

Industrial Monitor Solution



Durable waterproof displays are essential in today's commercial and industrial applications. IEI's versatile lines of flat-bezel IP 65 compliant industrial displays with shock and vibration resistance are designed specifically to endure the rigorous demands of modern commerce and industrial environments. These displays are easily integrated into automation applications, ATM machines and human machine interfaces.



» Display Monitor

DM-F Series

- IP65 flat-bezel
- Resistive touch window: 6H anti-scratch PCAP multi-touch
- HDMI/DP high definition audio/video interface
- 9~36V wide range DC input
- Anti-glare and UV-resistant Touch Screen

» Maritime Monitor

SxxM Series

- IP66 flat-bezel
- PCAP multi-touch
- DVI/VGA/BNC output and BNC input
- Redundant power : AC and 18-36V DC
- 0%~100% dimmable LCD backlight
- Remote OSD control by serial port or LAN port
- Duplicate daisy chain monitor connection by VGA port

Product Line	DM-F Series	SxxM series
LCD Size	6.5" ~ 24"	19"
Input Signal Interface	6.5"/ 8": VGA+DVI-D 12.1" ~ 24": VGA+HDMI+DisplayPort	2 x VGA, 2 x DVI 1 x BNC input, 1 x BNC output
Brightness (cd/m ²)	250 ~ 800	300
Operating Temperature	-20°C ~ 60°C	-15°C ~ 55°C
OSD Function	Yes	Yes
IEI samrtOSD Support	Yes	-
Front Panel Protection	IP 65	IP 66

Industrial Monitor Redefine

» Anti-glare and UV-resistant Touch Screen Ideal for Outdoor Applications

Etching anti-glare, never peel off!

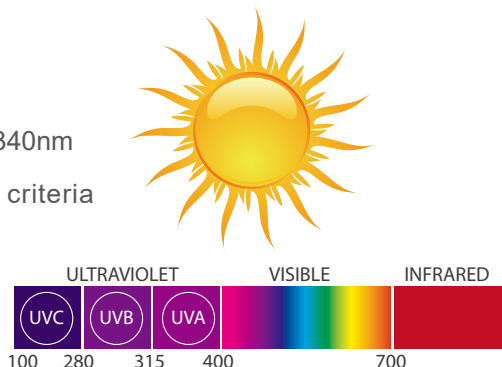
The PPC-FxxC series is built with anti-glare touch screen, which has lower reflection compared to normal touch screen. The reflection will reduce from 8% to 1% and it will eliminate the interference of shine and lights on displays and improve the screen clarity.



UV-resistant ensures reliable continuous operation for mission critical applications

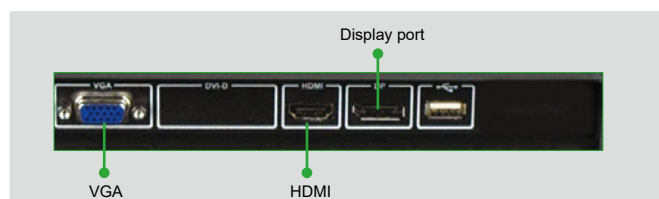
Outdoor applications exposing to direct sunlight and long-term ultraviolet (UV) light will affect PCAP panel appearance such as PCAP top glass hard coat cracking and hazing, or varying degrees of yellowing and bubbling. Thus, IEI offers a UV resistant PCAP touch solution to equip outdoor industrial systems exposed to direct long-term sunlight with anti-UV characteristics.

- Blocks UV wavelengths less than $\approx 340\text{nm}$
- Meets ASTM G154 performance criteria Cycle 1 for 1000 hours



■ Flexible Video Input Selection

DM-F provides comprehensive video input from conventional analog VGA to broad bandwidth digital HDMI and DisplayPort to fulfill different needs.



Benefits of HDMI

- Single-link bandwidth to 340 MHz (10.2 Gbit/s)
- Blu-ray disc content support
- Downward convertible for DVI



Benefits of DisplayPort

- 17.28 Gbit/s broad bandwidth for faster transmission
- 15M for 1080p 60fps long transmission distance
- Blu-ray disc content support
- Lockable cables against vibration
- Downward convertible for HDMI and DVI



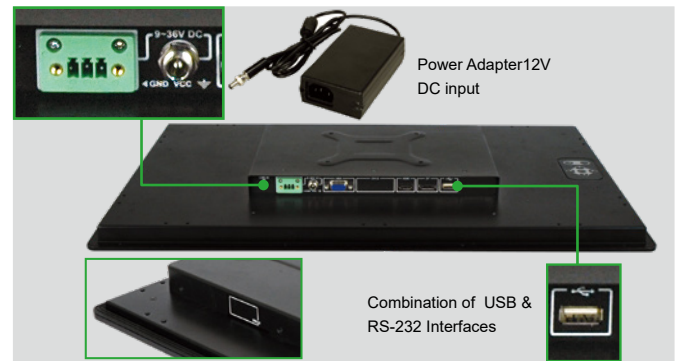
Lockable

■ 9V~36V Wide Range DC Input

Power requirement varies from applications. DM-F series provides 9V~36V DC input which simplifies system integration through adapter or DC source.

Supports Mobile Application

Display Monitor series M models support wide 9V~36V DC power input. Factory and mobile environments, such as vehicles, usually use 12V or 24V DC power source. The wide 9V~36V power input range by terminal block and 12V power input by power jack can be adapted to a wide variety of appliance requirements.



■ Dual Touch Screen Control Interface: RS-232 & USB

Display monitor series provides both RS-232 and USB ports for touch screen connection.

