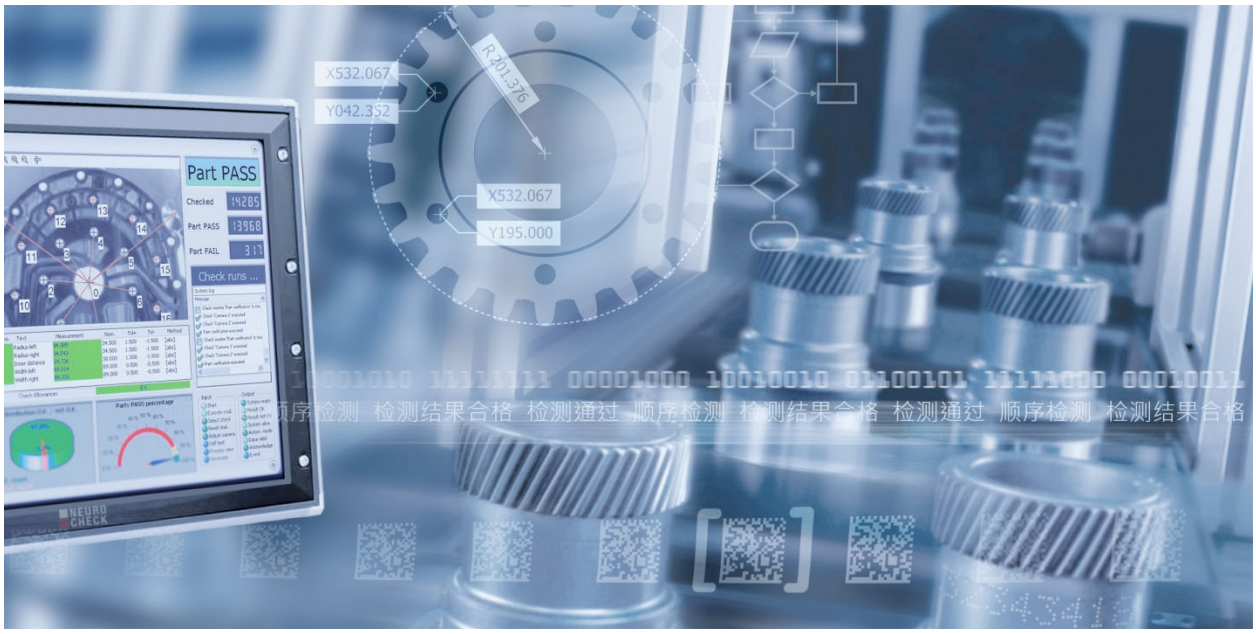
NEURO CHECK
Industrial Vision Systems



Product Catalog 2020

This Product Catalog is valid from June 2020.

Subject to technical changes and errors.

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Item No.	Description

NeuroCheck Software

NeuroCheck Version 6.2

NC-62S-PRE

NeuroCheck V 6.2 Premium Edition (USB)
Developer Edition for interactive development and operation of vision applications including programming interface.

The universal application software for industrial vision systems for developing visual inspection systems for all areas of manufacturing.
+ Interactive language switching at runtime.
+ Graphical user interface for check-routine development.
+ Formula editor to calculate and modify parameters and result values.
+ Integrated device manager for 1D, 2D, 3D-cameras and industrial bus communications.
+ Graphical tools for automatic mode screen design.
+ Automatic shop-floor operation with process communication.
+ Powerful and fast image processing algorithms.
+ Programming interface to develop and integrate plug-in functions.

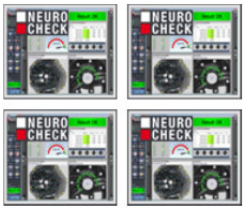
The Premium Edition also includes these additional licenses:
+ NcFmtCnv.NeuroCheck.CustomFile.NET.dll
+ PI_HalconWrapper.NET.dll
+ PI_CodeReaderXNC.NET.dll
+ PI_ContourMatchXNC.NET.dll.

Please note that the hardware key (dongle) constitutes the value of the purchased program.

Item No.	Description
NC-62S-PRO	**NeuroCheck V 6.2 Professional Edition (USB)** **Developer Edition for interactive development and operation of vision applications.** **The universal application software for industrial vision systems for developing visual inspection systems for all areas of manufacturing.** **+ Interactive language switching at runtime.** **+ Graphical user interface for check-routine development.** **+ Formula editor to calculate and modify parameters and result values.** **+ Integrated device manager for 1D, 2D, 3D-cameras and industrial bus communications.** **+ Graphical tools for automatic mode screen design.** **+ Automatic shop-floor operation with process communication.** **+ Powerful and fast image processing algorithms.** **The Professional Edition also includes these additional licenses:** **+ NcFmtCnv.NeuroCheck.CustomFile.NET.dll** **+ PI_HalconWrapper.NET.dll** **+ PI_CodeReaderXNC.NET.dll** **+ PI_ContourMatchXNC.NET.dll.** **Please note that the hardware key (dongle) constitutes the value of the purchased program.**
NC-62S-RT	**NeuroCheck V 6.2 Runtime Edition (USB)** **Runtime Edition for a completely configured application.** **The universal application software for industrial vision systems.** **The Runtime Edition comprises the entire image processing functionality of the Professional or Premium Edition excluding manual mode for configuration applications.** **+ Interactive language switching at runtime.** **+ Automatic shop-floor operation with process communication.** **+ Powerful and fast image processing algorithms.** **Please note that the hardware key (dongle) constitutes the value of the purchased program.**

