



## FHV7X-M016-S09-MC

FH Vision Smart Camera, high performance, monochrome type, 1.6 Mpix resolution, 3.45  $\mu\text{m}$  pixel size, 1/2.9" chip size, global shutter, motorized lens module, focal length 9 mm, multi color illuminator, 24 VDC, IP67, pre-assembled

# Specifications

|                           |                                                                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of pixels          | 1.6 MP                                                                                                                                                  |
| Camera with lens          | ✓                                                                                                                                                       |
| Communication port(s)     | EtherNet/IP, Ethernet TCP/IP, PROFINET Slave, Serial RS-232C                                                                                            |
| Communication option(s)   | EtherCAT Slave                                                                                                                                          |
| Focal length              | 9 mm                                                                                                                                                    |
| Focus distance            | 60-1000 mm                                                                                                                                              |
| Autofocus                 | ✓                                                                                                                                                       |
| Camera family             | FHV                                                                                                                                                     |
| Camera type               | Monochrome                                                                                                                                              |
| Frame rate                | 224 fps                                                                                                                                                 |
| Illumination              | Multi-coloured LED                                                                                                                                      |
| Image width               | 1440 pixels                                                                                                                                             |
| Image height              | 1080 pixels                                                                                                                                             |
| Pixel size                | 3.45 µm                                                                                                                                                 |
| Shutter type              | Global                                                                                                                                                  |
| Image sensor format       | 1/2.9"                                                                                                                                                  |
| Image sensor type         | CMOS                                                                                                                                                    |
| Lens mount                | Other                                                                                                                                                   |
| Lens type                 | Motorized                                                                                                                                               |
| Optics class              | Not Applicable                                                                                                                                          |
| Degree of protection (IP) | IP67                                                                                                                                                    |
| Application               | 2D Robot guidance, Bead inspection, Code reading, Code verification, Counting, Defect inspection, Measurement inspection, OCR / OCV, Presence / Absence |