- Lockable RS-232 connector ensures secure attachment (Optional)
- Standard Type A USB 2.0 interface with 480 Mbit/s maximum transfer rate provides faster data transmission than a traditional RS-232 interface

■ IP 65 Waterproof Aluminum Front Panel

IP 65 is the highest dust, water and oil proof standard in ground usage. It absolutely prevents any micro-particles from getting into the system front panel and allows the system to function in harsh environments.



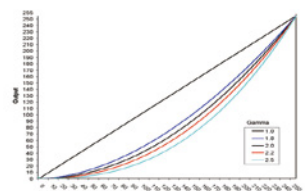
■ Wide Operating Temperature

Design for outdoor applications, DM-F series support wide operating temperature from -20°C ~ 60°C for 12" to 17" models. 22" and 24" are by project request.



■ Gamma Correction - Pursuit of Perfection

Gamma correction enables each panel model to follow the specified look-up-table (LUT) in gamma curve doing color adjustment through software encode. In this way, various monitors can display in an unified color by following Gamma 2.2 standard for PC products, ensuring color consistency for multiple monitor applications.



■ Cable Cover for Neat Cabling

The DM-F series provides an optional cable cover for easy and neat cabling.



» On Screen Display (OSD)

■ OSD Keypad on Back

In order to keep the front panel simple and clean, the membrane keypad of the DM-F series is located on the rear panel to prevent the possibility to adjust the setting accidentally.

■ SmartOSD

- 100% compatible with Windows environment -Windows 95/NT 4.0/98/2000/2003/XP/Vista
- Normal video cable (VGA/DVI) connection only
- Overcome operation obstacles

Distance, location and multiple display units no longer present obstacles when controlling the monitors with the SmartOSD.

■ IEI SmartOSD Software OSD for IEI LCD Monitors

IEI SmartOSD is a proprietary On-Screen-Display (OSD) software solution that enables easy remote monitor setting adjustments in Windows environment. IEI SmartOSD delivers excellent performance and provides more flexibility than typical OSD hardware solutions when adjusting a monitor. SmartOSD also allows monitor settings such as brightness, contrast, screen position, size, and color gain to be read and changed over normal video cable (VGA/DVI by project base).

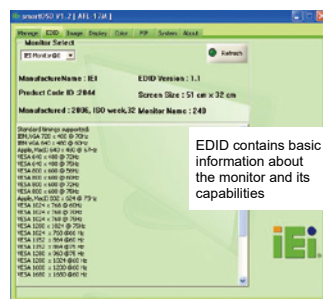
■ 100% Compatible with VESA DDC / CI Protocol

IEI LCD monitors are implemented with the VESA DDC/CI protocol and standard VESA Monitor Control Command Set (MCCS). Compliance software for designing displays compatible with VESA's DDC/CI and MCCS standards are easily modified and applied in other application programs.



Various Remote Management Functions

1. EDID



2. Image Setting



3. Display Setting



4. Color Setting



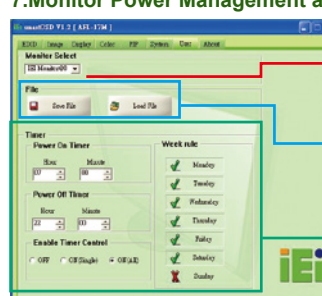
5. Picture in Picture Setting



6. System Setting



7. Monitor Power Management and File Saving



- Monitor Select**
Selects the monitor unit for which the system parameters will be adjusted
- Settings Saving**
Saves the referred settings of all the OSD functions as .dat files and load the settings
- Power Management**
Sets the monitor power on/off by time and week

Heavy Industrial Monitor

6.5"~15.6" DM-F IP65 Industrial Monitor

Features

- Robust IP65 aluminum front bezel
- Aesthetic ultra-thin bezel for seamless panel mount installation
- DC input
- DVI / VGA flexible video input solution
- Resistive single touch
- Wide temperature support



