

Industrial Display Solutions

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Industrial Monitor Selection Guide

Selection Guide



Model Specifications		FPM-5191G	FPM-5171G	FPM-5151G	FPM-3191G	FPM-3171G
LCD Display	Size (diagonal)	19" SXGA	17" SXGA	15" XGA	19" SXGA	17" SXGA
	Resolution	1280 x 1024	1280 x 1024	1024 x 768	1280 x 1024	1280 x 1024
	Colors	16.2 M	16.7 M	16.2 M	16.2M	16.7 M
	Viewing Angle (H/V°)	178/178	160/160	140/120	178/178	160/160
	Luminance (cd/m²)	300	300	250	300	300
	Backlight Life (hrs)	50,000	50,000	50,000	50,000	50,000
	Contrast Ratio	1300 : 1	800 : 1	500 : 1	1300 : 1	800 : 1
Direct VGA Input		Yes	Yes	Yes	Yes	Yes
DVI Input		Yes	Yes	Yes	Yes	Yes
S-Video		-	-	-	-	-
Video Input		-	-	-	-	-
Touchscreen (optional)		Resistive	Resistive	Resistive	Resistive	Resistive
OSD (onscreen display)		Yes	Yes	Yes	Yes	Yes
Touchscreen Sensor		AMT	AMT	AMT	ELO	ELO
Touchscreen Driver		Penmount 6000	Penmount 6000	Penmount 6000	ELOTOUCH	ELOTOUCH
Inverter		TDK	TDK	TDK	TDK	TDK
Power Adapter (voltage, AC)		100-240 V Optional	100-240 V Optional	100-240 V Optional	100-240 V	100-240 V
DC Power Input (voltage)		10-30 V	10-30 V	10-30 V	N/A	N/A
Front Panel Ingress Protection		NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	NEMA4/IP65
Operating Temperature		0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
Storage Temperature		-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)
Certifications		BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC, UL	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC
Dimensions (W x H x D)		481.9 x 384.6 x 59.0 mm (18.9" x 15.1" x 2.3")	481.9 x 355.9 x 58.5 mm (18.9" x 14" x 2.3")	449.92 x 315.63 x 52.5 mm (17.7" x 12.4" x 2")	482 x 399 x 66 mm (18.9" x 15.7" x 2.6")	482 x 354 x 68 mm (18.9" x 13.9" x 2.7")
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Selection Guide



FPM-3150G	FPM-3120G	FPM-3060G	FPM-8232V	FPM-8192V
15" XGA	12.1" SVGA	6.5" VGA	23" UXGA	19" SXGA
1024 x 768	800 x 600	640 x 480	1600 x 1200	1280 x 1024
16.2 M	262 k	262 k	16.7M	16.7M
140, 120	140, 120	140, 120	170, 170	140, 135
550	350	300	250	500 under ambient lighting 10,000 nits 630 under ambient lighting 30,000 nits 830 under ambient lighting 80,000 nits
50,000	50,000	50,000	50,000	50,000
500 : 1	200 : 1	500 : 1	500:1	550:1
Yes	Yes	Yes	Yes	Yes
Yes	-	-	Yes	Yes
-	-	-	Yes	Yes
-	-	-	Yes	Yes
Resistive	Resistive	Resistive	-	Resistive
Yes	Yes	Yes	Yes	Yes
AMT	AMT	AMT	-	ELO
Penmount 6000	Penmount 5000 (USB)/ 9000 (RS-232)	Penmount5000 (USB)/ 9000 (RS-232)	N/A	ELOTOUCH
TDK	TDK	TDK	TPCI	TPCI
100-240 V	100-240 V	100-240 V	N/A	100 - 240 V Optional
N/A	N/A	N/A	24 VDC	24 VDC
NEMA4/IP65	NEMA4/IP65	NEMA4/IP65	IP65 fornt, IP54 rear	IP65 fornt, IP54 rear
0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)	-10 ~ 55° C (14 ~ 131° F)	-10 ~ 55° C (14 ~ 131° F)
-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-20 ~ 60° C (-4 ~ 140° F)	-40 ~ 60° C (-40 ~ 140° F)	-40 ~ 60° C (-40 ~ 140° F)
BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC	BSMI, CCC, CE, FCC	CCC, CE, FCC, DNV	CCC, CE, FCC, DNV
422 x 310 x 86 mm (16.6" x 12.2" x 3.4")	312 x 244 x 44.6 mm (12.28" x 9.61" x 1.76")	220 x 150 x 46 mm (8.7" x 5.9" x 1.8")	584 x 534 x 115.1 mm (22.9" x 21" x 4.5")	483 x 444 x 75 mm (19" x 17.48" x 1.95")
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FPM-5191G

19" SXGA Industrial Monitor with Resistive Touchscreen, Direct-VGA, and DVI Ports

NEW



Features

- 19" SXGA TFT LCD with resolution up to 1280 x 1024
- Direct VGA & DVI-D video input interface
- Lockable OSD keys with 2 user-defined contrast/brightness settings
- Flat-sealed front panel
- Robust design with anti-rust chassis and aluminum die-cast front panel
- Front accessible USB connector
- Combo RS-232 & USB interface for touchscreen function (optional)
- Supports industrial 10-30 V_{DC} power input
- Supports panel, wall, desktop, rack or VESA arm mounting
- Front panel is NEMA4/IP65 compliant

Introduction

FPM-5191G is a 19" color TFT LCD flat panel monitor specifically designed for industrial applications. With a viewing size as large as 19", it presents an ample display area as well as vivid and sharp images for your HMI. It features Direct-VGA & DVI-D signal transmission, which allows VGA control cards to be used in your system. The onscreen display allows users to adjust the images on the screen with two user-defined settings. The front access USB connector provides easy access the controller, and the industrial 10-30 Vdc wide range power support makes this product an excellent option for Factory and Machine Automation display solutions.