**FHV-SDU30**

FHV7 extended data unit, EtherCAT interface



**FHV-VDB2 10M**

FHV7 Power / IO Cable, straight 10 m, M12 connector



**FHV-VDB2 20M**

FHV7 Power / IO Cable, straight 20 m, M12 connector



**FHV-VDB2 2M**

FHV7 Power / IO Cable, straight 2 m, M12 connector



**FHV-VDB2 3M**

FHV7 Power / IO Cable, straight 3 m, M12 connector



**FHV-VDB2 5M**

FHV7 Power / IO Cable, straight 5 m, M12 connector



**FHV-VDBX2 10M**

FHV7 Power / IO Cable, straight, super bend resistant, 10 m, M12 connector



**FHV-VDBX2 5M**

FHV7 Power / IO Cable, straight, super bend resistant, 5 m, M12 connector



**FHV-VDLB2 10M**

FHV7 Power / IO Cable, right angle 10 m, M12 connector



**FHV-VDLB2 20M**

FHV7 Power / IO Cable, right angle 20 m, M12 connector



**FHV-VDLB2 2M**

FHV7 Power / IO Cable, right angle 2 m, M12 connector



**FHV-VDLB2 3M**

FHV7 Power / IO Cable, right angle 3 m, M12 connector



**FHV-VDLB2 5M**

FHV7 Power / IO Cable, right angle 5 m, M12 connector



**FHV-VDLBX2 10M**

FHV7 Power / IO Cable, right angle, super bend resistant, 10 m, M12 connector



**FHV-VDLBX2 5M**

FHV7 Power / IO Cable, right angle, super bend resistant, 5 m, M12 connector



**FHV-VNB2 10M**

FHV7 Ethernet cable, straight 10 m, M12 connector



**FHV-VNB2 20M**

FHV7 Ethernet cable, straight 20 m, M12 connector



**FHV-VNB2 2M**

FHV7 Ethernet cable, straight 2 m, M12 connector



**FHV-VNB2 3M**

FHV7 Ethernet cable, straight 3 m, M12 connector



**FHV-VNB2 5M**

FHV7 Ethernet cable, straight 5 m, M12 connector



**FHV-VNBX2 5M**

FHV7 Ethernet cable, straight, super bend resistant, 5 m, M12 connector



**FHV-VNLB2 10M**

FHV7 Ethernet cable, right angle 10 m, M12 connector



**FHV-VNLB2 20M**

FHV7 Ethernet cable, right angle 20 m, M12 connector



**FHV-VNLB2 2M**

FHV7 Ethernet cable, right angle 2 m, M12 connector

















**FHV-VNLB2 3M**

FHV7 Ethernet cable, right angle 3 m, M12 connector



**FHV-VNLB2 5M**

FHV7 Ethernet cable, right angle 5 m, M12 connector

|                                                                                     |                             |                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>FHV-VNLBX2 10M</b>       | FHV7 Ethernet cable, right angle, 10 m, super bend resistant, M12 connector                                                                                                                                           |
|     | <b>FHV-VNLBX2 5M</b>        | FHV7 Ethernet cable, right angle, super bend resistant, 5 m, M12 connector                                                                                                                                            |
|     | <b>FHV-VUB2 10M</b>         | Smart Camera data unit cable, bend resistant, 10 m                                                                                                                                                                    |
|     | <b>FHV-VUB2 2M</b>          | Smart Camera data unit cable, bend resistant, 2 m                                                                                                                                                                     |
|     | <b>FHV-VUB2 3M</b>          | Smart Camera data unit cable, bend resistant, 3 m                                                                                                                                                                     |
|     | <b>FHV-VUB2 5M</b>          | Smart Camera data unit cable, bend resistant, 5 m                                                                                                                                                                     |
|     | <b>FHV-VULB2 10M</b>        | Smart Camera data unit cable, bend resistant, right angle, 10 m                                                                                                                                                       |
|   | <b>FHV-VULB2 2M</b>         | Smart Camera data unit cable, bend resistant, right angle, 2 m                                                                                                                                                        |
|   | <b>FHV-VULB2 3M</b>         | Smart Camera data unit cable, bend resistant, right angle, 3 m                                                                                                                                                        |
|   | <b>FHV-VULB2 5M</b>         | Smart Camera data unit cable, bend resistant, right angle, 5 m                                                                                                                                                        |
|  | <b>FHV-XDF</b>              | FHV7 Diffusion filter                                                                                                                                                                                                 |
|  | <b>FHV-XMT-7</b>            | Fixture for FHV7                                                                                                                                                                                                      |
|  | <b>FHV-XPL-IR</b>           | Polarized Light Filter, for visible and IR light                                                                                                                                                                      |
|  | <b>NYE2A-20F11-12WR1200</b> | Touch screen HMI Panel PC with FHV7 Viewer, Windows 10 IOT 2021, Intel Atom E3950 CPU, 12 inch, 1 x RS-232C, 2 x Ethernet (10/100/1000 Base-T), 2 x USB 2.0 Ports, 1 x USB 3.0 Port, 128 GB CFAST, 24 VDC, black case |



**NYE2A-20F11-12WR1300**

Touch screen HMI Panel PC with FHV7 viewer, Windows 10 IOT 2021, Intel Atom E3950 CPU, 12 inch, 1 x RS-232C, 2 x Ethernet (10/100/1000 Base-T), 2 x USB 2.0 Ports, 1 x USB 3.0 Port, 128 GB CFAST, 24 VDC, silver case



**NYE2A-20F11-15WR1200**

Touch screen HMI Panel PC with FHV7 Viewer, Windows 10 IOT 2021, Intel Atom E3950 CPU, 15 inch, 1 x RS-232C, 2 x Ethernet (10/100/1000 Base-T), 2 x USB 2.0 Ports, 1 x USB 3.0 Port, 128 GB CFAST, 24 VDC, black case



**NYE2A-20F11-15WR1300**

Touch screen HMI Panel PC with FHV7 Viewer, Windows 10 IOT 2021, Intel Atom E3950 CPU, 15 inch, 1 x RS-232C, 2 x Ethernet (10/100/1000 Base-T), 2 x USB 2.0 Ports, 1 x USB 3.0 Port, 128 GB CFAST, 24 VDC, silver case

## Spare parts



**FHV-XCV**

FHV7 Replacement Lighting cover



**FHV-XLS-LTM**

FHV7 lighting shielding sheet

## Downloads

CAD Library



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Discontinuation Notice**

EN PDF 221 KB



**FH Series Vision System  
- Sysmac Studio  
Operation Manual**

EN PDF 11.9 MB



**FH Series Vision System  
- Hardware  
Setup Manual**

EN PDF 21.4 MB



**FH Series Vision System  
- Macro Customize  
Functions  
Programming Manual**

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**FH/FHV Series  
Communications  
Settings  
Communications  
Manual**

EN PDF 13.2 MB



**FH/FHV Series Vision  
System  
Users Manual**

EN PDF 27.4 MB



### FH/FHV Series Vision System - Processing Item Function

Reference Manual

EN PDF 38.6 MB



### FH/FHV Vision Application Guide for ABB robots

Practice Guide

EN PDF 3.01 MB



### FH/FHV Vision Application Guide for Denso robots

Practice Guide

EN PDF 2.93 MB



### FH/FHV Vision Application Guide for Epson robots

Practice Guide

EN PDF 2.86 MB



### FH/FHV Vision Application Guide for Fanuc robots

Practice Guide

EN PDF 3.02 MB



### FH/FHV Vision Application Guide for Omron robots

Practice Guide

EN PDF 3.27 MB



### FHV Series Setup Manual

EN PDF 26.6 MB



### FHV7 Series Datasheet

EN PDF 7.43 MB



### FHV7H Simulator Launcher v655 Software

EN ZIP 34.1 MB



### FHV7X Simulator Launcher Software

EN ZIP 40.2 MB



### FHV7 -M -C C - Smart Camera Instruction Sheet

EN PDF 4.33 MB



### IfzToBitmap V160 Software

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### Omron FHV7H-xxxx-x PROFINET GSDML file

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### Robot Setting Tool Software

EN ZIP 3.09 MB



### Selection Guide for Vision Sensors Brochure

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### Touch panel monitor for FHV7 Smart Camera Flyer

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