloading the configuration
- » Diagnosis
- » OPC UA and MQTT configuration

netX Studio IDE

- » Secure Boot configuration
- » Firmware signature
- » Public Key installation

Command-line tools for production environments



All in one package

- Bundle of hardware, firmware, license, device driver / toolkit, configuration tool and support.

**Additional fee for license and selected drivers*

Protocol highlights



- » IO-Controller & IO-Device
- » Isochronous Real Time (IRT)
- » S2 System Redundancy
- » I&M 1-5
- » PROFenergy ASE
- » "Shared Device"
- » Fast Startup



- » Scanner & Adapter
- » Device level Ring (DLR) | Media redundancy
- » Address Conflict Detection (ACD)
- » CIP Sync
- » Quick Connect



- » MainDevice & SubDevice
- » SDO client and server side protocol
- » CoE Emergency messages (CoE)
- » Ethernet over EtherCAT (EoE)
- » File Access over EtherCAT (FoE)
- » Servo-over-EtherCAT (SoE)
- » Hot Connect



- » Slave
- » Remote Device Station
- » Intelligent Device Station
- » 1Gbit/s Full-Duplex

Drop-in replacement

- Rotary switch to set Card ID for unique identification
- Same firmware & configuration usable for replacement card
- Distinguish between Controller & Device Cards



Diagnosis

- External USB diagnostic port
- OS & driver independent access
- Available for Compact PCI cards



DMA support

- Data transfer between cifX and a host system
- Via PCI bus-Controller Direct Memory Access
- Available for all standard cards

2-in-1 solution

- 2-Channel PC Cards
- Independent communication in just 1 PC slot (PCI / PCI Express)
- PROFIBUS-DP or DeviceNet as Controller or Device



All netX 90 designs are security and IIoT ready



Security ready

- CryptoCore hardware accelerator for hash, symmetric & asymmetric encryption
- Secure Boot option
- Security Configuration with key generation and software signing
- Secure Communication with certificate & key and user management

Industrial IoT ready

- PROFINET, EtherCAT, EtherNet/IP or ModbusTCP combined with OPC UA / MQTT
- OPC UA Server (Base Specification Version 1.04) and MQTT publisher (Version 3.1.1)
- IoT configuration plug-in for standard Communication Studio



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Product information

Technical data

	CIFX 50	CIFX 80	CIFX 50E	CIFX 70E	CIFX (L)PCIE90
Bus Type	PCI	Compact PCI	PCI Express, One Lane Port	PCI Express, One Lane Port	(Low-Profile) PCI One Lane Port
Communication Controller	netX 100	netX 100	netX 100	netX 100	netX 90
Integrated Flash	4 MB serial Flash-EPROM	4 MB serial Flash-EPROM	4 MB serial Flash-EPROM	4 MB serial Flash-EPROM	8 MB serial Flash-EPROM
Integrated RAM	8 MB SDRAM	8 MB SDRAM	8 MB SDRAM	8 MB SDRAM	8 MB SDRAM
Size of the Dual-Port Memory	64 KB	64 KB	64 KB	64 KB	32 KB
Power supply	+3.3 VDC ±5%	+3.3 VDC ±5%	+3.3 VDC ±5%	+3.3 VDC ±5%	+3.3 VDC ±5%
Current consumption at 3.3V	650 mA (max.)	650 mA (max.)	800 mA (max.)	800 mA (max.)	270 mA (max.)
Operating temperature range, Air flow 0.5 m/s	0°C ... +55°C	0°C ... +70°C	0°C ... +55 °C	0°C ... +65°C	-20°C ... +70°C
Operating temperature for /ET variant, Air flow 0.5 m/s	0°C ... +70°C	-	0°C ... +70°C	-	-
Storage temperature range	-40°C ... +85°C	-40°C ... +85°C	-40°C ... +85°C	-40°C ... +85°C	-40°C ... +85°C
CE sign, UKCA sign, RoHS	✓	✓	✓	✓	✓

Product overview	Description	Part number	Protocol number							
			Industrial Ethernet	PROFIBUS	CANopen	DeviceNet	CC-Link	CC-Link Field	2x PROFIBUS	2x DeviceNet
CIFX 50	PCI PC Card	1250.XXX	.100	.410	.500	.510	.740	-	-	-
CIFX 50-2	2-channel PCI PC Card	1252.XXX	-	-	-	-	-	-	.410	.510
CIFX 80	Compact PCI PC Card	1280.XXX	.100	.410	.500	.510	-	-	-	-
CIFX 50E	PCI Express PC Card	1251.XXX	.100	.400	.500	.510	.740	.700	-	-
CIFX 50E-2	2-channel PCI Express PC Card	1253.XXX	-	-	-	-	-	-	.410	.510
CIFX 70E	Low-profile PCI Express PC Card	1259.XXX	.100	.410	.500	.510	.740	.700	-	-
CIFX PCIE90	PCI Express PC Card	1420.XXX	.100	.410	-	.510	.740	-	-	-
CIFX LPCIE90	Low-profile PCI Express PC Card	1421.XXX	.100	.410	-	.510	.740	-	-	-

Related products

Product overview	Description
\+ML	Master License for netX 100 based cifX card
\PNSSR	License for PROFINET IO-Device S2 System Redundancy



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