Item No.	Description

Multi license levels



Please note:

- **When using these software license levels, you can operate up to four parallel NeuroCheck software instances on one computer with each instance processing one NeuroCheck project. Thus you can run several, completely independent and non-synchronized image processing systems on a single computer.**

NC-62M-PRE

NeuroCheck V 6.2 Premium Multi Edition (USB)
Developer Edition for interactive development and parallel operation of multiple applications on one computer, including programming interface.

The universal application software for industrial vision systems for developing visual inspection systems for all areas of manufacturing.
+ Interactive language switching at runtime.
+ Graphical user interface for check-routine development.
+ Formula editor to calculate and modify parameters and result values.
+ Integrated device manager for 1D, 2D, 3D-cameras and industrial bus communications.
+ Graphical tools for automatic mode screen design.
+ Automatic shop-floor operation with process communication.
+ Powerful and fast image processing algorithms.
+ Programming interface to develop and integrate plug-in functions.

The Premium Edition also includes these additional licenses:
+ NcFmtCnv.NeuroCheck.CustomFile.NET.dll
+ PI_HalconWrapper.NET.dll
+ PI_CodeReaderXNC.NET.dll
+ PI_ContourMatchXNC.NET.dll.

Please note that the hardware key (dongle) constitutes the value of the purchased program.

Item No.	Description
NC-62M-RT	NeuroCheck V 6.2 Runtime Multi Edition USB) Runtime Edition for multiple completely configured applications on one computer. The universal application software for industrial vision systems. The Runtime Edition comprises the entire image processing functionality of the Professional or Premium Edition excluding manual mode for configuration applications. + Interactive language switching at runtime. + Automatic shop-floor operation with process communication. + Powerful and fast image processing algorithms. Please note that the hardware key (dongle) constitutes the value of the purchased program.

Upgrades

Please note that after applying a NeuroCheck 6.2 license upgrade there is no compatibility with older NeuroCheck 5.1 installations.
The 6.2 dongle will not be accepted by a NeuroCheck installation of version 5.1 older than service pack 11, it will only run in Demo mode!

NC-62-UPDATE/PRE	Upgrade NeuroCheck V6.1 Premium to V6.2 Premium
NC-62-UPDATE/PRO	Upgrade NeuroCheck V6.1 Professional to V6.2 Professional
NC-62-UPDATE/RT	Upgrade NeuroCheck V6.1 Runtime to V6.2 Runtime
NC-62-UPDATE/P-M	Update NeuroCheck V6.1 Premium Multi to V6.2 Premium Multi
NC-62-UPDATE/R-M	Update NeuroCheck V6.1 Runtime Multi to V6.2 Runtime Multi
NC-62-UPGRADE/01	Upgrade NeuroCheck V6.2 Runtime to Professional
NC-62-UPGRADE/02	Upgrade NeuroCheck V6.2 Runtime to Premium
NC-62-UPGRADE/03	Upgrade NeuroCheck V6.2 Professional to Premium
NC-62-UPGRADE/04	Upgrade NeuroCheck Version 6.2 Runtime to Runtime Multi-Edition
NC-62-UPGRADE/05	Upgrade NeuroCheck V6.2 Premium to Premium Multi-Edition

Item No.	Description

Plug-in extensions (extra licensing)

Please note:

- **Plug-in software extensions listed in this section are licensed for single use on one computer only and therefore are bound to a specific NeuroCheck license.**
- **Please note that for creation of a check routine containing plug-in check functions a NeuroCheck 6.2 Premium Edition is required.**

NC-3420/U-F

PI_ContourMatch.NET.dll

This NeuroCheck 6.2 plug-in contains a contour based search algorithm to find patterns (models) within an image using the external library MIL 10.0. For details please refer to help file PI_ContourMatch.NET.chm.

NC-3430/U-F

PI_CodeReader.NET.dll

This NeuroCheck 6.2 plug-in is used to read several 2D codes and 1D bar codes using the external library MIL 10.0. For details please refer to help file PI_CodeReader.NET.chm.