Specifications

General

- **Button Controls** OSD control pad on rear side with lockable function
- **Certification** BSMI, CCC, CE, FCC, UL
- **Dimension (W x H x D)** 481.9 x 384.6 x 58.5 mm (18.9" x 15.1" x 2.3")
- **Enclosure** Front panel: Aluminum and flat-sealed
Rear cover: Anti-rust coating
- **Mounting** Panel, wall, desktop, VESA arm, or 19" rackmount
- **Power Input** Phoenix Jack - 10 ~ 30 V_{DC} input
Optional external 57 W power adapter, with AC 100 V ~ 240 V input and DC +12 V @ 4.7A output
- **Power Consumption** 32 W + 20%
- **USB** Front USB access for extension
- **Video Port** VGA & DVI-D
- **Weight (Net)** 10 kg (22.04 lbs)

LCD Display

- **Display Type** SXGA TFT LCD
- **Display Size** 19"
- **Max. Resolution** 1280 x 1024
- **Max. Color** 16.2M
- **Viewing Angle (H/V°)** 178/178
- **Luminance (cd/m²)** 300
- **Backlight Life (hrs)** 50,000
- **Contrast Ratio** 1300 : 1

Touchscreen (Optional)

- **Sensor** AMT
- **Driver** Penmount 6000
- **Type** 5-wire Resistive
- **Interface** RS-232 & USB
- **Lifespan** 36 million with a silicone rubber of R8 finger, writing rate is by 250g at 2 times/s
- **Light Transmission** > 80%
- **OS Support** Windows® 2000/XP/CE/Vista, Linux
- **Power Consumption** +5 V @ 100 mA
- **Touch Resolution** Linearity

Environment

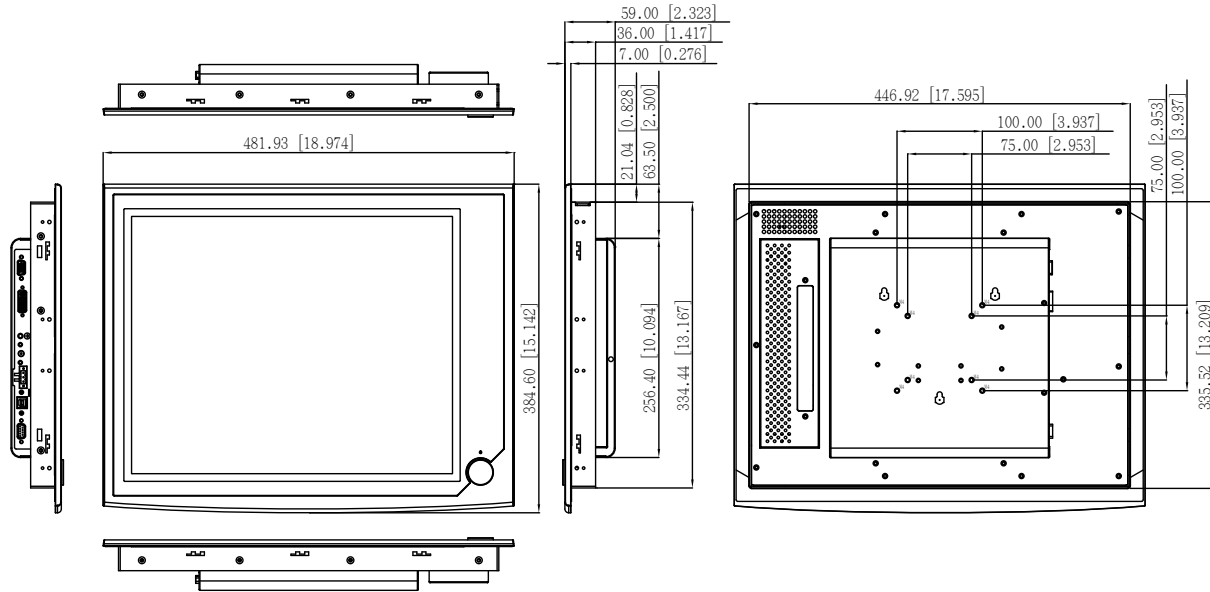
- **Operation Temperature** 0 ~ 50° C (32 ~ 122° F)
- **Storage Temperature** -20 ~ 60° C (-4 ~ 140° F)
- **Humidity (Storage)** 10 ~ 90% non-condensing
- **Waterproof** Front panel is NEMA4/IP65 compliant
- **Vibration** 5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-5191G-X0AE** 19" SXGA Ind. Monitor
- **FPM-5191G-R3AE** 19" SXGA Ind. Monitor w/Resistive TS (RS-232, USB)

Dimensions

Unit: mm

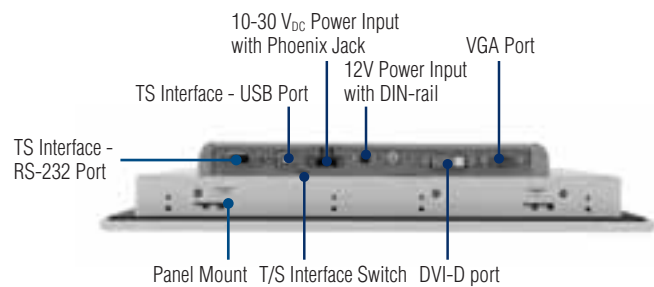


Panel Cut-out Dimensions: 454 x 338 mm

Accessories

- **FPM-5191G-SMKE** FPM-5191G Stand Kit
- **IPPC-6192A-RMKE** IPPC-6192A/FPM-5191G Rack Mount Kit
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1702031836** Power Cable China/Australia Plug 1.8 M
- **1757002742** Adapter AC 90-264V 57W SPU63-105

