

CAM



Overview

Digital Camera Module with 5 Megapixel resolution for direct connection with SOM interface (monochrome).

VM-011-BW is equipped with the Aptina monochrome CMOS Sensor MT9P031. Aptina's DigitalClarity technology offers outstanding image quality. The 5 megapixels resolution (2592H x 1944V) is designed for applications that require high-resolution images.

The integrated „windowing“ function allows for the resolution to be reduced and adjusted depending on the task. This feature offers the implementation of pan-and-scan without moving parts. In addition, complicated adjustments of the camera board during the implementation phase are no longer necessary.

Due to the reduced resolution, the readout speed can be increased. Therefore frame rates of up to 60 fps at HDTV resolution (720p) are possible.

As for all phyCAM Modules, all parameters such as exposure time, gain and more can be adjusted via software.

VM-011-BW can connect directly to the parallel processor camera interface. All PHYTEC PCBs with phyCAM-P connection (e.g. all SOMs with OMAP and i.MX processor) can directly connect the sensor board with a cable. All camera

drivers and demo programs are already implemented in the Board Support Package for the respective SOM.

This camera board is equipped with a monochrome Aptina CMOS sensor MT9P031. Image data format is Y8 / Y10. Optional Y12 is available by jumper configuration. The camera is designed for an extended temperature range of -25°C to +70°C.

The camera module is available with three housing options: PCB-version (sensor only), with M12 or with C/CS-mount lens holder.

Technical Details

VM-011- Monochrom

Camera Characteristics

Resolution	5 Mpixel
Image Resolution (H x V)	2592 x 1944
Sensor Size	1/2.5" 5.7 x 4.28 mm
Pixel Size	2.2 x 2.2 µm
Color / Monochrome	monochrome
Sensor Technology	CMOS
Sensor Chip	Aptina MT9P031
Scanning System	progressive
Shutter Type	rolling
Frame Rate, max (fps)	up to 15 fps (Vollbild), up to 60 fps (720p)
Video Resolution	n/a
Sensitivity	1.4 V/lux-sec

Dynamic Range	67.74 dB
Exposure Time	programmable
Gain	x1...x32
AEC	n/a
AGC	n/a
White Balance/AWB	n/a
Ext. Trigger / Sync.	Trigger / Strobe
ROI	yes
Binning	2x2 / 4x4
Mirror	programmable
Electrical Interface	
Interface Type	digital
Connection	phyCAM-P
Data Format	8 / 10 Bit parallel
Interface Mode	Y8 / Y10
Dataline Shifting	-
Parameter Settings	I ² C
Supply Voltage	2.8 V
Power Consumption	450 mW
Standby Power	2 mW
Mechanical Specifications	
Lens Mount	none / M12 / C-CS
Dimensions (mm)	34 x 34
Mounting	4 x M2.5
Weight	5g
Operating Temperature	-25 to 70°C
Connections	

Signal Output FFC 33 pol.

Trigger / Sync. FFC + JST 3 pol.

Part number VM-011-BW

Pricing plus VAT

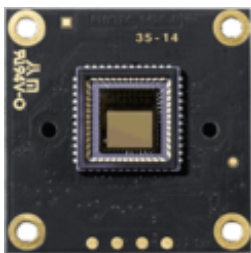
VM-011-BW

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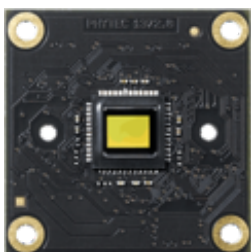
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See here for the VM-011 phyCAM-P Monochrome Download section.

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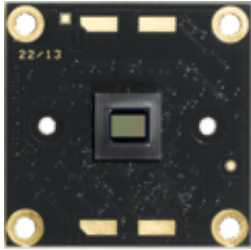
VM-012: phyCAM-P - monochrome



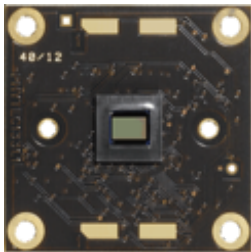
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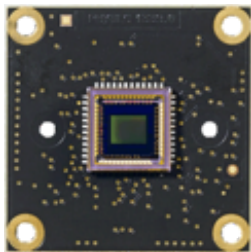
VM-011: phyCAM-P - color



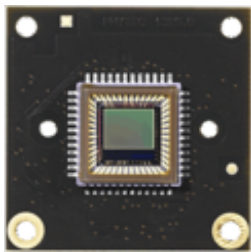
VM-010: phyCAM-P - monochrome



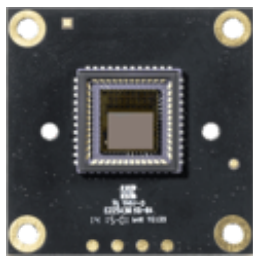
VM-010: phyCAM-P - color



VM-009: phyCAM-P - color



VM-006: phyCAM-P monochrome



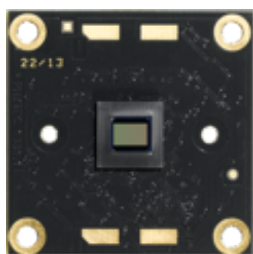
VM-012: phyCAM-S+ - monochrome



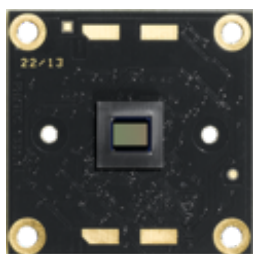
VM-011: phyCAM-S+ - monochrome



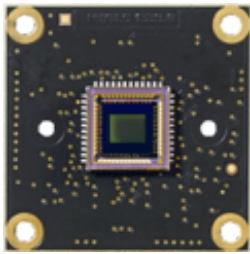
VM-011: phyCAM-S+ - color



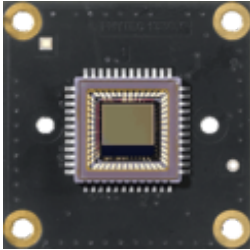
VM-010: phyCAM-S+ - monochrome



VM-010: phyCAM-S+ - color



VM-009: phyCAM-S+ - color



VM-006: phyCAM-S+ monochrome



VM-008 Video Converter



VM-050: Thermal Imaging Camera



VM-051: Thermal Imaging Camera

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