NC-3440-F

PI_HalconWrapper.NET.dll

This NeuroCheck 6.2 plug-in is used to execute HDevelop programs for the external HALCON library. It is possible to use objects from the NeuroCheck data tray and register cells as input or output for the programs. For details please refer to help file PI_HalconWrapper.NET.chm.
(already included in the Professional and Premium Edition)

NC-3450-F

PI_LensFocusControl.NET.dll

This NeuroCheck 6.2 plug-in allows to change the focus value of a Optotune's electrically tunable lense dynamically. For details please refer to help file PI_LensFocusControl.NET.chm.

Item No.	Description

Driver and data format converter extensions (extra licensing)

Please note:

- **Software extensions listed in this section are licensed for single use on one computer only and therefore are bound to a specific NeuroCheck license.**
- **Please note that for configuration of hardware drivers and data format converters a NeuroCheck 6.2 Professional Edition is required.**

NC-3461-F	**Nc3D.NeuroCheck.EN.dll:** **This NeuroCheck 6.2 hardware driver integrates selected models of the "N" series stereo 3D cameras of manufacturer Ensenso as a 3D camera device in NeuroCheck software.**
NC-3462-F	**Nc3D.NeuroCheck.Generic.dll:** **This NeuroCheck 6.2 hardware driver integrates various 3D cameras of selected manufacturers as a 3D camera device in NeuroCheck software.**
NC-3435-F	**NcFb.InterComm.NET.dll:** **NeuroCheck 6.2 driver for interprocess-communication** **+ between multiple NeuroCheck instances on the same PC or over the network** **+ between NeuroCheck and NCRoboDirector** **For details please refer to help file NcFb.InterComm.NET.chm.**
NC-3443-F	**NcFmtCnv.NeuroCheck. DatabaseStandard.NET.dll** **This NeuroCheck 6.2 Data Format Converter is used to connect and exchange data from and to a local database using SQL statements.**
NC-3444-F	**NcFmtCnv.NeuroCheck. FieldbusFlowControl.NET.dll** **This NeuroCheck 6.2 Data Format Converter contains a special sequence control system that allows starting a sequence of check routine executions including type changes by a single start signal from field bus.**

Item No.	Description
NC-3445-F	NcFmtCnv.NeuroCheck. SerialFlowControl.NET.dll This NeuroCheck 6.2 Data Format Converter contains a special sequence control system that allows starting a sequence of check routine executions including type changes by a single start signal from a serial device (RS232, TCP/IP).
NC-3442-F	NcFmtCnv.NeuroCheck. CustomFile.NET.dll This NeuroCheck 6.2 Data Format Converter writes data into a readable text file (TXT, XML or HTML files for instance) in a custom file format. The file format is defined as template file using place holders.
NC-3446-F	NcFmtCnv.NeuroCheck.OPCUA.NET.DLL This NeuroCheck 6.2 Data Format Converter acts as a OPC UA Client application and allows data transfer between NeuroCheck and a OPC UA Server. For details please refer to help file NcFmtCnv.NeuroCheck.OPCUA.UI.NET.chm.

Item No.	Description

Plug-in extensions (products)

Please note:

- **Plug-in software extensions listed in this section may be used several times in different projects.**
- **Please note that for creation of a check routine containing plug-in check functions a NeuroCheck 6.2 Premium Edition is required.**

NC-3494	**PI_Distortion.NET.dll** **This NeuroCheck 6.2 plug-in contains functions to determine the geometric distortion in an image and minimizes the distortion like radial lens distortion or perspective by transforming the image. For details please refer to help file PI_Distortion.NET.chm.**
NC-3488	**PI_CoordinateTransformation.NET.dll** **This NeuroCheck 6.2 plug-in allows to perform a two-dimensional coordinate transformation for the center points of objects found in the current image. For details please refer to help file PI_CoordinateTransformation.NET.chm.**
NC-3482	**PI_RoiTools.NET.dll** **This NeuroCheck 6.2 plug-in contains different plug-in check functions for creation or modification of list of ROIs. For details please refer to help file PI_RoiTools.NET.chm.**
NC-3480	**PI_ImageTools.NET.dll** **This NeuroCheck 6.2 plug-in contains different plug-in check functions for creation or modification of images. For details please refer to help file PI_ImageTools.NET.chm.**
NC-3481	**PI_MeasTools.NET.dll** **This NeuroCheck 6.2 plug-in contains different plug-in check functions for creation or modification of measurement lists. For details please refer to help file PI_MeasTools.NET.chm.**

Item No.	Description
NC-3471	PI_Gauge.NET.dll This NeuroCheck 6.2 plug-in is used to gauge a part of an object contour with a special calliper rule. For details please refer to help file PI_Gauge.NET.chm.
NC-3473	PI_ManualInput.NET.dll This NeuroCheck 6.2 plug-in contains plug-in check functions which allow a synchronous user input of data in automatic mode. For details please refer to help file PI_ManualInput.NET.chm.
NC-3496	PI_DataRegister.NET.dll This NeuroCheck 6.2 plug-in contains different plug-in check functions for modification or special use cases of data register cells. For details please refer to help file PI_DataRegister.NET.chm.
NC-3475	PI_FileManagement.NET.dll: This NeuroCheck 6.2 plug-in contains functions to manage files on hard disc and network storages, for instance copy, move, zip and delete operations. For details please refer to help file PI_FileManagement.NET.chm.