Specifications

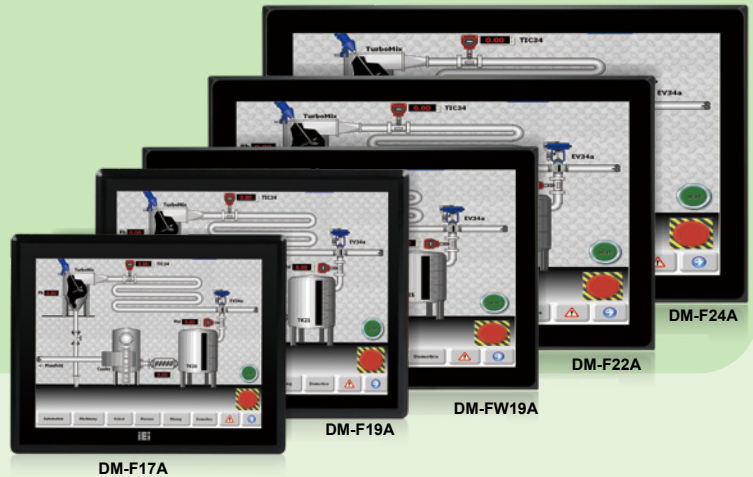
Model		DM-F65A	DM-F08A	DM-F12A	DM-F15A	DM-FW15A
LCD	LCD Display	6.5" (4:3)	8" (4:3)	12.1" (4:3)	15" (4:3)	15.6" (16:9)
	Max. Resolution	640 (W) x 480 (H)	800 x 600	1024 (W) x 768 (H)	1024 (W) x 768 (H)	1366 (W) x768 (H)
	Brightness (cd/m²)	800	500	600	500	400
	Contrast Ratio	600:1	500:1	700 : 1	800 : 1	500:1
	LCD Color	16.2M	262K	16.2M	16.2M	16.2M
	Pixel Pitch (mm)	0.207 x 0.207	0.0675 x 0.2025	0.24 x 0.24	0.29 x 0.29	0.252 x 0.252
	Viewing Angle (H-V)	160° / 140°	140°/120°	160° /140°	160° / 150°	170° / 160°
	Backlight MTBF (Hrs)	50000	50000	50000	70000	50000
Touchscreen & Controller		5-wire resistive single touch window/ Penmount 6000		5-wire resistive single touch window/ Penmount 6000 (Anti-glare Surface) 10-point Projected capacitive touch window, 6H/EETI EXC3188 (Anti-UV, Anti-glare Surface)		
I/O Ports		1 x VGA (DB-15) 1 x DVI 1 x USB 2.0 (touch) 1 x RS-232 (reserved for resistive touch ATO) 1 x Lockable 12V DC jack		1 x VGA (DB-15) 1 x HDMI 1 x DisplayPort 1.1 1 x USB 2.0 (touch) 1 x RS-232 (reserved for resistive touch ATO) 1 x Lockable 9V-36V DC jack 1 x 9V-36V terminal block		
OSD	OSD Button	5-key membrane OSD keypad		7-key membrane OSD keypad		
	Smart OSD Software	Smart OSD Software				
Physical	Construction Material	Aluminum front frame and sheet metal rear cover				
	Mounting	Panel Mount/ Rack Mount 75 x 75 VESA Mount		Panel Mount/ Rack Mount 100 x 100 VESA Mount		
	Enclosure Color	Black C				
	Dimensions (mm)	191.8 x 154.36 x 42.88	222.2 x 182.2 x 42.7	262.2 x 322.2 x 40.5	303 x 378.5 x 43.2	400.1 x 253.3 x 52.9
	Cutout Dimensions (mm)	180 x 140	206 x 154	244.8 x 304.8	285.6 x 361.1	379.1 x 232.3
	Weight (kg) Net/ Gross	1.1 / 2.6	1.33 / 4.5	2.7 / 4.9	3.5 / 5.5	4 / 6.5
Environment	Operating Temperature (with air flow)	-20°C ~ 60°C (with air flow)				
	Storage Temperature	-20°C ~ 70°C				
	Humidity	10% to 95% (non-condensing)				
	IP Level	IP 65 compliant front panel				
	Safety and EMC	CE & FCC certified				
Power Input		12V DC		9V~36V DC		
Power consumption		12V @ 0.5A	12V @ 0.5A	9V @ 2.2A 36V @ 0.5A	9V @ 1.6A 36V @ 0.4A	9V @ 1.3 36V @ 0.33

Heavy Industrial Monitor

17"~23.8" DM-F IP65 Industrial Monitor

Features

- Robust IP65 aluminum front bezel
- Aesthetic ultra-thin bezel for seamless panel mount installation
- Wide range 9V~36V DC input
- HDMI / DisplayPort / VGA flexible video input solution
- Projected capacitive multi-touch and resistive single touch options
- Wide temperature support



Specifications

Model		DM-F17A	DM-FW19A	DM-F19A	DM-F22A	DM-F24A
LCD	LCD Display	17" (5:4)	18.5" (16:9)	19" (5:4)	21.5" (16:9)	23.8" (16:9)
	Max. Resolution	1280 (W) x 1024 (H)	1366 (W) x 768 (H)	1280 (W) x 1024 (H)	1920 (W) x 1080 (H)	1920 (W) x 1080 (H)
	Brightness (cd/m²)	350	400	350	250	250
	Contrast Ratio	1000 : 1	1000 : 1	1000 : 1	1000 : 1	3000 : 1
	LCD Color	16.7M				
	Pixel Pitch (mm)	0.26 x 0.26	0.3 x 0.3	0.294 x 0.294	0.25 x 0.25	0.28 x 0.28
	Viewing Angle (H-V)	170° / 160°			170° / 160°	178° / 178°
	Backlight MTBF (Hrs)	50000			30000	30000
Touchscreen & Controller		5-wire resistive single touch window, 3H/Penmount 6000 (Anti-glare Surface) 10-point Projected capacitive touch window, 6H/EETI EXC3188 (Anti-UV, Anti-glare Surface)			10-point Projected capacitive touch window, 6H/EETI EXC3188 (Anti-UV, Anti-glare Surface)	
I/O Ports		1 x VGA (DB-15) 1 x DVI (F19A only) 1 x HDMI (F17A & FW19A only) 1 x DisplayPort 1.1 1 x USB 2.0 (touch) 1 x RS-232 (reserved for resistive touch ATO) 1 x Lockable 9V-36V DC jack 1 x 9V-36V terminal block			1 x VGA (DB-15) 1 x HDMI 1 x DisplayPort 1.1 1 x USB 2.0 (touch) 1 x RS-232 (reserved for resistive touch ATO) 1 x Lockable 9V-36V DC jack 1 x 9V-36V terminal block	
OSD	OSD Button	7-key membrane OSD keypad				
	Smart OSD Software	Smart OSD Software				
Physical	Construction Material	Aluminum front frame and sheet metal rear cover				
	Mounting	Panel Mount/ Rack Mount 100 x 100 VESA Mount			Panel Mount 100 x 100 VESA Mount	Panel Mount 100 x 100 VESA Mount
	Enclosure Color	Black C				
	Dimensions (mm)	341.4 x 408.4 x 49.3	468.8 x 288.2 x 48.9	372.4 x 447.4 x 49.57	358.4 x 550.4 x 49.1	382 x 600 x 49.4
	Cutout Dimensions (mm)	324 x 391	447.8 x 267.2	430 x 355	340 x 532	358.6 x 576.6
	Weight (kg) Net/Gross	4.4 / 7.1	5 / 8.1	5.4 / 8.4	6.3 / 9.6	7.6 / 10.9
Environment	Operating Temperature (with air flow)	-20°C ~ 60°C (with air flow)			-10°C ~ 50°C	-10°C ~ 50°C
	Storage Temperature	-20°C ~ 70°C	-20°C ~ 70°C	-20°C ~ 70°C	-20°C ~ 60°C	-20°C ~ 60°C
	Humidity	10% to 95% (non-condensing)				
	IP Level	IP 65 compliant front panel				
	Safety and EMC	CE & FCC certified				
Power input		9V~36V DC				
Power consumption		9V @ 2.6A 36V @ 0.6A	9V @ 1.33A 36V @ 0.35A	9V @ 3.3A 36V @ 0.8A	9V @ 2.5A 36V @ 0.6A	9V @ 3.4A 36V @ 0.8A