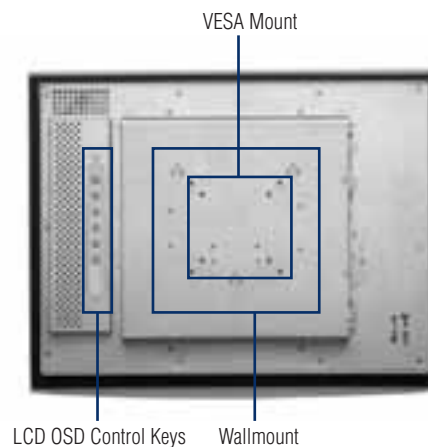
I/O View



Front Accessible USB Port



Back View



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- 6 Device Servers
- 7 Serial Comm. Cards
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FPM-5171G

17" SXGA Industrial Monitor with Resistive Touchscreen, Direct-VGA, and DVI Ports

NEW



Features

- 17" SXGA TFT LCD with resolution up to 1280 x 1024
- Direct VGA & DVI-D video input interface
- Lockable OSD keys with 2 user-defined contrast/brightness settings
- Flat-sealed front panel
- Robust design with anti-rust chassis and aluminum die-cast front panel
- Front accessible USB connector
- Combo RS-232 & USB interface for touchscreen function (optional)
- Supports industrial 10-30 V_{DC} power input
- Supports panel, wall, desktop, rack or VESA arm mounting
- Front panel is NEMA4/IP65 compliant

Introduction

FPM-5171G is a 17" color TFT LCD flat panel monitor specifically designed for industrial applications. With a viewing size as large as 17", it presents an ample display area as well as vivid and sharp images for your HMI. It features Direct-VGA & DVI-D signal transmission, which allows VGA control cards to be used in your system. The onscreen display allows users to adjust the images on the screen with two user-defined settings. The front access USB connector provides easy access the controller, and the industrial 10-30 Vdc wide range power support makes this product an excellent option for Factory and Machine Automation display solutions.

Specifications

General

- **Button Controls** OSD control pad on rear side with lockable function
- **Certification** BSMI, CCC, CE, FCC, UL
- **Dimension (W x H x D)** 481.9 x 355.9 x 58.5 mm (18.9" x 14" x 2.3")
- **Enclosure** Front panel: Aluminum and flat-sealed
Rear cover: Anti-rust coating
- **Mounting** Panel, wall, desktop, VESA arm, or 19" rackmount
- **Power Input** Phoenix Jack - 10 ~ 30 V_{DC} input
Optional external 57 W power adapter, with AC 100 V ~ 240 V input and DC +12 V @ 4.7A output
- **Power Consumption** 31 W + 20%
- **USB** Front USB access for extension
- **Video Port** VGA & DVI-D
- **Weight (Net)** 8 kg (17.63 lbs)

LCD Display

- **Display Type** SXGA TFT LCD
- **Display Size** 17"
- **Max. Resolution** 1280 x 1024
- **Max. Color** 16.7M
- **Viewing Angle (H/V°)** 160/160
- **Luminance (cd/m²)** 300
- **Backlight Life (hrs)** 50,000
- **Contrast Ratio** 800 : 1

Touchscreen (Optional)

- **Sensor** AMT
- **Driver** Penmount 6000
- **Type** 8-wire Resistive
- **Interface** RS-232 & USB
- **Lifespan** 10 million with a silicone rubber of R8 finger, writing rate is by 250g at 2 times/s
- **Light Transmission** > 80%
- **OS Support** Windows® 2000/XP/CE/Vista, Linux
- **Power Consumption** +5 V @ 100 mA
- **Touch Resolution** Linearity

Environment

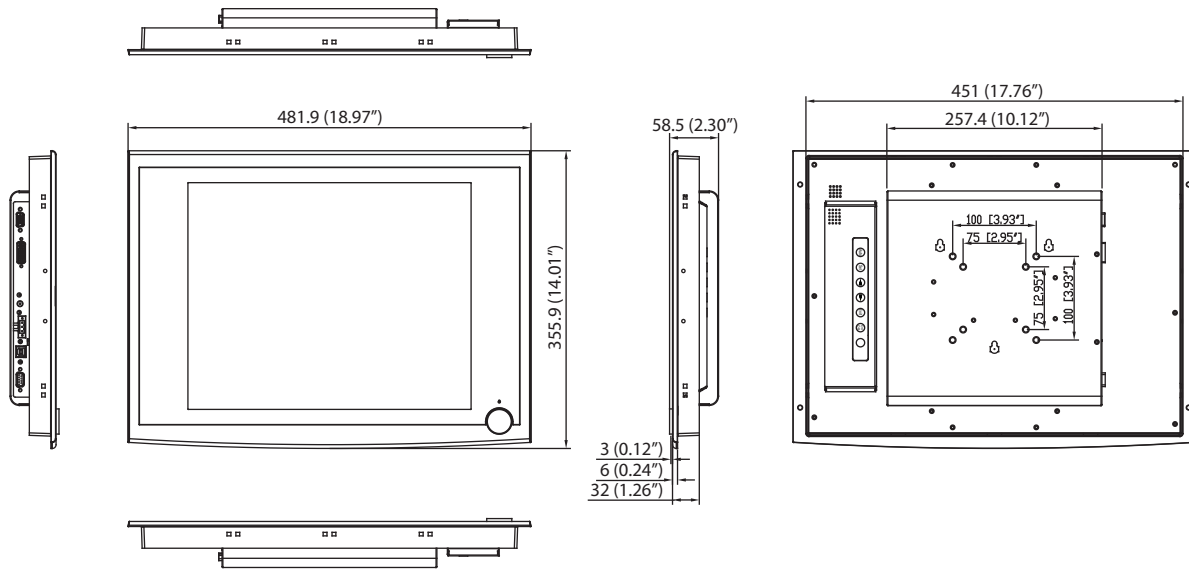
- **Operation Temperature** 0 ~ 50° C (32 ~ 122° F)
- **Storage Temperature** -20 ~ 60° C (-4 ~ 140° F)
- **Humidity (Storage)** 10 ~ 90% non-condensing
- **Waterproof** Front panel is NEMA4/IP65 compliant
- **Vibration** 5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-5171G-X0AE** 17" SXGA Ind. Monitor
- **FPM-5171G-R3AE** 17" SXGA Ind. Monitor w/Resistive TS (RS-232, USB)

