

Product Discontinuation

Vision Systems

**FH-2050
FH-2050-10
FH-2050-20****FH-5050
FH-5050-10
FH-5050-20****FH-5550
FH-5550-10
FH-5550-20****FH-2050-H
FH-2050-10H
FH-2050-20H****FH-5050-H
FH-5050-10H
FH-5050-20H****Recommended Replacement**

Vision Systems

**FH-2051
FH-2051-10
FH-2051-20****FH-5051
FH-5051-10
FH-5051-20****FH-5551
FH-5551-10
FH-5551-20****Please contact your local office****[Final order entry date]**

The end of September 2024

[Date of The Last Shipping]

The end of July 2025

[Scheduled date of maintenance close]

The end of March 2030

[Caution on recommended replacement]

Processing performances such as processing time of processing item and communication response time will change because of replacement with the recommended replacement.

The operation of the equipment may be affected by it.

When replacing, please check the operation of the equipment.

About available application software versions

Only Ver.6.51 or later application software can be used with the recommended replacement.

Do not downgrade it to Ver.6.40 or earlier version.

If you are using customization software

Customized software designed for the product discontinuation cannot be operated with the recommended replacement. Please contact our sales department.

[Difference from discontinued product]


Recommended replacement Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
FH-2051	**	**	**	**	*	*	**
FH-2051-10	**	**	**	**	*	*	**
FH-2051-20	**	**	**	**	*	*	**
FH-5051	**	**	**	**	*	*	**
FH-5051-10	**	**	**	**	*	*	**
FH-5051-20	**	**	**	**	*	*	**
FH-5551	**	**	**	**	*	*	**
FH-5551-10	**	**	**	**	*	*	**
FH-5551-20	**	**	**	**	*	*	**

- ** : Compatible
- * : The change is a little/Almost compatible
- : Not compatible
- : No corresponding specification

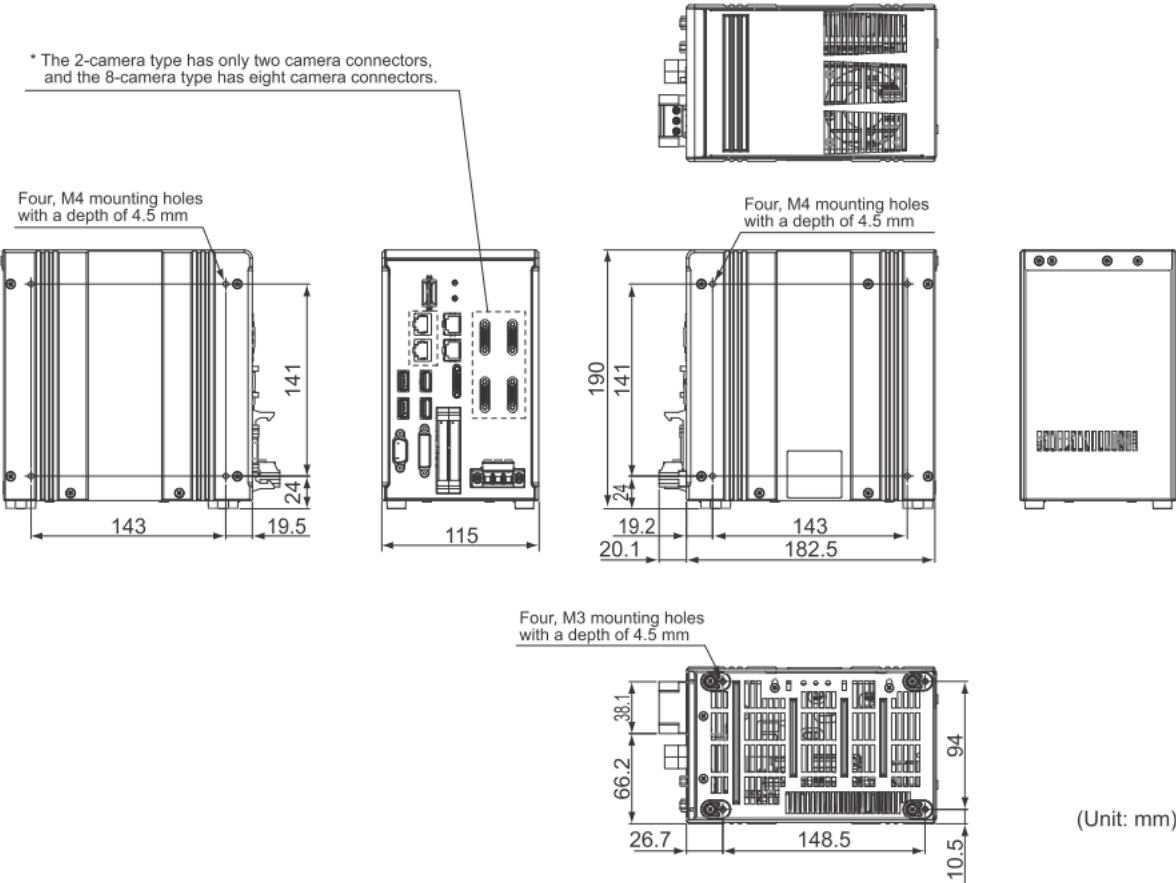
[Product Discontinuation and recommended replacement]