Item No.	Description

Gigabit-Ethernet Area-Scan Cameras (monochrome/color)

NCLT-50C.I

10-GigE Area Scan Camera NCLT-50C.I ***NEW!***

C-Mount
2/3″-CMOS sensor, progressive scan, color
Resolution: 2448 × 2048 pixels
Pixel size: 3.45 µm x 3.45 µm
Frame rate: max. 163 fps
Data interface: M12 / 8 pol X-coded
Processs interface: M12 / 12 pol A-coded
Electrical data:
• external: U: 12 … 24 V DC, P: 10.3 W @ 12 V DC
• PoE: not supported
IOs: 2 digital Inputs and 4 digital Outputs
(continuously max. 1.5 A; PWM max. 2.5 A)
Lens control for Corning Varioptic
Dimensions (WxHxD in mm): 60 x 60 x 99,7
((Lens tube is an optional accessory)

NCCG-13M.I

GigE Area Scan Camera NCCG-13M.I

C-Mount
1/2″-CMOS sensor, progressive scan, monochrome
Resolution: 1280 × 1024 pixels
Pixel size: 4,8 µm x 4,8 µm
Frame rate: max. 94 fps
Data interface: M12 / 8 pol X-coded
Processs interface: M12 / 12 pol A-coded
Electrical data:
• extern: U: 12 … 24 VDC, P: 2,5 W @ 12 VDC
• PoE: U: 36 … 57 V DC, P: 3,0 W @ 48 VDC
4 digital Inputs
4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)
Dimensions: 40 mm x 40 mm x 51 mm
Protection: IP 65/67 (with mounted tube and cable)

Item No.	Description
NCCG-13C.I	**GigE Area Scan Camera NCCG-13C.I** **C-Mount** **1/2″-CMOS sensor, progressive scan, color** **Resolution: 1280 × 1024 pixels** **Pixel size: 4,8 µm x 4,8 µm** **Frame rate: max. 94 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,5 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 3,0 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**
NCCG-15M.I	**GigE Area Scan Camera NCCG-15M.I** **C-Mount** **1/2.9″″-CMOS sensor, progressive scan, monochrome** **Resolution: 1440 × 1080 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 121 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,5 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 3,0 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**
NCCG-15C.I	**GigE Area Scan Camera NCCG-15C.I** **C-Mount** **1/2.9″″-CMOS sensor, progressive scan, color** **Resolution: 1440 × 1080 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 121 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,5 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 3,0 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**

Item No.	Description
NCCG-32M.I	**GigE Area Scan Camera NCCG-32M.I** **C-Mount** **1/1,8″-CMOS sensor, progressive scan, monochrome** **Resolution: 2048 × 1536 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 39 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,3 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 2,9 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**
NCCG-32C.I	**GigE Area Scan Camera NCCG-32C.I** **C-Mount** **1/1,8″-CMOS sensor, progressive scan, color** **Resolution: 2048 × 1536 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 39 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,4 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 3,1 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**
NCCG-51M.I	**GigE Area Scan Camera NCCG-51M.I** **C-Mount** **2/3″ CMOS sensor, progressive scan, monochrome** **Resolution: 2448 x 2048 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 23 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,3 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 3,1 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**

Item No.	Description
NCCG-51C.I	**GigE Area Scan Camera NCCG-51C.I** **C-Mount** **2/3″ CMOS sensor, progressive scan, color** **Resolution: 2448 x 2048 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 23 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,5 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 3,0 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**
NCCG-124M.I	**GigE Area Scan Camera NCCG-124M.I** **C-Mount** **1,1″-CMOS sensor, progressive scan, monochrome** **Resolution: 4096 × 3000 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 10 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,5 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 3,2 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**
NCCG-124C.I	**GigE Area Scan Camera NCCG-124C.I** **C-Mount** **1,1″-CMOS sensor, progressive scan, color** **Resolution: 4096 × 3000 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 10 fps** **Data interface: M12 / 8 pol X-coded** **Processs interface: M12 / 12 pol A-coded** **Electrical data:** **• extern: U: 12 … 24 VDC, P: 2,6 W @ 12 VDC** **• PoE: U: 36 … 57 V DC, P: 3,2 W @ 48 VDC** **4 digital Inputs** **4 digital Outputs (with PWM, max. 48 V / max. 2,5 A)** **Dimensions: 40 mm x 40 mm x 51 mm** **Protection: IP 65/67 (with mounted tube and cable)**

