PRODUCT NEWS

Product Discontinuation Notices

OMRON

Issue Date
June 1, 2024

No. 2024060CN

Product Discontinuation	Recommended Replacement
Vision Systems	Vision Systems
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**

[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.

<u>About available application software versions</u>
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.

<u>If you are using customization software</u>
Customized software designed for the product discontinuation cannot be operated with F the recommended replacement. Please contact our sales department.

[Difference from discontinued product]

Recommended replacement Model	Body Color	Dimen-sions	Wire connection	Mounting Dimensions	Charac-teristics	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
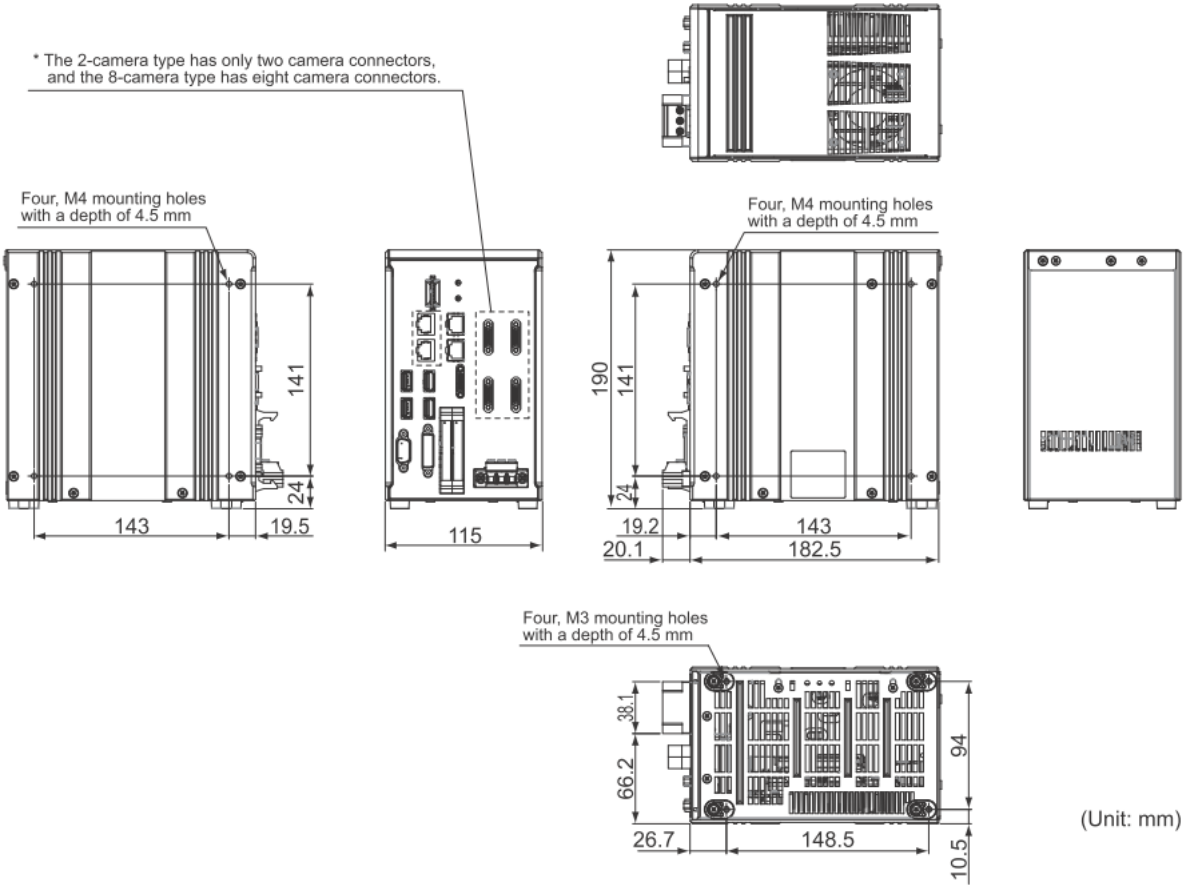-- : Not compatible
- : No corresponding specification

[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

[Body color]

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-[] Black 	

[Dimensions]

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-[] 190 mm x 115 mm x 182.5 mm 	

3

[Wire connection]

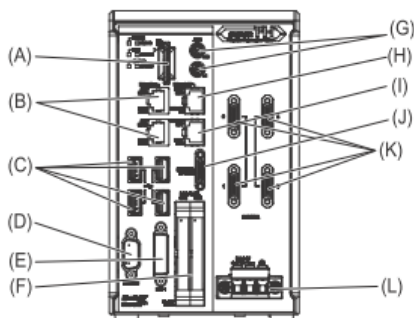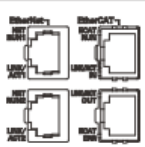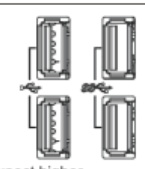| Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]

