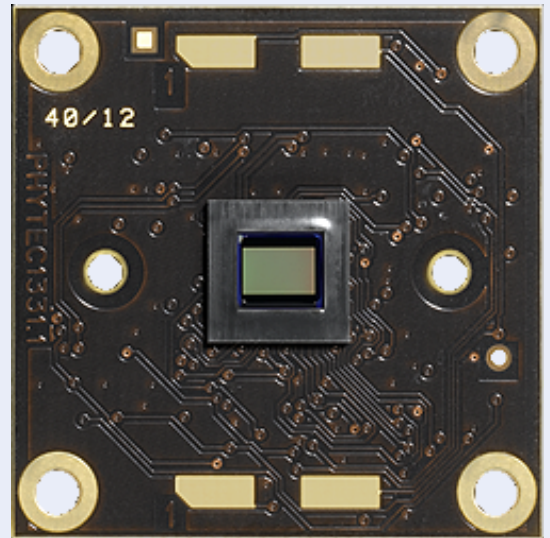


CAM



Overview

Digital Camera Module with W-VGA resolution for direct connection with SOM interface (color).

VM-010-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.

This camera board is equipped with Aptina color CMOS Sensor MT9V024. Image data format is Bayer Pattern. The camera is designed for an extended temperature range of -25°C to $+105^{\circ}\text{C}$.

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

All VM-010 variants are optionally available with an integrated multiplexer. This allows to switch the camera from 8-bit to 10-bit interface operation by an I²C bus command.

This option is essential if an application requires both, 8-bit and 10-bit data (for example for 8-bit live preview and 10-bit analysis) but when the processor interface does not support this function.

Technical Details

VM-010-COLOR

Camera Characteristics

Resolution	WVGA
Image Resolution (H x V)	752 x 480
Sensor Size	1/3" 4,51 x 2,88 mm
Pixel Size	6.0 x 6.0 µm
Color / Monochrome	Color
Sensor Technology	CMOS
Sensor Chip	Aptina MT9V024
Scanning System	progressive
Shutter Type	global
Frame Rate, max (fps)	up to 60 fps (Vollbild)
Video Resolution	n/a
Sensitivity	4,8 V/lux-sec
Dynamic Range	>55 dB linear
High Dynamic Range	>80...100 dB
Exposure Time	programmable
Gain	x1...x4
AEC	yes

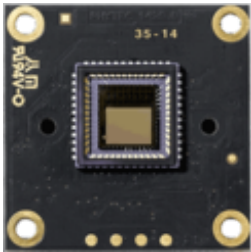
AGC	yes
White Balance/AWB	n/a
Ext. Trigger / Sync.	Trigger / Strobe / LED Light
ROI	yes
Binning	2x2 / 4x4
Mirror	programmable
LED Lighting	optional
Electrical Interface	
Interface Type	digital
Connection	phyCAM-P
Data Format	8 / 10 Bit parallel
Interface Mode	Y8 / Y10
Dataline Shifting	-
Parameter Settings	I ² C
Supply Voltage	3.3 V
Power Consumption	220 mW
Standby Power	100 mW
Mechanical Specifications	
Lens Mount	none / M12 / C-CS
Dimensions (mm)	34 x 34
Mounting	4 x M2.5
Weight	7g
Operating Temperature	-25 to 85°C
Connections	
Signal Output	FFC 33 pol.
Trigger / Sync.	FFC + JST 3 pol.

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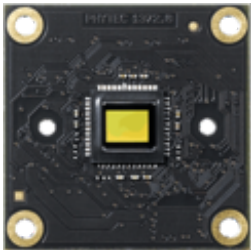
VM-010-COL

Quote

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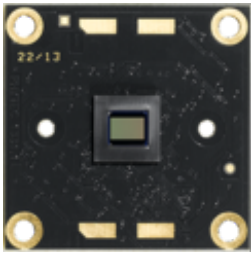
VM-012: phyCAM-P - monochrome



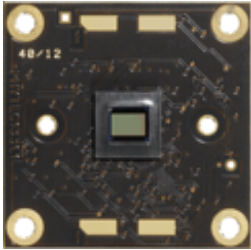
VM-011: phyCAM-P - monochrome



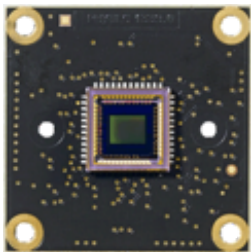
VM-011: phyCAM-P - color



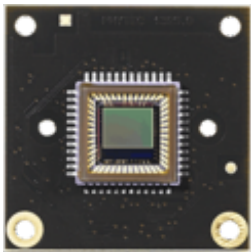
VM-010: phyCAM-P - monochrome



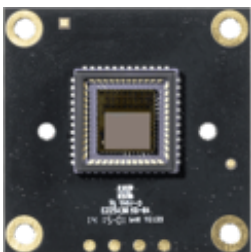
VM-010: phyCAM-P - color



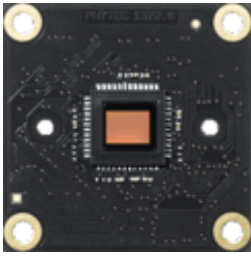
VM-009: phyCAM-P - color



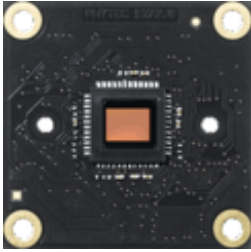
VM-006: phyCAM-P monochrome



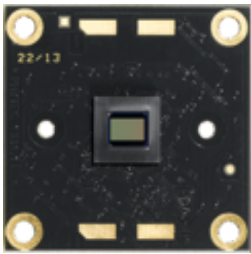
VM-012: phyCAM-S+ - monochrome



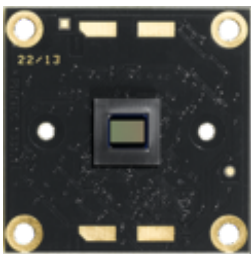
VM-011: phyCAM-S+ - monochrome



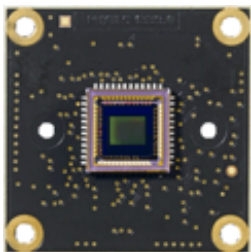
VM-011: phyCAM-S+ - color



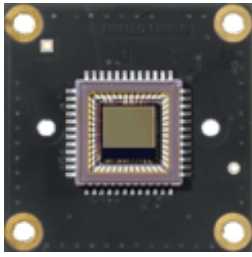
VM-010: phyCAM-S+ - monochrome



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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