Dimensions

Unit: mm

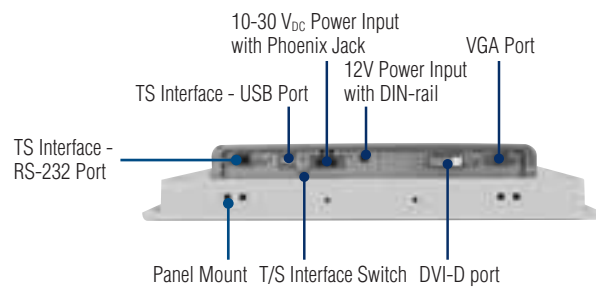


Panel Cut-out Dimensions: 454 x 338 mm

Accessories

- **FPM-5151G-SMKE** FPM-5151G/5171G Stand Kit
- **IPPC-6172A-RMKE** IPPC-6172A/FPM-5171G Rack Mount Kit
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1702031836** Power Cable China/Australia Plug 1.8 M
- **1757002742** Adapter AC 90-264V 57W SPU63-105

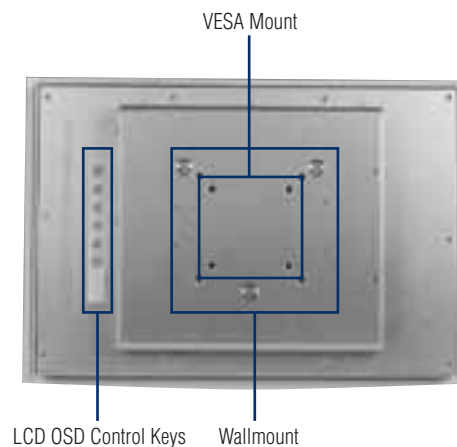
I/O View



Front Accessible USB Port



Back View



- Operator Panels
- Fanless Panel PCs
- Panel Computers
- Display Solutions
- Ethernet Switches
- Device Servers
- Serial Comm. Cards
- Video Surveillance
- Pre-Configured Systems
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- SBCs and Backplanes
- Industrial Motherboards
- Embedded IPCs
- Mobile Computers
- IPC Peripherals
- DAQ
- Signal Conditioning
- USB DAQ

FPM-3150G

15" XGA Industrial Monitor with Resistive Touchscreen, Direct-VGA and DVI Ports



Features

- High brightness 550 nits LCD display
- Direct VGA & DVI-D video input interface
- Lockable OSD keys with 2 user-defined contrast/brightness settings
- Combo RS-232 & USB interface for touchscreen function (optional)
- Robust design with stainless steel chassis and aluminum front panel
- Supports industrial 24-48 V_{DC} power input (optional)
- Supports panel, wall, desktop, rack or VESA arm mounting
- Front panel is NEMA4/IP65 compliant

Introduction

FPM-3150G is a 15" color TFT LCD flat panel monitor specifically designed for industrial applications. With a viewing size as large as 15", it presents an ample display area as well as vivid and sharp images for your HMI. It features Direct-VGA & DVI-D signal transmission, which allows a regular VGA control card to be used in your system. Users can thus upgrade the display without making changes to the existing system. Its on screen display function also allows users to adjust the images on the screen with ease. The whole chassis is stainless steel and the front panel is made of aluminum with front panel NEMA4/IP65 compliance.

Specifications

General

- **Button Controls** OSD control pad on front panel with lockable function
- **Certification** BSMI, CCC, CE, FCC
- **Dimension (W x H x D)** 422 x 310 x 86 mm (16.6" x 12.2" x 3.4")
- **Enclosure** Front panel: Aluminum with coating
Rear cover: Stainless steel chassis
- **Mounting** Panel, wall, desktop, VESA arm, or 19" rackmount with optional mounting kit
- **Power Input** External 50 W power adapter, with AC 100 V ~ 240 V input and DC +12 V @ 4.16 A output
- **Power Consumption** 31 W + 20%
- **Video Port** VGA & DVI-D Port
- **Weight (Net)** 7.73 kg (17.04 lbs)

LCD Display

- **Display Type** XGA TFT LCD
- **Display Size** 15"
- **Max. Resolution** 1024 x 768
- **Max. Color** 16.2M
- **Viewing Angle (H/V°)** 140/120
- **Luminance (cd/m²)** 550
- **Backlight Life (hrs)** 50,000
- **Contrast Ratio** 500 : 1

Touchscreen (Optional)

- **Sensor** AMT
- **Driver** Penmount 6000
- **Type** 8-wire Resistive
- **Interface** RS-232 & USB
- **Lifespan** 10 million with a silicone rubber of R8 finger, writing rate is by 250g at 2 times/s
- **Light Transmission** > 80%
- **OS Support** Windows® 2000/XP/CE/Vista, Linux
- **Power Consumption** +5 V @ 100 mA
- **Touch Resolution** Linearity