Ordering Information

Part No.	Description
DM-F65A/R-R20	6.5" 800 cd/m ² high-luminance VGA LCD monitor with aluminum die casting front panel, black color, USB resistive touchscreen, R20
DM-F08A/R-R20	8" 500 cd/m ² SVGA LCD monitor, Aluminum front panel, Black color, W/ USB resistive touch screen, 12V DC input, R20
DM-F12A/R-R30	12.1" 600 cd/m ² XGA LCD monitor, Aluminum die casting front panel, Black color, W/ USB resistive touch screen, 9 ~36V DC input, R30
DM-F12A/PC-R30	12.1" 600 cd/m ² XGA LCD monitor, Aluminum die casting front panel, Black color, W/ USB projected capacitive touch screen, 9 ~36V DC input, R30
DM-F15A/R-R40	15" 450 cd/m ² XGA LCD monitor, Aluminum die casting front panel, Black color, W/ USB resistive touch screen, 9 ~36V DC input, R40
DM-F15A/PC-R40	15" 450 cd/m ² XGA LCD monitor, Aluminum die casting front panel, Black color, W/ USB projected capacitive touch screen, 9 ~36V DC input, R40
DM-FW15A/PC-R20	15.6" 400 cd/m ² 1366x768 LCD monitor, Aluminum front panel, Black color, W/ USB PCAP touch screen, 9 ~36V DC input, R20
DM-F17A/R-R30	17" 350 cd/m ² SXGA LCD monitor, Aluminum die casting front panel, Black color, W/ USB resistive touch screen, 9 ~36V DC input, R30
DM-F17A/PC-R30	17" 350 cd/m ² SXGA LCD monitor, Aluminum die casting front panel, Black color, W/ USB projected capacitive touch screen, 9 ~36V DC input, R30
DM-FW19A/PC-R20	18.5" 400 cd/m ² 1366x768 LCD monitor, Aluminum front panel, Black color, W/ USB PCAP touch screen, 9 ~36V DC input, R20
DM-F19A/R-R30	19" 350 cd/m ² SXGA LCD monitor, Aluminum die casting front panel, Black color, W/ USB resistive touch screen, 9 ~36V DC input, R30
DM-F19A/PC-R30	19" 350 cd/m ² SXGA LCD monitor, Aluminum die casting front panel, Black color, W/ USB projected capacitive touch screen, 9 ~36V DC input, R30
DM-F22A/PC-R30	21.5" 250 cd/m ² FHD LCD monitor, Aluminum die casting front panel, Black color, W/ USB projected capacitive touch screen, 9 ~36V DC input, R30
DM-F24A/PC-R40	23.8" 250 cd/m ² FHD LCD monitor, Aluminum front panel, Black color, W/ USB projected capacitive touch screen, 9 ~36V DC input, R40

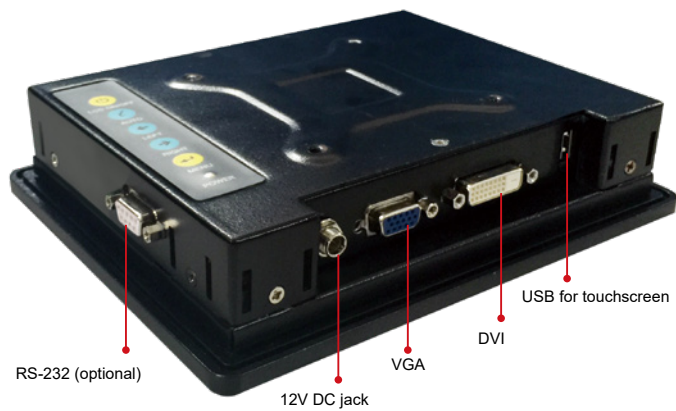
Options

Item	DM-F65A	DM-F08A	DM-F12A	DM-F15A	DM-FW15A	DM-F17A	DM-F19A	DM-FW19A	DM-F22A	DM-F24A
Arm	ARM-11-RS		ARM-11-RS	ARM-31-RS	ARM-31-RS	ARM-31-RS	ARM-31-RS	ARM-31-RS	ARM-31-RS	ARM-31-RS
Stand	STAND-B08		STAND-C12-R10	STAND-C19-R10 STAND-A21-R10						
Wall Mount Kit	AFLWK-12		WK-190MS-R10							
Panel Mount Kit	FPK-07-R10		FPK-01-R10				FPK-02-R10		FPK-02-R10	FPK-03-R10
Rack Mount Kit	FRK65-R10	FRK08-R10	FRK12-R10	FRK15-R10	FRKW15D-R10	FRK17-R10	FRK19D-R10	FRKW19D-R10	N/A	
Cable Cover	N/A		N/A	DM-F-CC01-R10	N/A	DM-F-CC01-R10	DM-F-CC02-R10	N/A	DM-F-CC02-R10	
RS-232 Touch Cable Kit	DM-F-COMKIT-R10		DM-F-COMKIT-R10	DM-F-COMKIT-R10	N/A	DM-F-COMKIT-R10	DM-F-COMKIT01-R10	N/A	N/A	
Power Adapter	N/A		63040-010060-211-RS							

