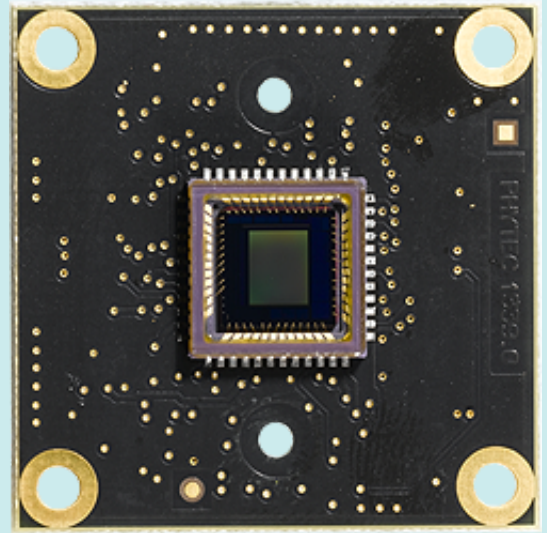


CAM



Overview

Digital Camera Module with 1.3 Megapixel resolution for direct connection with SOM interface (color).

VM-009-COL is equipped with the Aptina MT9M131 color CMOS sensor. This sensor features an integrated pre-processing unit (IFP - *image flow processor*) for image correction and enhancement. The SOC architecture also enables image data conversion. Therefore six different 8-bit image formats are available.

VM-009 supports RGB and YUV formats as well as the Bayer Pattern.

VM-009-COL 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.

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-009-COL

Camera Characteristics	
Resolution	1.3 Mpixel
Image Resolution (H x V)	1280 x 1024
Sensor Size	1/3" 4.6 x 3.7 mm
Pixel Size	3.6 x 3.6 μm
Color / Monochrome	Color
Sensor Technology	CMOS
Sensor Chip	Aptina MT9M131
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	1.0 V/lux-sec
Dynamic Range	71 dB
High Dynamic Range	-
Exposure Time	programmable
Gain	programmable
AEC	yes
AGC	yes
Gamma Correction	yes
White Balance/AWB	yes / yes
Ext. Trigger / Sync.	Strobe

ROI	yes
Binning	2x2 / 4x4
Mirror	programmable
Image Processor	yes
LED Lighting	-
Additional Functionalities	sharpening, lens shade corr., color control...
Electrical Interface	
Interface Type	digital
Connection	phyCAM-P
Data Format	8 / 10 Bit parallel
Interface Mode	YUV RGB-565 RGB-555 RGB-444 Raw RGGB (Bayer, processed)
Dataline Shifting	-
Parameter Settings	I ² C
Supply Voltage	2.8 V
Power Consumption	170 mW
Standby Power	tbd.
Mechanical Specifications	
Lens Mount	none / M12 / C-CS
Dimensions (mm)	34 x 34
Mounting	4 x M2.5
Weight	7g
Operating Temperature	-25 to 70°C
Connections	

Signal Output

FFC 33 pol.

Trigger / Sync.

FFC + JST 3 pol.

Pricing plus VAT

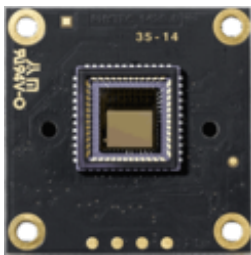
VM-009-COL

Quote

Download

See here for the VM-009 phyCAM-P Color Download section.

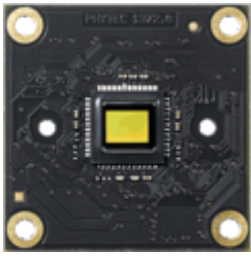
Related Products



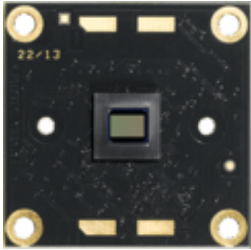
VM-012: phyCAM-P - monochrome



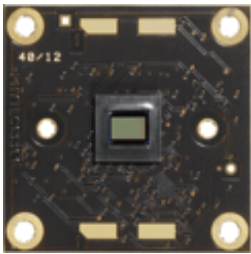
VM-011: phyCAM-P - monochrome



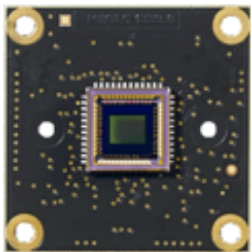
VM-011: phyCAM-P - color



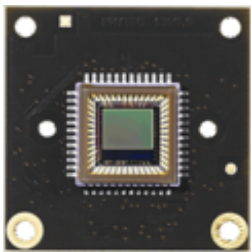
VM-010: phyCAM-P - monochrome



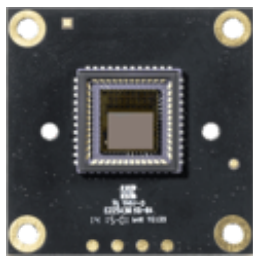
VM-010: phyCAM-P - color



VM-009: phyCAM-P - color



VM-006: phyCAM-P monochrome



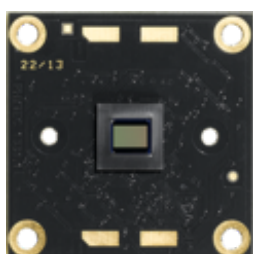
VM-012: phyCAM-S+ - monochrome



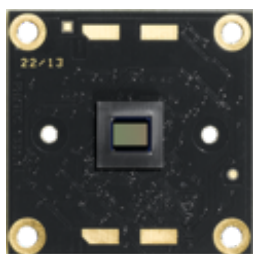
VM-011: phyCAM-S+ - monochrome



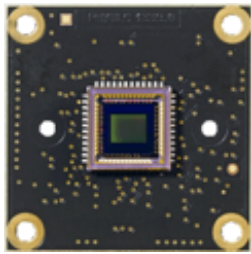
VM-011: phyCAM-S+ - color



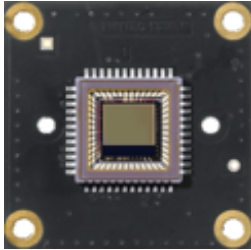
VM-010: phyCAM-S+ - monochrome



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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