Environment

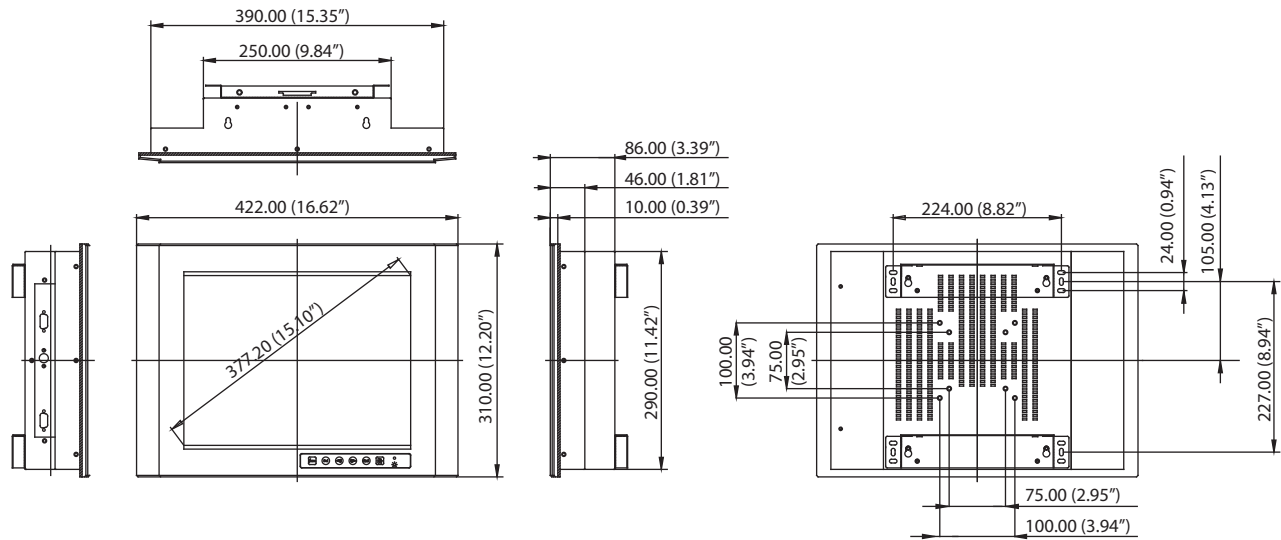
- **Operation Temperature** 0 ~ 50° C (32 ~ 122° F)
- **Storage Temperature** -20 ~ 60° C (-4 ~ 140° F)
- **Humidity (Storage)** 10 ~ 95% non-condensing
- **Waterproof** Front panel is NEMA4/IP65 compliant
- **Vibration** 5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-3150G-XCE** 15" XGA Ind. Monitor
- **FPM-3150G-RCE** 15" XGA Ind Monitor w/Resistive TS (RS-232, USB)
- **PWR-246E** DC to DC Converter w/24-48 V_{DC} Power Input

Dimensions

Unit: mm



Panel Cut-out Dimensions: 396 x 296 mm (15.6" x 11.6")

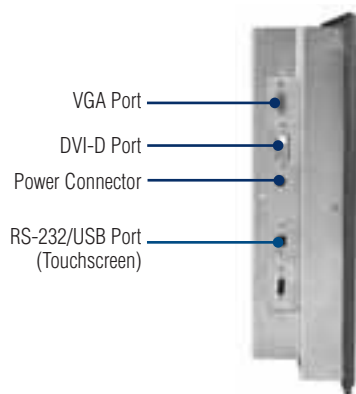
Accessories

- **FPM-3150G-RMKE** Mounting kit for 19" industrial rack
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1702031836** Power Cable China/Australia Plug 1.8 M

Rack Mount (FPM-3150G-RMKE)



Side View



Mounting with DC Source



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FPM-3120G

12.1" SVGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port



Features

- 12.1" SVGA TFT LCD with resolution up to 800 x 600
- Robust design with stainless steel chassis and aluminum front panel
- Anti-reflective screen with tempered glass
- Supports stainless steel front panel (optional)
- OSD control pad on front panel
- Supports industrial 24-48 V_{DC} power input (optional)
- Supports transreflective LCD technology (optional)
- Supports panel, wall, desktop, rack or VESA arm mounting
- Front panel is NEMA4/IP65 compliant

Introduction

FPM-3120G is 12-inch color TFT LCD flat panel monitor specially designed for industrial or public applications with limited installation space. With a new industrial design, mounting is extremely easy and fits most environments perfectly. The FPM-3120G features Direct-VGA signal transmissions to allow a regular VGA control card to be used in your system. Users can thus upgrade the display without making changes to the existing system. Its onscreen display function lets users adjust the image easily. The whole chassis is stainless steel and the front panel is made of aluminum with NEMA4/IP65 compliance.

Specifications

General

- **Button Controls** OSD (Onscreen Display) control pad on front panel
- **Certification** BSMI, CCC, CE, FCC
- **Dimension (W x H x D)** 312 x 244 x 44.6 mm (12.28" x 9.61" x 1.76")
- **Enclosure** Front panel: Aluminum with hard anodic coating
Rear cover: Stainless steel chassis
- **Mounting** Panel, VESA arm, or wall & desktop mount with optional mounting kit
- **Power Input** External 42 W power adapter, with AC 100 V ~ 240 V input and DC +12 V @ 3.5 A output
- **Power Consumption** 12 W + 20% (FPM-3120G)
14 W + 20% (FPM-3121G)
- **Video Port** VGA
- **Weight (Net)** 4.07 kg (8.975 lbs)

LCD Display

- **Display Type** SVGA/XGA TFT LCD
- **Display Size** 12.1"
- **Max. Resolution** 800 x 600/1024 x 768
- **Max. Color** 262 K
- **Viewing Angle (H/V°)** 140/120, 100/120
- **Luminance (cd/m²)** 350
- **Backlight Life (hrs)** 50,000
- **Contrast Ratio** 200 : 1/350 : 1

Touchscreen (Optional)

- **Sensor** AMT
- **Driver** Penmount 9000 (RS-232)
Penmount 5000 (USB)
- **Type** 8-wire Resistive
- **Interface** RS-232
- **Lifespan** 10 million with a silicone rubber of R8 finger, writing rate is by 250g at 2 times/s
- **Light Transmission** > 80%
- **OS Support** Windows® 2000/XP/CE/Vista, Linux
- **Power Consumption** +5 V @ 100 mA
- **Touch Resolution** Linearity