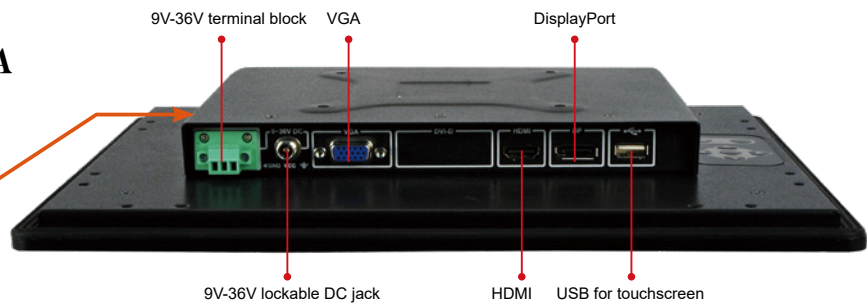
Packing List

Item	P/N	Q'ty	Remark
USB Cable	32001-006100-100-RS	1	For touchscreen
VGA Cable	32000-036200-RS	1	
Power Adapter	63040-010036-210-RS (for DM-F65/08A)		

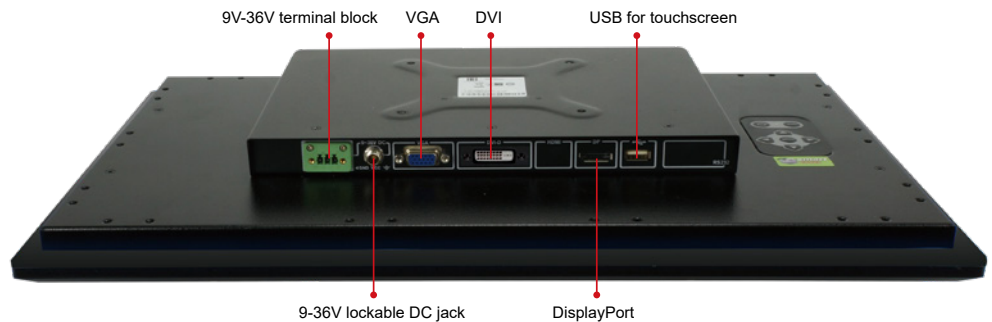
DM-F65A/08A
Fully Integrated I/O



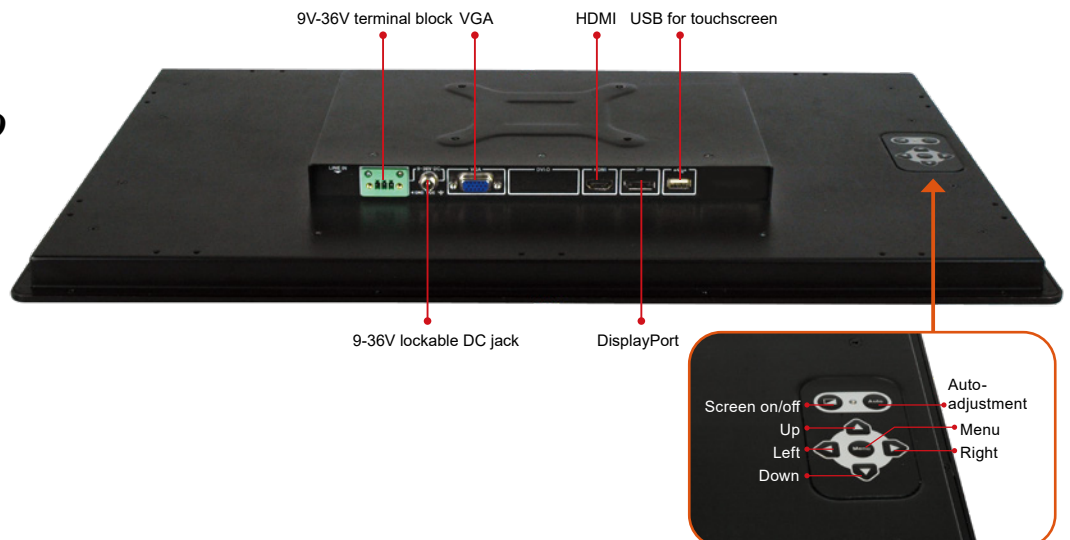
DM-F12A/F15A/FW15A/F17A
Fully Integrated I/O