Item No.	Description
NCCG-13M	**GigE Area Scan Camera NCCG-13M** **C-Mount** **1/2″ CMOS sensor, progressive scan, monochrome** **Resolution: 1280 × 1024 pixels** **Pixel size: 4.8 µm x 4.8 µm** **Frame rate: max. 94 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• external: U: 24 V DC, I: 108 mA, P: 2,6 W** **• PoE: U: 48 V DC, I: 87 mA, P: 4.2 W** **Dimensions: 29 mm x 29 mm x 56 mm**
	
NCCG-13C	**GigE Area Scan Camera NCCG-13C** **C-Mount** **1/2″ CMOS sensor, progressive scan, color** **Resolution: 1280 × 1024 pixels** **Pixel size: 4.8 µm x 4.8 µm** **Frame rate: max. 94 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• external: U: 24 V DC, I: 108 mA, P: 2,6 W** **• PoE: U: 48 V DC, I: 87 mA, P: 4.2 W** **Dimensions: 29 mm x 29 mm x 56 mm**
	
NCCG-23M	**GigE Area Scan Camera NCCG-23M** **C-Mount** **1/1.2″ CMOS sensor, progressive scan, monochrome** **Resolution: 1920 x 1200 pixels** **Pixel size: 5,86 µm x 5,86 µm** **Frame rate: max. 51 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• extern: U: 24 V DC, I: 97 mA, P: 2,3 W** **• PoE: U: 48 V DC, I: 58 mA, P: 2,8 W** **Dimensions: 29 mm x 29 mm x 56 mm**
	
NCCG-23C	**GigE Area Scan Camera NCCG-23C** **C-Mount** **1/1.2″ CMOS sensor, progressive scan, color** **Resolution: 1920 x 1200 pixels** **Pixel size: 5,86 µm x 5,86 µm** **Frame rate: max. 51 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• extern: U: 24 V DC, I: 97 mA, P: 2,3 W** **• PoE: U: 48 V DC, I: 58 mA, P: 2,8 W** **Dimensions: 29 mm x 29 mm x 56 mm**
	

Item No.	Description
NCCG-32M	**GigE Area Scan Camera NCCG-32M** **C-Mount** **1/1.8″ CMOS sensor, progressive scan, monochrome** **Resolution: 2048 x 1536 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 39 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• extern: U: 24 V DC, I: 107 mA, P: 2,6 W** **• PoE: U: 48 V DC, I: 64 mA, P: 3,1 W** **Dimensions: 29 mm x 29 mm x 56 mm**
NCCG-32C	**GigE Area Scan Camera NCCG-32C** **C-Mount** **1/1.8″ CMOS sensor, progressive scan, color** **Resolution: 2048 x 1536 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 39 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• extern: U: 24 V DC, I: 107 mA, P: 2,6 W** **• PoE: U: 48 V DC, I: 64 mA, P: 3,1 W** **Dimensions: 29 mm x 29 mm x 56 mm**
NCCG-51M	**GigE Area Scan Camera NCCG-51M** **C-Mount** **2/3″ CMOS sensor, progressive scan, monochrome** **Resolution: 2448 x 2048 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 23 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• extern: U: 24 V DC, I: 109 mA, P: 2,6 W** **• PoE: U: 48 V DC, I: 65 mA, P: 3,1 W** **Dimensions: 29 mm x 29 mm x 56 mm**
NCCG-51C	**GigE Area Scan Camera NCCG-51C** **C-Mount** **2/3″ CMOS sensor, progressive scan, color** **Resolution: 2448 x 2048 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 23 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• extern: U: 24 V DC, I: 109 mA, P: 2,6 W** **• PoE: U: 48 V DC, I: 65 mA, P: 3,1 W** **Dimensions: 29 mm x 29 mm x 56 mm**

