80 – 40.000 Frames per Second by Variable RoI

- **Monochrome or RGB Color Version (with BAYER Filter)**
- **Gigabit Ethernet Industry Standard Interface**
- **GigE Vision® Compatible**
- **Resolution 1280 (h) x 1024 (v)**
- **Variable Region of Interest (RoI) and Frame Rate**
- **Full Frame Shutter with Internal or External Triggering**
- **8 Bit / 10 Bit Greyscale with 3-Level Digital Gain**
- **Pixel Binning, Horizontal and Vertical**
- **Patented ImageBLITZ® Trigger**
- **Compact and Robust Design**

High Performance Via Standard Interface

Mikrotron's MC1324/25 is the high speed camera for the Ethernet. Data transfer of 80 full 1280 x 1024 frames per second via any GigE network wire makes the MC1324/24 ready-to-use for any current PC or notebook. Complex special hardware is no longer needed for high speed imaging wherever it helps making processes more efficient. For instance, by analyzing fast moving mechanical operations, or in defect recognition within manufacturing processes.

For dependable operation, the MC1324/25 comes with an IP67 compliant RJ45 interface connector, providing secure and dense contact even under mechanical demanding conditions, as vibrations or rapid movements.

Freeze-Frame Shutter with Variable Exposure Time

The MC1324/25 features a „Freeze-Frame Shutter" which proceeds a complete frame even while the image before is buffered and transferred. Exposure times from 1/30 sec. down to 4 µsec are selectable to capture fast-moving objects on high definition.

Automatic Self-Triggering with ImageBLITZ®

For event-driven self-triggered imaging, normally complex sensor technology is obligatory. ImageBLITZ® is a camera-internal self-triggering feature that enables to define a specific line sector within the Region of Interest (RoI) as "sensor". Image recording is triggered in real-time by any variation of a defined number of pixels' brightness within the specified sector. The ImageBLITZ® self-trigger allows configuration by minimal effort on intuitive interface. Photoelectric relays and synchronizing to clock rate are not necessary (however, applicable as additional tools).

Pixel binning, Horizontal and Vertical

At high frame rates, lighting may become a critical issue. To increase sensitivity, pixel values of neighboring pixels can be summarized by line and column.

Intuitive User Interface

MC-Control provides an intuitive, easy-to-go user interface for camera setup and operation. All parameters, including ImageBLITZ® configuration, may be entered numerically, or be altered via sliders respectively. Also, command inputs and system reaction are monitored on user interface.

Realtime FPGA Intelligence

A programmable post-sensor array (FPGA) enables real time pre-processing of large data amounts within the camera trough the Mikrotron Sobel Filter (available as option). Only the results of the FPGA-analysis are transferred to the host PC. Data rate runs up a multiple and applications are focussed on the facts that really count.

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Specifications

MC1324	Monochrome, linear sensitivity
MC1325	RGB Color, linear sensitivity, with Bayer filter and UV-IR filter
Resolution	1280(h) x 1024 (v) Pixels
Frame Rates	80 fps at 1,280 x 1,024 Pixel, up to 40.000 fps at reduced resolution up to 550 fps at 1280 x 1024 after onboard FPGA filtering
Pixel Area	12 x 12 µm
Active Sensor Area	15,36 (h) x 12,29 (v) mm 19,67 mm diagonal; 1¼"
Fill factor	40%
Spectral Bandwidth	400 … 800 nm
Illumination	1600 LSB/lux-sec at 550 nm (ADC ref 1V)
Internal Dynamics	59 dB
Data Width	8 or 10 Bit
Video Output	Gigabit Ethernet, max. 110 MByte/s
Synchronization	TTL Input 1/30s to 1/250,000s
Shutter	Internal timer, or pulse width of trigger signal
Gain	Digital x1, x2, x4
Camera Configuration	Via Gigabit Ethernet
Power Supply	8 … 24 V DC
Power Consumption	max. 5W
Thermal Resistance	typ. 0,17°/W
Environmental Temperature	+5° … +50° C
Lens Mount	C-Mount with adjustment for sensor distance +/- 1mm, F-Mount with Adapter
Dimensions	63 x 64.7 x 55 mm /2.5"x2.5"x2.2" (W x H x L)
Weight	265 grams

GiGE™ VISION Easy Multi-Camera Configuration through Gigabit Ethernet
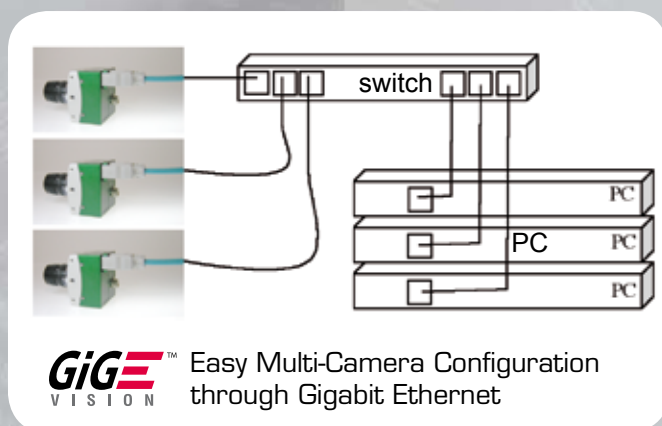
Connector pin assignment

12-pol. Hirose

Pin	Signal	Pin	Signal
1	GND	7	
2	VCC (8 – 24V)	8	
3	GND STROBE	9	
4	STROBE	10	
5	GND TRIG	11	VCC (8-24V)
6	TRIGGER	12	GND

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