DM-F19A
Fully Integrated I/O

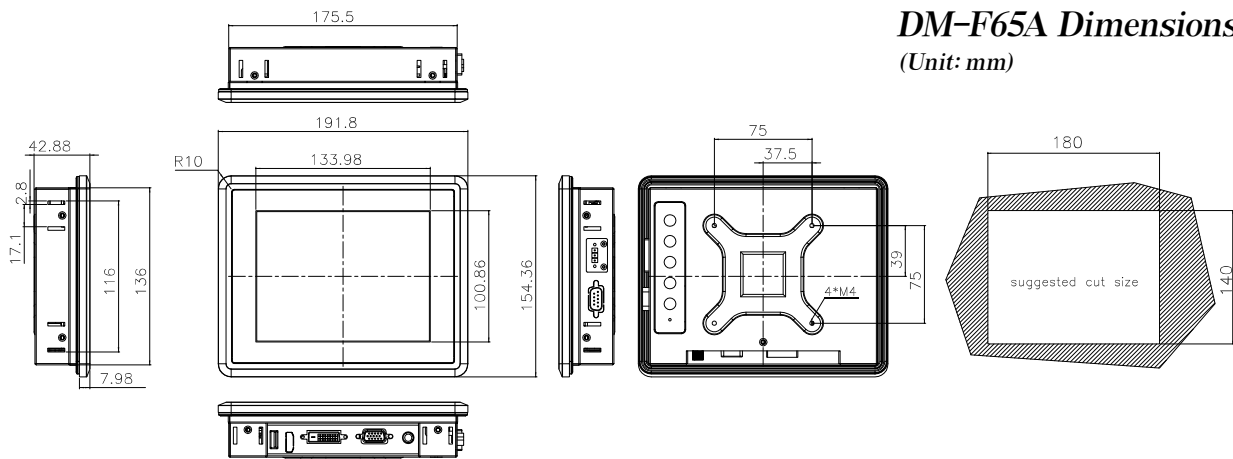


DM-F22A/F24A
Fully Integrated I/O



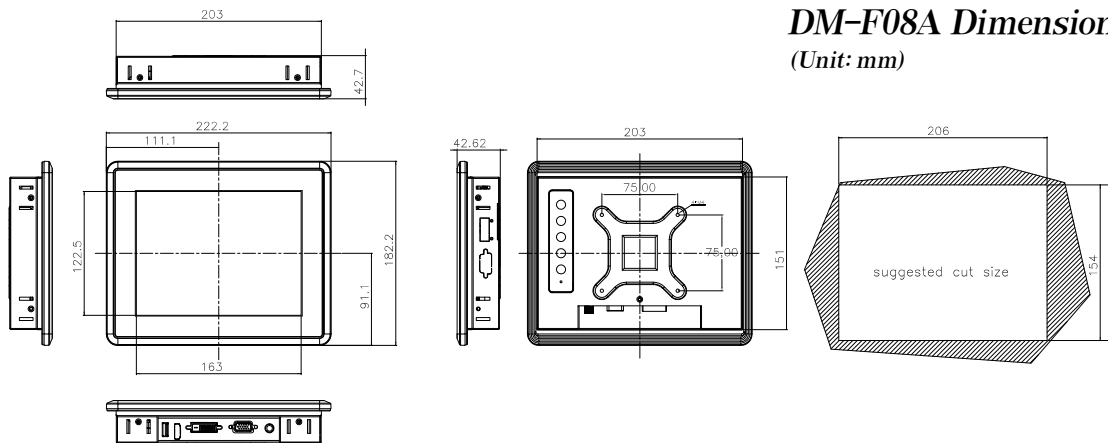
DM-F65A Dimensions

(Unit: mm)



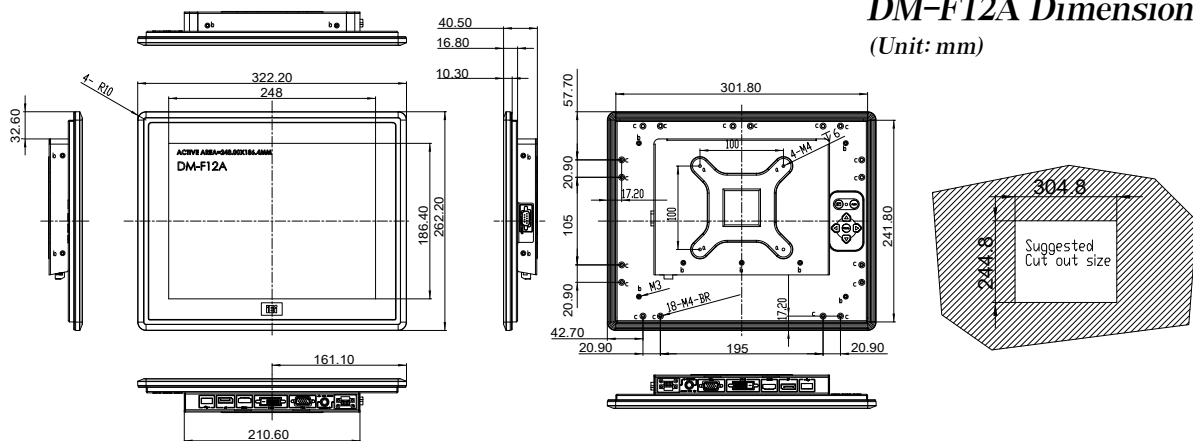
DM-F08A Dimensions

(Unit: mm)



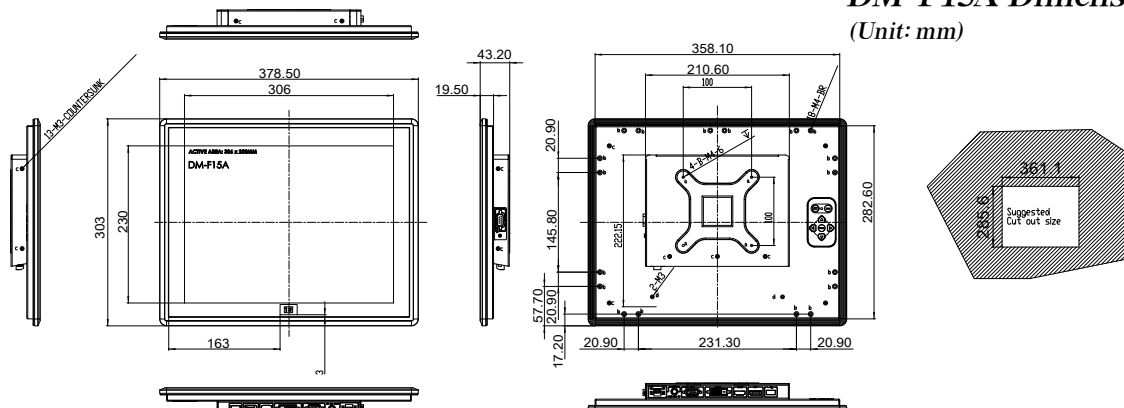
DM-F12A Dimensions

(Unit: mm)