Item No.	Description
NCCG-53M	**GigE Area Scan Camera NCCG-53M** **C-Mount** **1″ CMOS sensor, progressive scan, monochrome** **Resolution: 2592 × 2048 pixels** **Pixel size: 4.8 µm x 4.8 µm** **Frame rate: max. 23 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• external: U: 24 V DC, I: 282 mA, P: 6.8 W** **• PoE: U: 48 V DC, I: 87 mA, P: 4.2 W** **Dimensions: 29 mm x 29 mm x 56 mm**
NCCG-53c	**GigE Area Scan Camera NCCG-53C** **C-Mount** **1″ CMOS sensor, progressive scan, color** **Resolution: 2592 × 2048 pixels** **Pixel size: 4.8 µm x 4.8 µm** **Frame rate: max. 23 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• external: U: 24 V DC, I: 282 mA, P: 6.8 W** **• PoE: U: 48 V DC, I: 87 mA, P: 4.2 W** **Dimensions: 29 mm x 29 mm x 56 mm**
NCCG-124M	**GigE Area Scan Camera NCCG-124M** **C-Mount** **1.1″ CMOS sensor, progressive scan, monochrome** **Resolution: 4096 × 3000 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 10 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• extern: U: 24 V DC, I: 120 mA, P: 2,9 W** **• PoE: U: 48 V DC, I: 73 mA, P: 3,5 W** **Dimensions: 29 mm x 29 mm x 56 mm**
NCCG-124C	**GigE Area Scan Camera NCCG-124C** **C-Mount** **1.1″ CMOS sensor, progressive scan, color** **Resolution: 4096 × 3000 pixels** **Pixel size: 3,45 µm x 3,45 µm** **Frame rate: max. 10 fps** **GigE output: standard RJ45 female connector** **Electrical data:** **• extern: U: 24 V DC, I: 120 mA, P: 2,9 W** **• PoE: U: 48 V DC, I: 73 mA, P: 3,5 W** **Dimensions: 29 mm x 29 mm x 56 mm**

Item No.	Description
NCLG-120M	**GigE Area Scan Camera NCLG-120M** **M58-Mount (C-, F-, M42-Mount via adapter)** **APS-C CMOS sensor, progressive scan, monochrome** **Resolution: 4096 x 3072 pixels** **Pixel size: 5.5 µm x 5.5 µm** **Frame rate: max. 19 fps** **GigE output: 2x standard RJ45 female connector** **Dual Gigabit Ethernet (Static Link Aggregation)** **Electrical data:** **• external: U: 24 V DC, I: 255 mA, P: 6.1 W** **• PoE: U: 48 V DC, I: 154 mA, P: 7.4 W** **Dimensions: 60 mm x 60 mm x 52,4 mm**
	
NCLG-120C	**GigE Area Scan Camera NCLG-120C** **M58-Mount (C-, F-, M42-Mount via adapter)** **APS-C CMOS sensor, progressive scan, color** **Resolution: 4096 x 3072 pixels** **Pixel size: 5.5 µm x 5.5 µm** **Frame rate: max. 19 fps** **GigE output: 2x standard RJ45 female connector** **Dual Gigabit Ethernet (Static Link Aggregation)** **Electrical data:** **• external: U: 24 V DC, I: 255 mA, P: 6.1 W** **• PoE: U: 48 V DC, I: 154 mA, P: 7.4 W** **Dimensions: 60 mm x 60 mm x 52,4 mm**
	
NCLG-200M	**GigE Area Scan Camera NCLG-200M** **M58-Mount (C-, F-, M42-Mount via adapter)** **35 mm CMOS sensor, progressive scan, monochrome** **Resolution: 5120 x 3840 pixels** **Pixel size: 6.4 µm x 6.4 µm** **Frame rate: max. 12 fps** **GigE output: 2x standard RJ45 female connector** **Dual Gigabit Ethernet (Static Link Aggregation)** **Electrical data:** **• external: U: 24 V DC, I: 247 mA, P: 5.9 W** **• PoE: U: 48 V DC, I: 150 mA, P: 7.2 W** **Dimensions: 60 mm x 60 mm x 52,4 mm**
	
NCLG-200C	**GigE Area Scan Camera NCLG-200C** **M58-Mount (C-, F-, M42-Mount via adapter)** **35 mm CMOS sensor, progressive scan, color** **Resolution: 5120 x 3840 pixels** **Pixel size: 6.4 µm x 6.4 µm** **Frame rate: max. 12 fps** **GigE output: 2x standard RJ45 female connector** **Dual Gigabit Ethernet (Static Link Aggregation)** **Electrical data:** **• external: U: 24 V DC, I: 247 mA, P: 5.9 W** **• PoE: U: 48 V DC, I: 150 mA, P: 7.2 W** **Dimensions: 60 mm x 60 mm x 52,4 mm**
	

Item No.	Description

Line-Scan Cameras

DAL-S2-2k40

Monochrome line-scan camera Spyder2 CameraLink

M42x1 mount
2048 pixel CCD sensor
14µm x 14µm pixel area
18 kHz line scan rate
Pixel Clock 1 x 40 MHz
Digital output 8/10 Bit CameraLink Standard Base
Power requirements: 12V DC / 5 W
Dimensions: 50 x 85 x 50mm³ (excl. lens adapter)
F-mount adapter is contained in the scope of supply

DAL-LIN-2k80

Monochrome line-scan camera LINEA CameraLink

mount M42x1 (optional C-mount adapter)
CMOS-Sensor 2048 pixel
7,04µm x 7,04µm Pixel size
Sensor size 14,4 mm
line scan rate 80 kHz
Pixel Clock 77 MHz
Power requirements: 12 bis 24 VDC, 4 W
Connector:2xSDR26, 6-Pol Hirose (Mini-CL)
Digital output 8 or 12 Bit via CameraLink Standard
Dimensions 62 x 62 x 31 (B x H x T in mm)