Product discontinuation	Recommended replacement
FH-2050	FH-2051
FH-2050-10	FH-2051-10
FH-2050-20	FH-2051-20
FH-5050	FH-5051
FH-5050-10	FH-5051-10
FH-5050-20	FH-5051-20
FH-5550	FH-5551
FH-5550-10	FH-5551-10
FH-5550-20	FH-5551-20
FH-2050-H	Please contact your local office
FH-2050-10H	Please contact your local office
FH-2050-20H	Please contact your local office
FH-5050-H	Please contact your local office
FH-5050-10H	Please contact your local office
FH-5050-20H	Please contact your local office

[Body colour]

Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]
<p>Model FH-2050-[] / FH-5050-[] / FH-5550-[] / FH-2051-[] / FH-5051-[] / FH-5551-[] Black</p> 	

[Dimensions]

Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]
<p>Model FH-2050-[] / FH-5050-[] / FH-5550-[] / FH-2051-[] / FH-5051-[] / FH-5551-[] 190 mm x 115 mm x 182.5 mm</p> <p>* The 2-camera type has only two camera connectors, and the 8-camera type has eight camera connectors.</p>  <p>Four, M4 mounting holes with a depth of 4.5 mm</p> <p>Four, M4 mounting holes with a depth of 4.5 mm</p> <p>Four, M3 mounting holes with a depth of 4.5 mm</p> <p>(Unit: mm)</p>	

[Wire connection]

Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]		Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]	
Model FH-2050-[] / FH-5050-[] / FH-5550-[] / FH-2051-[] / FH-5051-[] / FH-5551-[]			
Connector name	Description		
(A)	SD memory card installation connector	Install the SD memory card. Do not plug or unplug the SD memory card during measurement operation. Otherwise measurement time may be affected or data may be destroyed.	
(B)	Ethernet connector	Connect an Ethernet device. Upper port : Ethernet port Lower port : Ethernet port, EtherNet/IP port, and PROFINET port are sharing use.	
(C)	USB connector	Connect a USB device. Do not plug or unplug it during measurement. Otherwise measurement time may be affected or data may be destroyed. Left ports: USB2.0 Right ports: USB3.0 The USB3.0 interface has a higher bus power supply capability than the USB2.0 interface, and you can expect more stable operation with it. Also, when used in combination with a USB3.0 device, you can expect higher transfer speed than USB2.0. Be sure to give priority to using the USB3.0 interface.	
(D)	RS-232C connector	Connect an external device such as a PLC.	
(E)	DVI-I connector	Connect a monitor.	
(F)	I/O (Parallel) connector (control lines, data lines)	Connect the controller to external devices such as a sync sensor and PLC.	
(G)	EtherCAT address setup volume	Used to set a station address (00 to 99) as an EtherCAT communication device.	
(H)	EtherCAT communication connector (IN)	Connect the opposed EtherCAT device.	
Connector name	Description		
(I)	EtherCAT communication connector (OUT)	Connect the opposed EtherCAT device.	
(J)	Encoder connector	Connect an encoder.	
(K)	Camera connector	Connect cameras.	
(L)	Power supply terminal connector	Connect a DC power supply. Wire the FH Sensor Controller independently on other devices. Wire the ground line. Be sure to ground the FH Sensor Controller alone. Use an attachment power terminal (male) for installation. For details, refer to 5-3 <i>Sensor Controller Installation</i> on page 5-5.	

[Mounting dimensions]

<p>Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]</p>	<p>Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]</p>
<p>Model FH-2050-[] / FH-5050-[] / FH-5550-[] / FH-2051-[] / FH-5051-[] / FH-5551-[]</p>	
<p>Side Mounting</p>	
<div style="display: flex; justify-content: space-between;"> <div data-bbox="245 445 485 719"> </div> <div data-bbox="501 479 1348 875"> <p style="text-align: right;">(Unit: mm)</p> <ul style="list-style-type: none"> • Left side 4-M4 depth 4.5 (mounting screw hole) • Right side 4-M4 depth 4.5 (mounting screw hole) </div> </div> <p style="text-align: center;">* Recommended tightening torque: 1.2 N•m to 1.3 N•m * The tolerance is ±0.2 mm.</p>	
<p>Bottom Mounting</p>	
<div style="display: flex; justify-content: space-between;"> <div data-bbox="199 1093 596 1294"> </div> <div data-bbox="596 1055 1214 1391"> <p style="text-align: right;">(Unit: mm)</p> <ul style="list-style-type: none"> • Bottom 4-M3 depth 4.5 (mounting screw hole) Insulating leg: 4 </div> </div> <p style="text-align: center;">* Do not remove the Insulating leg. Fix the Insulating leg to secure the ventilation path. * Recommended tightening torque: 0.54 N•m to 0.6 N•m * The tolerance is ±0.2 mm.</p>	