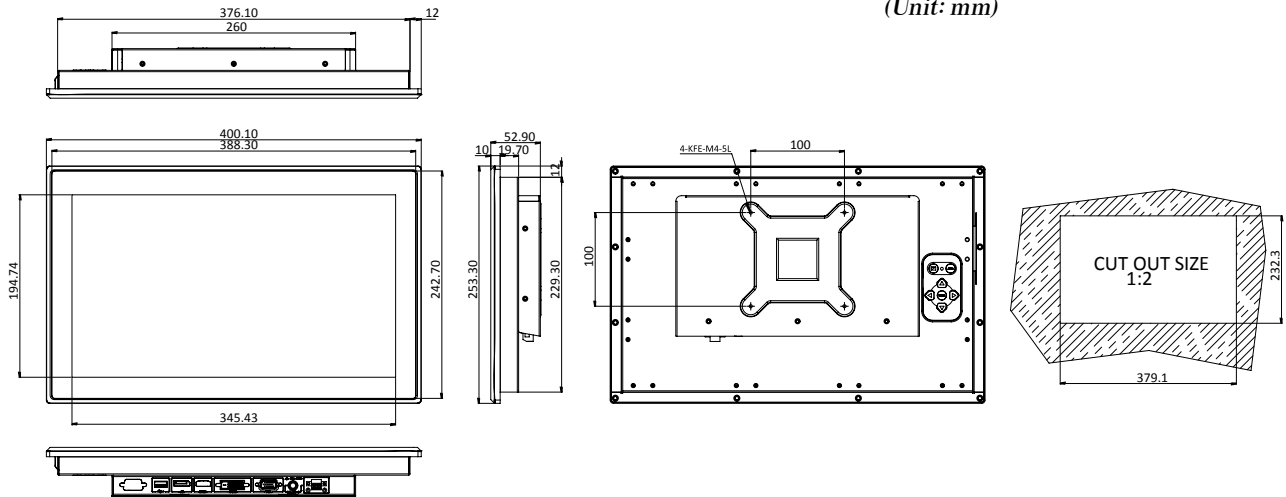
DM-F15A Dimensions

(Unit: mm)



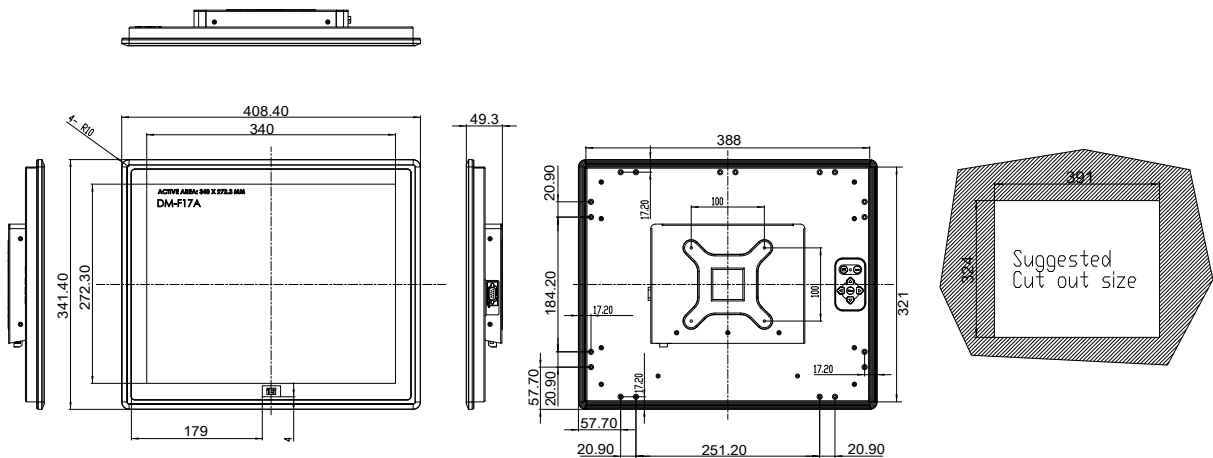
DM-FW15A Dimensions

(Unit: mm)