DAL-P4-2k10D

Monochrome line-scan camera Piranha4 CameraLink

M42x1 mount
2048 pixel CMOS sensor
10,56µm x 10,56µm pixel area
100 kHz line scan rate
Pixel Clock 2 x 85 MHz
Digital output 8, 10 or 12 Bit
Base, Medium, Full CameraLink configuration possible
Power requirements: 12 - 24 VDC, 8,3 W
Dimensions: 62 x 62 x 48mm³

Item No.	Description

Light Sources

CC-FL027x027/W-V02

Area light LED 27 x 27 mm

Lighted area: 27 x 27 mm²
Light source: LED white (6600 K)
Power requirements: 24 VDC / 2,9 W
Dimension: 29 x 39 x 15 mm³

CC-FL043x035/W-V02

Area light LED 43 x 35 mm

Lighted area: 43 x 35 mm²
Light source: LED white (6600 K)
Power requirements: 24 VDC / 4,8 W
Dimension: 45 x 47 x 15 mm³

CC-FL051x051/W-V02

Area light LED 51 x 51 mm

Lighted area: 51 x 51 mm²
Light source: LED white (6600 K)
Power requirements: 24 VDC / 8,2 W
Dimension: 53 x 63 x 15 mm³

PLA-0021-M8

Area light LED 100 x 100 mm

Lighted area: 100 x 100 mm²
Light source: LED white
Power requirements: 24 VDC
Dimension: 140mm x 135mm x 20mm

PLA-0030/W

Area light LED 300 x 200 mm

Lighted area: 300 x 200 mm²
Light source: LED white
Power requirements: 24 VDC / 19,2 W
Dimension: 250mm x 340mm x 20mmDC

CC-BL041x016/W-V02

High-Power LED-Light

Lighted area: 41 x 16 mm²
Light source: LED white
Power requirements: 24 VDC / 3,8 W
Dimension: 53 x 20 x 20 mm³

Item No.	Description
CC-BL080x016/W-V02 	**High-Power LED-Light** **Lighted area: 80 x 16 mm²** **Light source: LED white** **Power requirements: 24 VDC / 7,6 W** **Dimension: 92 x 20 x 20 mm³**
CC-BL074x030/W-V02 	**High-Power LED-Light** **Lighted area: 74 x 30 mm²** **Light source: LED white** **Power requirements: 24 VDC / 12 W** **Dimension: 86 x 34 x 20 mm³**
TIS-0011/R-24V 	**Diffuse ring light LED D 130** **External dimensions: 125 mm** **Light color: red** **Depth: 12mm** **24 VDC**
TIS-0012/R-24V 	**Diffuse ring light LED D 100** **External dimensions: 102 mm** **Light color: red** **Depth: 12mm** **24 VDC**
TIS-0021/R-24V 	**Ring light LED D 50** **External dimensions: 50 mm** **Light color: red** **Depth: 16mm** **24 VDC**
TIS-0022/R-24V 	**Ring light LED D 70** **External dimensions: 70 mm** **Light color: red** **Depth: 22mm** **24 VDC**

Further lighting on request

Item No.	Description

Gigabit-Ethernet Boards

NET-0010

GigE-board with 1 Port for PCI-Express x1

NET-0002

GigE-board with 2 Ports for PCI-Express x4

NET-0004

GigE-board with 4 Ports for PCI-Express x4

NET-0022/V02

GigE-Board with 2 Ports for PCI-Express x4 with PoE (Power over Ethernet)

NET-0024/V02

GigE-Board with 4 Ports for PCI-Express x4 with PoE (Power over Ethernet)

Item No.	Description

Frame Grabber

MAT-0014

Frame grabber board Hyperion-CLb (PCI-Express x1)
Connects 1 x BASE
Max. Data rate 200Mbyte/sec.
External trigger input (opto isolated)
PCI-Express x1

(Please note, only usable with NeuroCheck 6.x)

Item No.	Description

Lenses

RIC-OBJ-9M1220	**12 Megapixel lens 12 mm lockable C mount , 1,1" , f = 12 mm , F 2,0**
RIC-OBJ-9M1618	**12 Megapixel lens 16 mm lockable C mount , 1,1" , f = 16 mm , F 1,8**
RIC-OBJ-9M2518	**12 Megapixel lens 25 mm lockable C mount , 1,1" , f = 25 mm , F 1,8**
RIC-OBJ-9M3518	**12 Megapixel lens 35 mm lockable C mount , 1,1" , f = 35 mm , F 1,8**
RIC-OBJ-9M5024	**12 Megapixel lens 50 mm lockable C mount , 1,1" , f = 50 mm , F 2,4**
RIC-OBJ-9M7528	**12 Megapixel lens 75 mm lockable C mount , 1,1" , f = 75 mm , F 2,8**