Model FH-2050-[] / FH-5050-[] / FH-5550-[] / FH-2051-[] / FH-5051-[] / FH-5551-[]

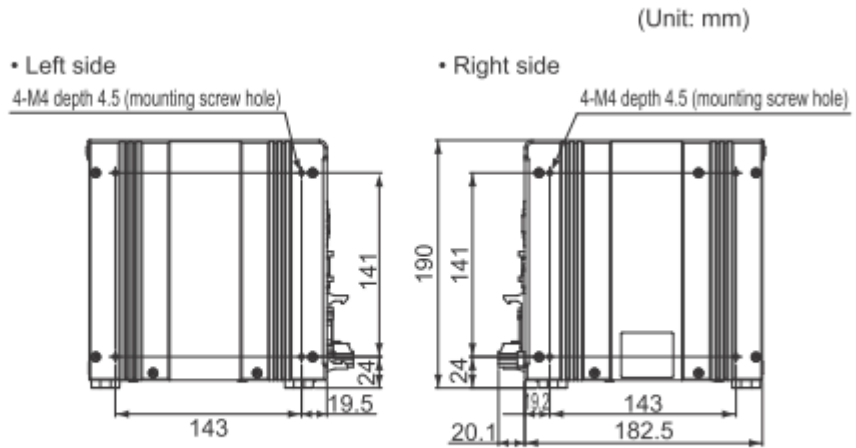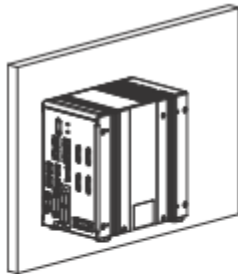|	Connector name	Description
(A)	SD memory card installation connector	Install the SD memory card. Do not plug or unplug the SD memory card during measurement operation. Otherwise measurement time may be affected or data may be destroyed.

(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 Sensor Controller Installation* on page 5-5.

[Mounting dimensions]

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-[]

Side Mounting

(Unit: mm)

• Left side

4-M4 depth 4.5 (mounting screw hole)

141

143

24

19.5

• Right side

4-M4 depth 4.5 (mounting screw hole)

190

141

24

9.2

143

20.1

182.5

* Recommended tightening torque: 1.2 N•m to 1.3 N•m
* The tolerance is ±0.2 mm.

Bottom Mounting

• Bottom

(Unit: mm)

4-M3 depth 4.5 (mounting screw hole)　Insulating leg: 4

38.1

66.2

26.7

148.5

94

10.5

* 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.

[Characteristics]

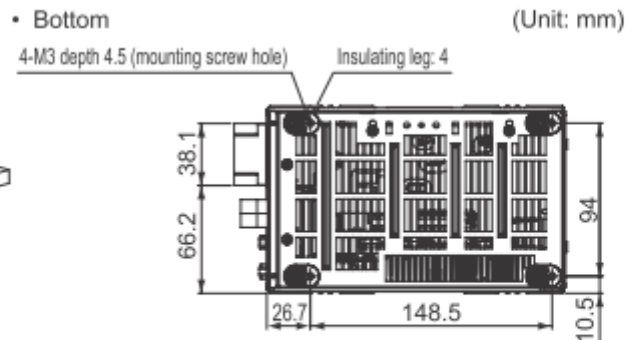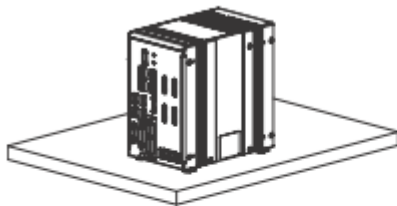| Item	Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]
Controller Type	Box type	
Parallel IO polarity	NPN/PNP (common)	
Memory, Storage	FH-2050-[]：8GB RAM, 32GB ROM FH-5050-[]：8GB RAM, 32GB ROM FH-5550-[]：32GB RAM, 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			
Operation 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	
Supported 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	
Operating 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 × 1	
Ethernet Communication	**Protocol**	Non-procedure (TCP/UDP)	
	I/F	1000BASE-T × 2	

Item	Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]
EtherNet/IP Communication	Yes (Target/Ethernet port)	
PROFINET Communication	• 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) x 1	
USB I/F	USB2.0 host x 2 (BUS Power: Port 5 V/0.5 A) USB3.0 host x 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		
• 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.	
Built-in FAN	Yes	

Item	Product discontinuation Model FH-2050-[] / FH-5050-[] / FH-5550-[]	Recommendable replacement Model FH-2051-[] / FH-5051-[] / FH-5551-[]
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**	• 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-[]
Model FH-2050-[] / FH-5050-[] / FH-5550-[] / FH-2051-[] / FH-5051-[] / FH-5551-[] 　　No major changes. 　　For details on how to operate, please refer to the following manual. 　　・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)	