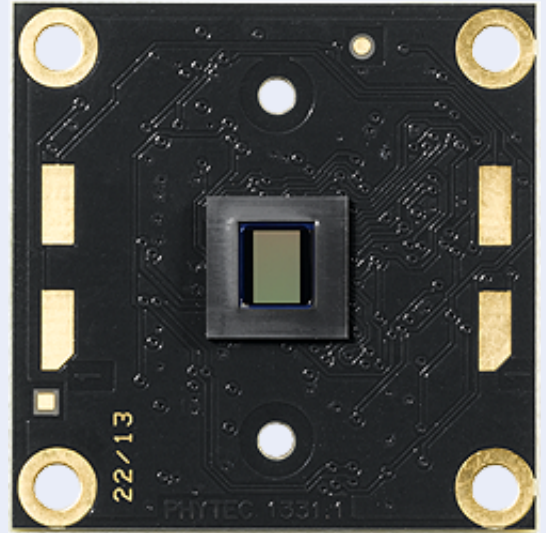


CAM



## Overview

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

VM-010-BW-LVDS is equipped with the Aptina monochrome CMOS Sensor MT9V024 and offers data with 8-bit greyscale resolution .

VM-0010-BW-LVDS is equipped with the serial phyCAM-S+ interface. It can connect directly to the SOM LVDS camera interface. All PHYTEC phyCARD and phyFLEX SOMs offer this interface, which is implemented on the PCB.

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

Trigger and strobe signals in order to synchronize the camera can be connected via an additional, three-pole connector.

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-010- Monochrome

#### Camera Characteristics

|                                 |                                    |
|---------------------------------|------------------------------------|
| <b>Resolution</b>               | WVGA                               |
| <b>Image Resolution (H x V)</b> | 752 x 480                          |
| <b>Sensor Size</b>              | 1/3" 4.51 x<br>2.88 mm             |
| <b>Pixel Size</b>               | 6.0 x 6.0 $\mu\text{m}$            |
| <b>Color / Monochrome</b>       | WVGA                               |
| <b>Sensor Technology</b>        | CMOS                               |
| <b>Sensor Chip</b>              | Aptina<br>MT9V024                  |
| <b>Scanning System</b>          | progressive                        |
| <b>Shutter Type</b>             | global                             |
| <b>Frame Rate, max (fps)</b>    | up to 60 fps<br>(Vollbild)         |
| <b>Video Resolution</b>         | n/a                                |
| <b>Sensitivity</b>              | 4.8 V/lux-sec                      |
| <b>Dynamic Range</b>            | >55 dB linear                      |
| <b>High Dynamic Range</b>       | >80...100 dB                       |
| <b>Exposure Time</b>            | programmable                       |
| <b>Gain</b>                     | x1...x4                            |
| <b>AEC</b>                      | yes                                |
| <b>AGC</b>                      | yes                                |
| <b>White Balance/AWB</b>        | n/a                                |
| <b>Ext. Trigger / Sync.</b>     | Trigger /<br>Strobe / LED<br>Light |
| <b>ROI</b>                      | yes                                |

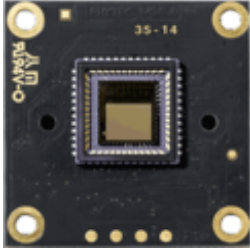
|                                  |                     |
|----------------------------------|---------------------|
| <b>Binning</b>                   | 2x2 / 4x4           |
| <b>Mirror</b>                    | programmable        |
| <b>LED Lighting</b>              | optional            |
| <b>Electrical Interface</b>      |                     |
| <b>Interface Type</b>            | digital             |
| <b>Connection</b>                | phyCAM-S+           |
| <b>Data Format</b>               | 8 Bit seriell       |
| <b>Interface Mode</b>            | Y8                  |
| <b>Dataline Shifting</b>         | -                   |
| <b>Parameter Settings</b>        | I <sup>2</sup> C    |
| <b>Supply Voltage</b>            | 3.3 V               |
| <b>Power Consumption</b>         | 320 mW              |
| <b>Standby Power</b>             | 120 mW              |
| <b>Mechanical Specifications</b> |                     |
| <b>Lens Mount</b>                | none / M12 / C-CS   |
| <b>Dimensions (mm)</b>           | 34 x 34             |
| <b>Mounting</b>                  | 4 x M2.5            |
| <b>Weight</b>                    | 7g                  |
| <b>Operating Temperature</b>     | -25 to 85°C         |
| <b>Connections</b>               |                     |
| <b>Signal Output</b>             | Hirose 8 pol.       |
| <b>Trigger / Sync.</b>           | JST 3 pol.<br>Crimp |