[Characteristics]

Item		Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]
Controller Type		Box type	
Parallel IO polarity		NPN/PNP (common)	
Memory, Storage		FH-2050-[]: 8GB RAM, 32GB ROM FH-5050-[]: 8GB RAM, 32GB ROM FH-5550-[]: 32GB RAM, 64GB ROM	FH-2051-[]: 8GB RAM, 64GB ROM FH-5051-[]: 8GB RAM, 64GB ROM FH-5551-[]: 32GB RAM, 64GB ROM
Number of Core		FH-2050-[] / FH-2051-[]: 2 FH-5050-[] / FH-5550-[] / FH-5051-[] / FH-5551-[] : 4	
AI Processing Items			
AI Scratch Detect Filter		FH-2050-[] / FH-2051-[]: No FH-5050-[] / FH-5550-[] / FH-5051-[] / FH-5551-[] : Yes*1	
AI Fine Matching		Yes	
Main Functions			
Operati on Mode	Standard	Yes	
	Double Speed Multi-input	Yes	
	Non-stop adjustment mode	Yes	
	Multi-line random-trigger mode	FH-2050-[] / FH-2051-[]: Yes (Maximum 8 lines) According to the CPU performance, FH-2000 series is recommended to use up to two lines in this mode. FH-5050-[] / FH-5550-[] / FH-5051-[] / FH-5551-[] : Yes (Maximum 8 lines)	
Parallel Processing		Yes	
Number of Connectable Camera		FH-2050/FH-5050/FH-5550/FH-2051/FH-5051/FH-5551 : 2 FH-2050-10/FH-5050-10/FH-5550-10/FH-2051-10/FH-5051-10/FH-5551-10: 4 FH-2050-20/FH-5050-20/FH-5550-20/FH-2051-20/FH-5051-20/FH-5551-20: 8	
Support ed Camera	FH-S series camera	All of the FH-S series cameras are connectable.*2	
	FZ-S series camera	All of the FZ-S series cameras are connectable.	
Camera I/F		OMRON I/F	
Possible Number of Captured Images		Refer to About Number of Logging Images or About Max. Number of Loading Images during Multi-input in the Vision System FH/FHV series User's Manual (Cat.No. Z365).	
Possible Number of Logging Images to Sensor Controller			
Possible Number of Scenes		128	
Operati ng on UI	USB Mouse	Yes (wired USB and driver is unnecessary type)	
	Touch Panel	Yes (RS-232C/USB connection: FH-MT12)	
Setup		Create the processing flow using Flow editing.	
Language		Japanese, English, Simplified Chinese, Traditional Chinese, Korean, German, French, Spanish, Italian, Vietnamese, Polish	
External Interface			
Serial Communication		RS-232C x 1	
Ethernet	Protocol	Non-procedure (TCP/UDP)	