Environment

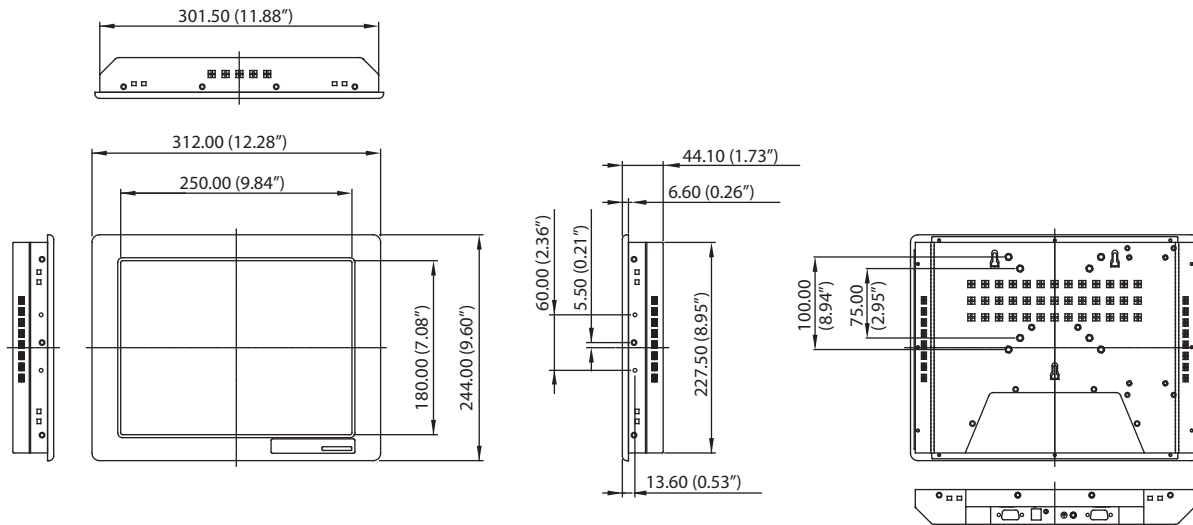
- **Operation Temperature** 0 ~ 50° C (32 ~ 122° F)
- **Storage Temperature** -20 ~ 60° C (-4 ~ 140° F)
- **Humidity (Storage)** 10 ~ 95% non-condensing
- **Waterproof** Front panel is NEMA4/IP65 compliant
- **Vibration** 5 ~ 500 Hz, 1 Grms (Operating, Random)

Ordering Information

- **FPM-3120G-XAE** 12.1" SVGA Ind. Monitor
- **FPM-3120G-RAE** 12.1" SVGA Ind. Monitor w/Resistive TS (RS-232)
- **FPM-3121G-XAE** 12.1" XGA Ind. Monitor
- **FPM-3121G-RAE** 12.1" XGA Ind. Monitor w/Resistive TS (RS-232)
- **PWR-246E** DC to DC Converter w/24-48 V_{DC} Power Input

Dimensions

Unit: mm

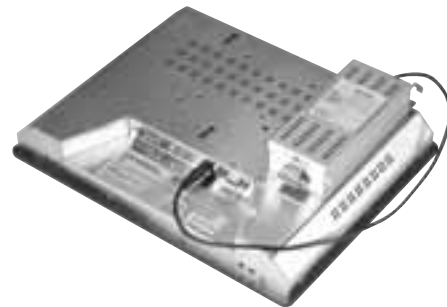


Panel Cut-out Dimensions: 303.5 x 229.5 mm (11.94" x 9.03")

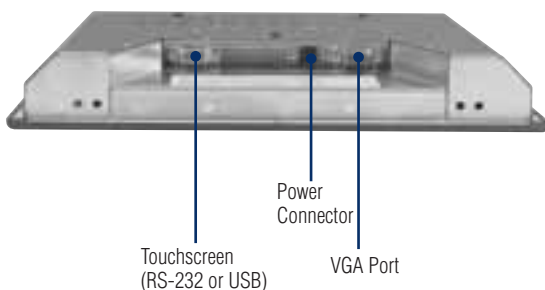
Accessories

- **FPM-2150G-SMKE** Mounting kit for desktop & wall
- **1700001524** Power Cable US Plug 1.8 M
- **170203180A** Power Cable UK Plug 1.8 M
- **170203183C** Power Cable EU Plug 1.8 M

Mounting with DC Source



I/O View



With Desktop Stand (FPM-2150G-SMKE)



1	Operator Panels
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15	IPC Peripherals
16	DAQ
17	Signal Conditioning
18	USB DAQ

FPM-3060G

6.5" VGA Industrial Monitor with Resistive Touchscreen and Direct-VGA Port



Features

- 6.5" VGA TFT LCD with resolution up to 640 x 480
- Robust design with stainless steel chassis and aluminum front panel
- Anti-reflective screen with tempered glass
- Supports stainless steel front panel (optional)
- OSD control pad on front panel
- Supports industrial 24-48 V_{DC} power input (optional)
- Supports transreflective LCD technology (optional)
- Supports panel, wall, desktop and VESA arm mounting
- Front panel is NEMA4/IP65 compliant
- RoHS compliant

Introduction

FPM-3060G is a 6.5" flat panel monitor designed for industrial applications with small display requirements. High brightness of up to 400 nits makes the display clearly visible, while the wide operating temperature range of 0 to 50° C combined with vibration resistance makes it suitable for rugged environments. Mounting of the small and compact display can be done in panels, with VESA arms, and even directly on products in the UNO-2000 and MBPC-200 series. Optional versions of FPM-3060G provide RS-232 or USB interfaces for a resistive touchscreen.