Item No.	Description
FUJ-0001/V02	Compact lens 6 mm lockable C mount , 1/2" , f = 6 mm , F 1,2
FUJ-0002/V02	Compact lens 9 mm lockable C mount , 2/3" , f = 9 mm , F 1,4
FUJ-0003/V02	Compact lens 12,5 mm lockable C mount , 2/3" , f = 12,5 mm , F 1,4
FUJ-0004/V02	Compact lens 16 mm lockable C mount , 2/3" , f = 16 mm , F 1,4
FUJ-0005/V02	Compact lens 25 mm lockable C mount , 2/3" , f = 25 mm , F 1,4
FUJ-0006/V02	Compact lens 35 mm lockable C mount , 2/3" , f = 35 mm , F 1,6
FUJ-0007/V02	Compact lens 50 mm lockable C mount , 2/3" , f = 50 mm , F 2,3
FUJ-0008/V02	Compact lens 75 mm lockable C mount , 2/3" , f = 75 mm , F 2,8

Item No.	Description

Communication

HIL-0003/2.2

PROFIbus slave board, DS50-DPS-PCI

PROFIbus DP slave
based on SPC3 ASIC,
max. data rate 12Mbaud, 368 byte process map ,
RS232C diagnostic link

HIL-0006

PROFIbus slave board, CIFX 50-DP
PROFIbus DP slave
for PCI

HIL-0008

PROFIbus slave board, CIFX 50E-DP

PROFIbus DP slave
for PCI Express

HIL-0206

Real-Time-Ethernet board, CIFX 50-RE

PCI Communication Interface netX
for Real-Time-Ethernet - 2x RJ45
for PCI

Only for NeuroCheck 6.0/6.1!

HIL-0208

Real-Time-Ethernet board, CIFX 50E-RE

PCI Communication Interface netX
for Real-Time-Ethernet - 2x RJ45
for PCI Express

Only for NeuroCheck 6.0/6.1!

Item No.	Description
ICP-0001/V02	Digital-I/O board PCI-P16POR16U
	PCI-board with 16 digital input channels and 16 digital output channels, opto-decoupled, 2 x 37-pin D-sub connectors on two slot covers. Special feature: with 1 x 37-pin D-sub connector 8 input and 8 outputs channels are available.
ICP-0002	Digital-I/O board PEX-P16POR16i (PCI-Express)
	PCI-Express board with 16 digital input channels and 16 digital output channels, opto-decoupled, 2 x 37-pin D-sub connectors on two slot covers. Special feature: with 1 x 37-pin D-sub connector 8 input and 8 outputs channels are available. Please note - pin assignment is not compatible with ICP-0001!
ME-0101	Digital I/O board 16/16 PCI-Express
	PCI-Express bus board with 16 digital input channels and 16 digital output channels, opto-decoupled 78-pin D-sub connector. Only for NeuroCheck 6.0/6.1 usable!
ME-0102	Digital I/O board 32/32 PCI-Express
	PCI-Express bus board with 32 digital input channels and 32 digital output channels, opto-decoupled 78-pin D-sub connector. Only for NeuroCheck 6.0/6.1 usable!

Item No.	Description

Cables

NWK-0005	GigE- Cable Cat.7, Length 5m
NWK-0010	GigE- Cable Cat.7, Length 10m
NWK-0020	GigE- Cable Cat.7, Length 20m
NWK-0105	GigE- Cable, dragchain resistant screw lock on one side Length 5m
NWK-0110	GigE- Cable, dragchain resistant screw lock on one side Length 10m
NWK-0120	GigE- Cable, dragchain resistant screw lock on one side Length 20m
KAB-M12-RJ45_NCG/05	Gigabit Ethernet cable RJ45 to M12 for NCG IP-Series IP67 protected length 5m
KAB-M12-RJ45_NCG/10	Gigabit Ethernet cable RJ45 to M12 for NCG IP-Series IP67 protected length 10m
KAB-M12-RJ45_NCG/15	Gigabit Ethernet cable RJ45 to M12 for NCG IP-Series IP67 protected length 15m
KAB-M12-RJ45_NCG/20	Gigabit Ethernet cable RJ45 to M12 for NCG IP-Series IP67 protected length 20m

Item No.	Description
KAB-CL2xMini/05	CameraLink-Cable Mini CL / Mini CL-plug (male) Length 5m
KAB-CL2xMini/10	CameraLink-Cable Mini CL / Mini CL-plug (male) Length 10m
KAB-CLMini/05	CameraLink-Cable MDR26 / Mini CL-plug (male) Länge 5m
KAB-CLMini/10	CameraLink-Cable MDR26 / Mini CL-plug (male) Länge 10m

Subject to technical changes and errors.