## Pricing plus VAT

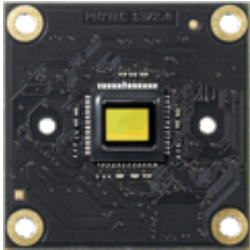
### VM-010-BW-LVDS

Quote

## Related Products



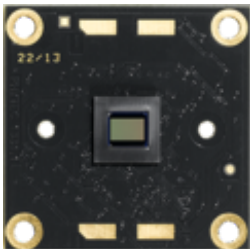
VM-012: phyCAM-P - monochrome



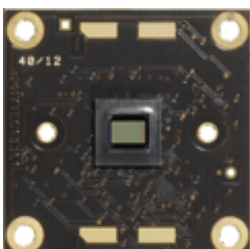
VM-011: phyCAM-P - monochrome



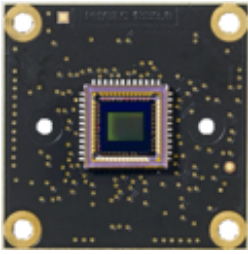
VM-011: phyCAM-P - color



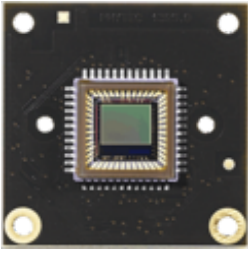
VM-010: phyCAM-P - monochrome



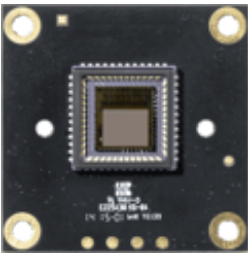
VM-010: phyCAM-P - color



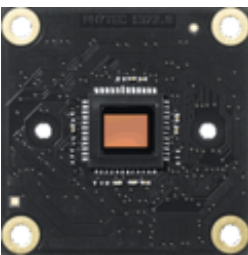
VM-009: phyCAM-P - color



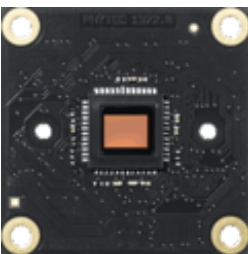
VM-006: phyCAM-P monochrome



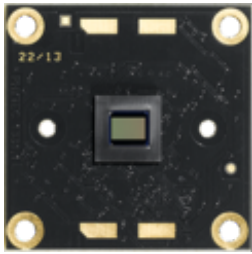
VM-012: phyCAM-S+ - monochrome



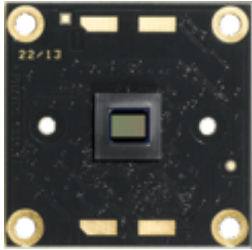
VM-011: phyCAM-S+ - monochrome



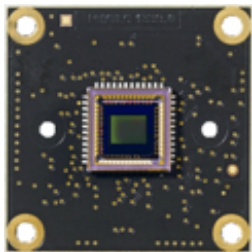
VM-011: phyCAM-S+ - color



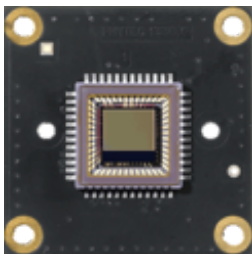
VM-010: phyCAM-S+ - monochrome



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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