Specifications

General

- **Button Controls** OSD (Onscreen Display) control pad on front panel
- **Certification** BSMI, CCC, CE, FCC
- **Dimension (W x H x D)** 220 x 150 x 46 mm (8.7" x 5.9" x 1.8")
- **Enclosure** Front panel: Aluminum with coating
Rear cover: Stainless steel chassis
- **Mounting** Panel, VESA arm, or wall & desktop mount with optional mounting kit
- **Power Input** External 42 W power adapter, with AC 100 V ~ 240 V input and DC +12 V @ 3.5 A output
- **Power Consumption** 7 W + 20%
- **Video Port** VGA
- **Weight (Net)** 1.82 kg (4.01 lbs)

LCD Display

- **Display Type** VGA TFT LCD
- **Display Size** 6.5"
- **Max. Resolution** 640 x 480
- **Max. Color** 262 K
- **Viewing Angle (H/V°)** 140/120
- **Luminance (cd/m²)** 300
- **Backlight Life (hrs)** 50,000
- **Contrast Ratio** 500 : 1

Touchscreen (Optional)

- **Sensor** AMT
- **Driver** Penmount 9000 (RS-232)
Penmount 5000 (USB)
- **Type** 4-wire Resistive
- **Interface** RS-232 or USB
- **Lifespan** 10 million with a silicone rubber of R8 finger, writing rate is by 250g at 2 times/s
- **Light Transmission** > 80%
- **OS Support** Windows® 2000/XP/CE/Vista, Linux
- **Power Consumption** +5 V @ 100 mA
- **Touch Resolution** Linearity

Environment

- **Operation Temperature** 0 ~ 50° C (32 ~ 122° F)
- **Storage Temperature** -20 ~ 60° C (-4 ~ 140° F)
- **Humidity (Storage)** 10 ~ 95% non-condensing
- **Waterproof** Front panel is NEMA4/IP65 compliant
- **Vibration** 5 ~ 500 Hz, 1 Grms (Operating, Random)

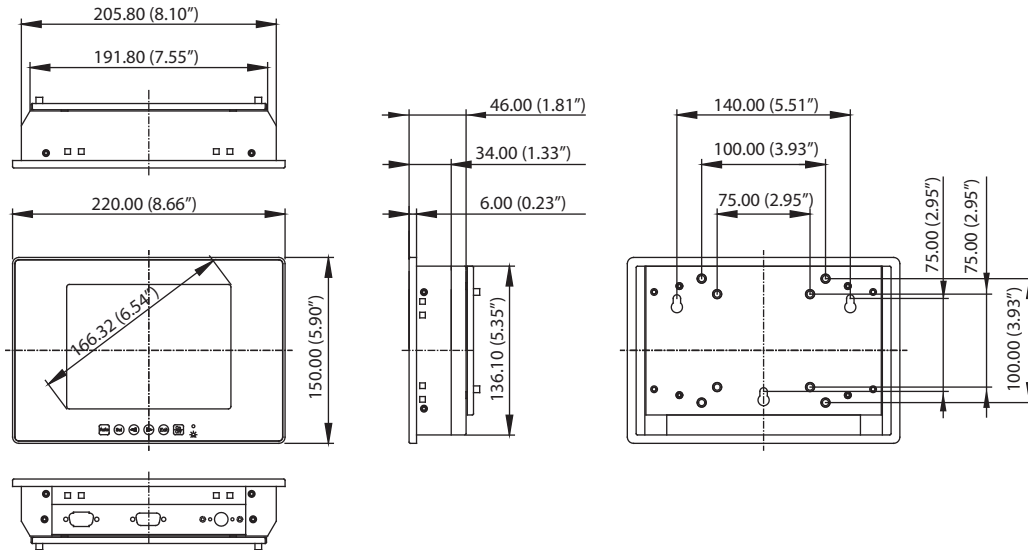
Ordering Information

- **FPM-3060G-XAE** 6.5" VGA Ind. Monitor
- **FPM-3060G-RAE** 6.5" VGA Ind. Monitor w/Resistive TS (RS-232)
- **FPM-3060G-UAE** 6.5" VGA Ind. Monitor w/Resistive TS (USB)
- **PWR-246E** DC to DC Converter w/24-48 V_{DC} Power Input

Dimensions

FPM-3060G-XAE

Unit: mm

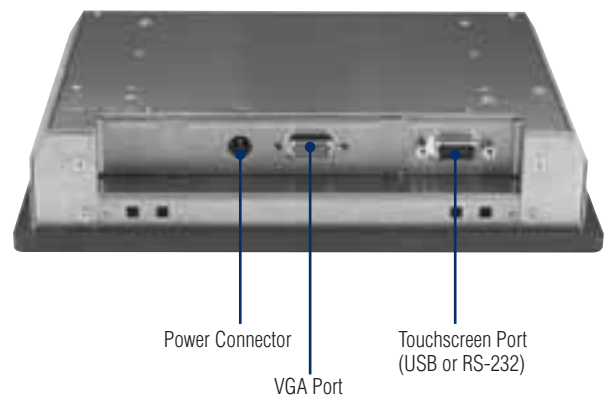


Panel Cut-out Dimensions: 209.8 x 140.1 mm (8.25" x 5.51")

Accessories

- **FPM-3060G-VMKE** Mounting Kit for VESA arm
- **1700001524** Power Cable US Plug 1.8 M
- **170203180A** Power Cable UK Plug 1.8 M
- **170203183C** Power Cable EU Plug 1.8 M

I/O View



Power Connector
VGA Port

Touchscreen Port
(USB or RS-232)

- 1 Operator Panels
- 2 Fanless Panel PCs
- 3 Panel Computers
- 4 Display Solutions
- 5 Ethernet Switches
- 6 Device Servers
- 7 Serial Comm. Cards
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- 9 Pre-Configured Systems
- 10 IPC Chassis
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FPM-8192V

19" SXGA Transflective Marine Grade Monitor with Resistive Touchscreen

NEW



Features

- 19" SXGA TFT LCD with transflective technology for outdoor visibility
- Dimming knob controls backlight brightness from nearly 0% to 100%
- Front OSD control with PIP (picture in picture) function
- Wide voltage power input 24 V_{DC}
- Direct-VGA, DVI-D, Video & S-Video input interface
- Chassis ESD/grounding protection
- Robust design with anti-rust aluminum housing and IP65 compliant front panel
- DNV standard 2.4 certified and IEC-60945 & IACS-E10 approved
- Front access mounting mechanism for marine bridge systems

Introduction

FPM-8192V is a 19" SXGA monitor with transflective display & dimming knob control from 0% ~ 100%, designed for marine industry applications. Constructed from marine grade aluminum with a UV protected powder coating, FPM-8192V ensures reliability even in harsh outdoor conditions. FPM-8192V can also accept up to 4 common video inputs, including VGA, DVI, S-Video, and Video as well as three stage PIP (picture in picture) with floating and resizable windows. Advantech's marine display is the right choice for any marine application due to its ease of installation, outstanding viewing capabilities and reliability.

