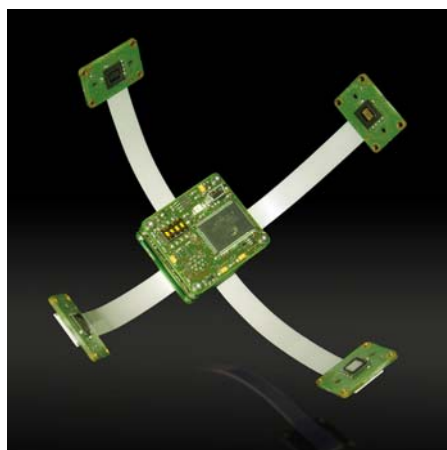# DATA SHEET

Multi-sensor camera*

*available in Q1/2009

Up to four pixel-synchronous CMOS sensors with global shutter can be connected to the central unit of the multi-sensor camera by an LVDS data cable and can be freely positioned. The image data is coordinated on a FPGA module with at least 256 MB RAM. The multi-sensor camera is available in colour or monochrome, and optionally with lenses ("Cob" variant).

Product name:

VRm2FC-12 OEM/ Cob (with two freely positionable sensors)

VRm3FC-12 OEM/ Cob (with three freely positionable sensors)

VRm4FC-12 OEM/ Cob (with four freely positionable sensors)

Characteristics of each sensor:

• 754x482 pixel array size

• Global shutter, CMOS

• Active pixel size 6µm x 6µm

• 1/3" optical format

• User programmable windowing and panning

• Pixelclock 5-26.6 MHz

• Bayer RGB pattern (color version)

• Switchable High Dynamic Mode (Multiple Exposure with Image Superposition)

• Switchable Auto Exposure and Auto Gain Mode

• Adjustable anit-blooming circuit

• Readout: 8bit or 10bit

Optical Characteristics:

• Responsivity 4.8 V/lux·sec

• Dynamic Range

• linear: 55db

• highdyn: 80-100db

• IR filter available

Physical Characteristics of the central unit:

• Board dimensions 42 x 38 x 25 mm

• Total height of package ca. 25 mm

• Mounting holes 36 x 32 mm

• Stack of 3 boards

• Inter-board distance 5 mm

• Power supply via USB (no additional power supply necessary)

• Standard Mini USB-B connector

• Operating temperature 0°C to 40°C

• Storage temperature -30°C to 80°C

Physical Characteristics of the freely positionable sensors:

• Board dimensions 28 x 19 x 7 mm

Image Formats

• [752x480] 69 frames/s
• [640x480] 80 frames/s

Data Transfer Characteristics:

• Supports all USB standards: High-speed USB 2.0 (EHCI) and full-speed USB 1.x
   (UHCI and OHCI)

Special Features:

• No frame grabbing hardware necessary

• Free programmable timings

• Unlimited access to uncompressed sensor data

• Operation with external hardware (eg. strobes, light barriers)

• Soft-trigger/ timestamps/ framecounter

• Storage of up to 9 user configurations (eg. format, exposure time) in the device

• Storage of user settings in the camera (24KB, eg. calibration data)

• Multiple standard formats plus one free definable ROI (region of interest)

• Image processing in the camera

• Low jitter for trigger and strobe

• Internal 256MB DDR-memory - Ring buffer

• Bayer and HQ Bayer filter with RGB24, RGB565 or optimized grey picture

• Lossless realtime compression (RLE-encoding)

• Supports USB 2.0 and 1.0, 1.1 (IPC)

• Cable length up to 45 meters realizable

Cob (Camera on board) variant:

• Standard lens: 12.0mm F2.0

• Alternative lenses are available on request

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