Item		Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]	
Communication I/F	1000BASE-T × 2			
	EtherNet/IP Communication	Yes (Target/Ethernet port)		
	PROFINET Communication	<ul style="list-style-type: none"> • Yes (Slave/Ethernet port) • Conformance class A 		
	EtherCAT Communication	Yes (slave)		
	Parallel I/O	12 inputs/31 outputs : Use 1 Line. Operation mode: Except Multi-line random-trigger mode.		
		17 inputs/37 outputs : Use 2 Line. Operation mode: Multi-line random-trigger mode.		
		14 inputs/29 outputs : Use 3 to 4 Line. Operation mode: Multi-line random-trigger mode.		
		19 inputs/34 outputs : Use 5 to 8 Line. Operation mode: Multi-line random-trigger mode.		
		Encoder Interface	Input voltage: 5 V ± 5% Signal: RS-422A Line Driver Level Phase A/B/Z: 1 MHz	
Monitor Interface	DVI-I output (Analog RGB & DVI-D single link) × 1			
USB I/F	USB2.0 host × 2 (BUS Power: Port 5 V/0.5 A) USB3.0 host × 2 (BUS Power: Port 5 V/0.9 A)			
SD Card I/F	SDHC × 1			
Indicator Lamps				
Main	POWER: Green, ERROR: Red, RUN: Green, ACCESS: Yellow			
Ethernet	NET RUN1: Green, LINK/ACT1: Yellow, NET RUN2: Green, LINK/ACT2: Yellow			
SD Card	SD POWER: Green, SD BUSY: Yellow			
EtherCAT	ECAT RUN: Green, LINK/ACT IN: Green, LINK/ACT OUT: Green, ECAT ERR: Red			
Supply Voltage		20.4 VDC to 26.4 VDC		
Current consumption				
<ul style="list-style-type: none"> • When connecting an intelligent compact digital camera • When connecting the following lighting or lighting controllers without an external power supply - FLV-TCC1 - FLV-TCC4 - FLV-TCC3HB - FLV-TCC1EP - FL-TCC1 • When connecting the following lighting or lighting controllers - FL-TCC1PS - FL-MD&MC 	FH-2050/FH-2051 : 4.6A max. FH-2050-10/FH-2051-10: 6.6A max. FH-2050-20/FH-2051-20: 11.2A max. FH-5050/FH-5550/FH-5051/FH-5551 : 5.6A max. FH-5050-10/FH-5550-10/FH-5051-10/FH-5551-10: 7.7A max. FH-5050-20/FH-5550-20/FH-5051-20/FH-5551-20: 12.2A max.			
	Other than above	FH-2050/FH-2051 : 3.5A max. FH-2050-10/FH-2051-10: 4.3A max. FH-2050-20/FH-2051-20: 6.3A max. FH-5050/FH-5550/FH-5051/FH-5551 : 4.5A max. FH-5050-10/FH-5550-10/FH-5051-10/FH-5551-10: 5.5A max. FH-5050-20/FH-5550-20/FH-5051-20/FH-5551-20: 7.3A max.		

Item	Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]
Built-in FAN	Yes	
Usage Environment		
Ambient temperature range	FH-2050-[]/FH-2051-[]: Operating: 0°C to +50°C Storage: -20 to +65°C (with no icing or condensation) FH-5050-[]/FH-5550-[]/FH-5051-[]/FH-5551-[]: Operating: 0°C to +45°C Storage: -20 to +65°C (with no icing or condensation)	
Ambient humidity range	Operating and storage: 35 to 85% (with no condensation)	
Ambient atmosphere	No corrosive gases	
Vibration tolerance	Oscillation frequency: 10 to 150 Hz, Half amplitude: 0.1 mm, Acceleration: 15 m/s ² Sweep time: 8 minute/count, Sweep count: 10, Vibration direction: up and down/front and behind/left and right	
Shock resistance	Impact force: 150 m/s ² Test direction: up and down/front and behind/left and right	
Noise immunity	Fast Transient Burst	<ul style="list-style-type: none"> • DC power: Direct infusion: 2 kV, Pulse rising: 5 ns, Pulse width: 50 ns, Burst continuation time: 15 ms/0.75 ms, Period: 300 ms, Application time: 1 min. • I/O line: Direct infusion: 1 kV, Pulse rising: 5 ns, Pulse width: 50 ns, Burst continuation time: 15 ms/0.75 ms, Period: 300 ms, Application time: 1 min.
Grounding	Class D grounding (100 Ω or less grounding resistance) ^{*3}	
External Features		
Dimensions	190 mm x 115 mm x 182.5 mm Note Height: Including the rubber at the base.	
Weight	FH-2050/FH-2051 : Approx.3.0kg FH-2050-10/FH-2051-10 : Approx.3.2kg FH-2050-20/FH-2051-20 : Approx.3.2kg FH-5050/FH-5550/FH-5051/FH-5551 : Approx.3.4kg FH-5050-10/FH-5550-10/FH-5051-10/FH-5551-10 : Approx.3.6kg FH-5050-20/FH-5550-20/FH-5051-20/FH-5551-20 : Approx.3.6kg	
Degree of protection	IEC60529 IP20	
Case material	Cover: zinc-plated steel plate, Side plate: aluminum (A6063)	

*1. Optional FH Application Software (FH-UMAI1 Scratch Detect AI Software Installer) is required.

*2. When 12 megapixels/20.4 megapixels cameras: Max. 4 cameras are connectable.

When use except 12 megapixels/20.4 megapixels cameras: Max. 8 cameras are connectable.

*3. Existing the third class grounding

[Operation ratings / Operation methods]

Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]
<p>Model FH-2050-[] / FH-5050-[] / FH-5550-[] / FH-2051-[] / FH-5051-[] / FH-5551-[]</p> <p>No major changes. For details on how to operate, please refer to the following manual.</p> <ul style="list-style-type: none"> •Vision System User's Manual (Z365) •Vision System User's Manual (Communications Settings) (Z342) •Vision System Hardware Setup Manual (Z366) •Vision System Operation Manual (Sysmac Studio) (Z343) •Vision System Processing Item Function Reference Manual (Z341) •Vision System Macro Customize Functions Programming Manual (Z367) 	

Specifications and prices in this product news are as of the issue date and are subject to change without notice.
 Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.