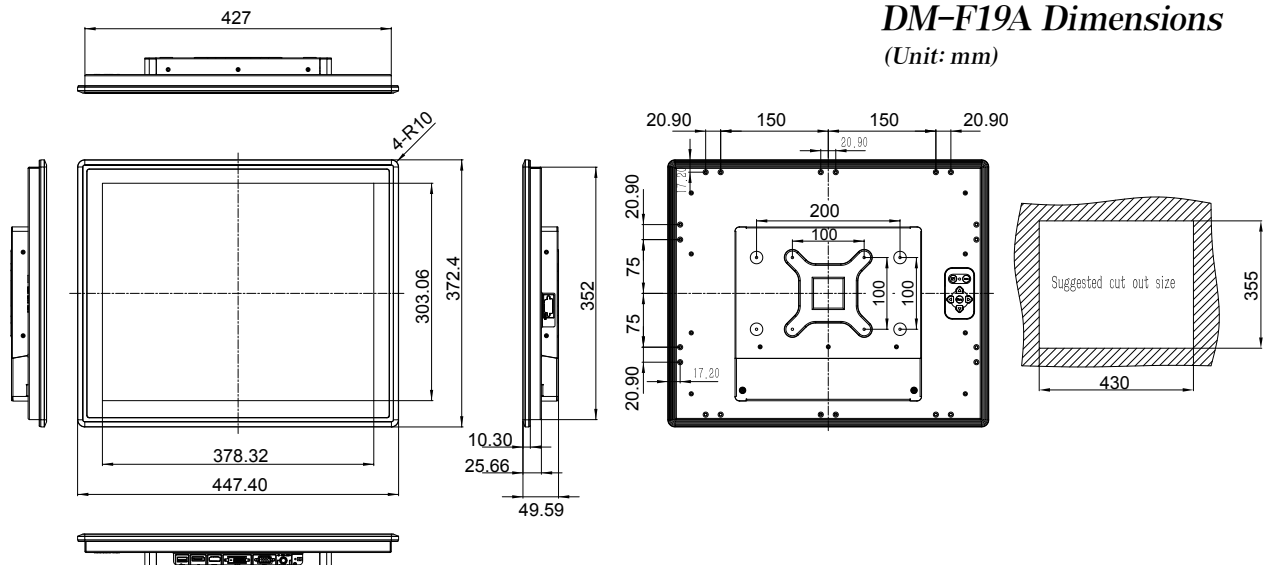
DM-F17A Dimensions

(Unit: mm)



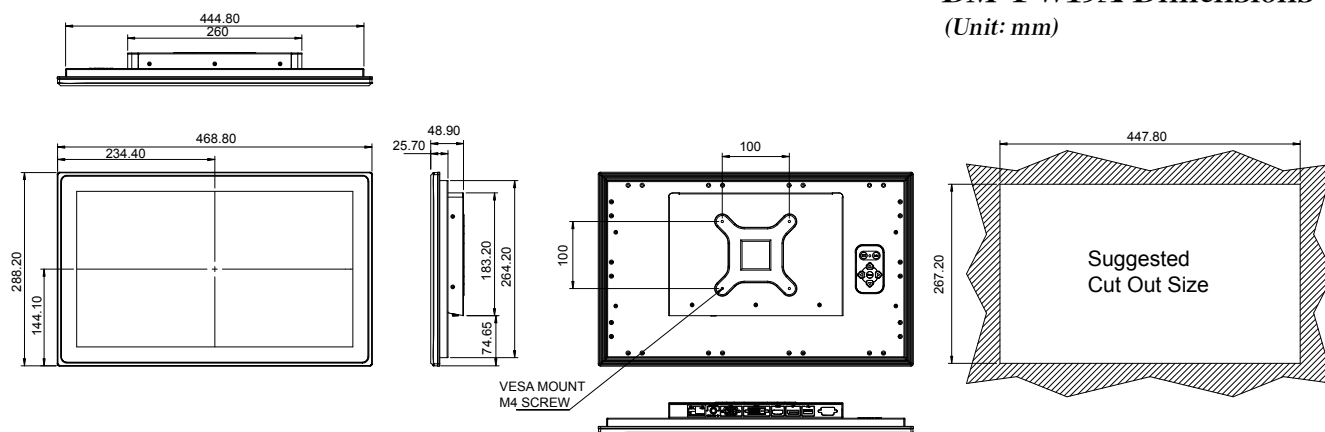
DM-F19A Dimensions

(Unit: mm)



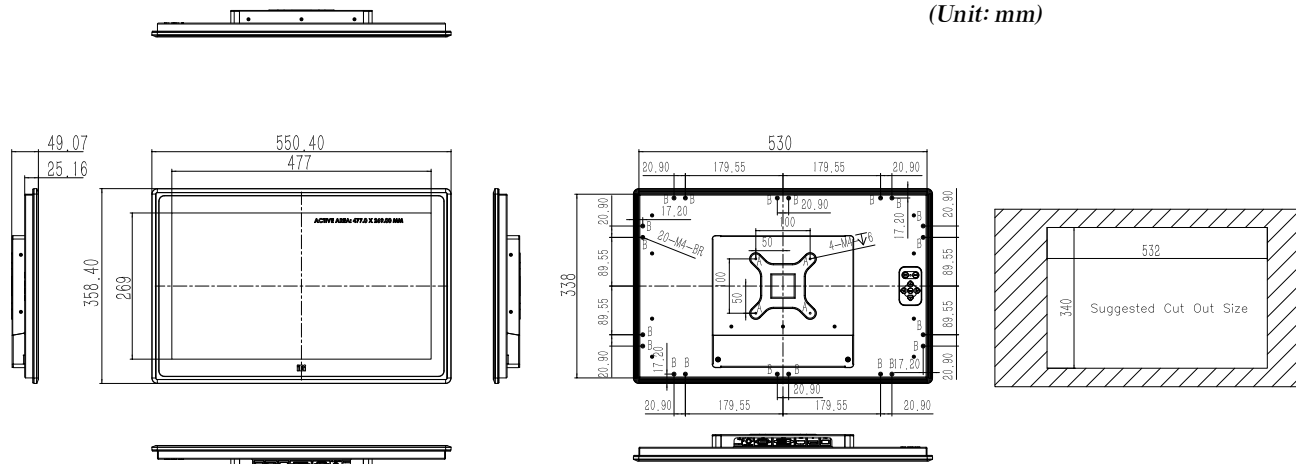
DM-FW19A Dimensions

(Unit: mm)



DM-F22A Dimensions

(Unit: mm)



DM-F24A Dimensions

(Unit: mm)