Specifications

General

- **Button Controls** Front OSD control pad with dimming control knob
- **Certifications** CCC, CE, FCC, DNV, IEC 60945, IACS-E10
- **Dimensions (W x H x D)** 483 x 444 x 75 mm (19" x 17.48" x 1.95")
- **Enclosure** Aluminum with coating
- **Mounting** Panel
- **Power Input** 45 W, 24 V_{DC}, 2.5 A
- **Video Port** VGA, DVI-D, Composite Video, S-Video
- **Weight** 14.5 kg (31.96 lbs)

LCD Display

- **Display Type** SXGA TFT LCD with transflective display
- **Display Size** 19"
- **Max. Resolution** 1280 x 1024
- **Max. Colors** 16.7M
- **Luminance (cd/m2)** 500 under ambient lighting 10,000 nits
630 under ambient lighting 30,000 nits
830 under ambient lighting 80,000 nits
- **Viewing Angle (H/V°)** 140/135
- **Backlight Life (hrs)** 50,000
- **Contrast Ratio** 550:1

Touchscreen (Optional)

- **Sensor** ELO
- **Driver** ELTOUCH
- **Lifespan** 35 million touches at single point
- **Light Transmission** Above 75%
- **Resolution** Linearity
- **Type** 5-wire, analog resistive
- **OS** Windows 2000/XP/CE/Vista, Linux
- **Power Consumption** +5 V @ 100 mA

Environment

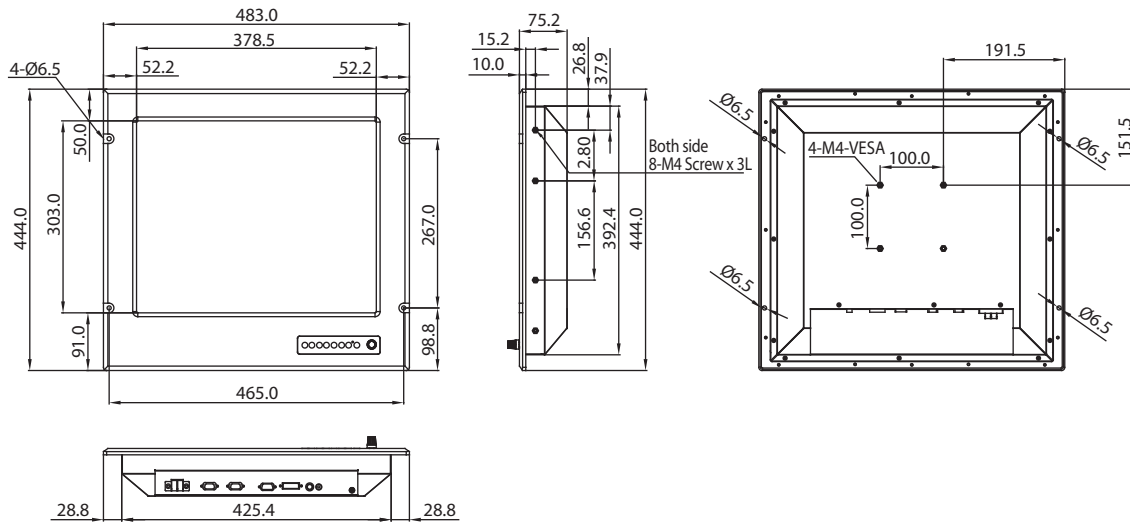
- **Operating Temperature** -10 ~ 55° C (14 ~ 131° F)
- **Storage Temperature** -40 ~ 70° C (-40 ~ 140° F)
- **Humidity** 100% non-condensing
- **Waterproof Front Panel** IP65, IP54 rear cover
- **Vibration** Frequency range: 3 ~ 13.2 Hz,
Amplitude: 1.0mm (peak value)
Frequency range: 13.2 ~ 100 Hz,
Acceleration amplitude: 0.7g

Ordering Information

- **FPM-8192V-X0AE** 19" SXGA Marine Grade Monitor
- **FPM-8192V-R1AE** 19" SXGA Marine Grade Monitor w/TS (RS-232)

Dimensions

Unit: mm

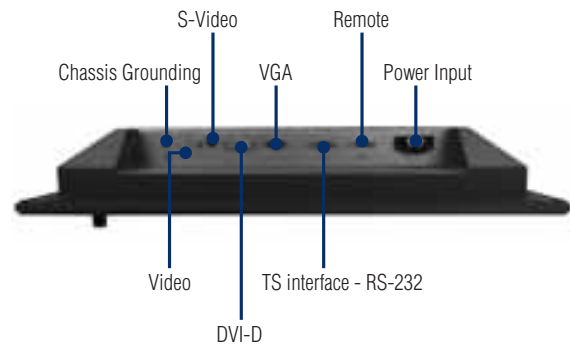


Panel Cut-out Dimensions: 429 x 396 mm

Front View (Panel Mount)



I/O View

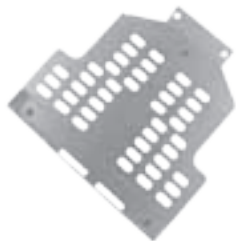


Front OSD with Dimming Knob

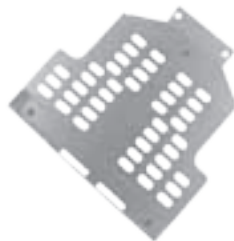


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Accessories



FPM-5191G-SMKE
FPM-5191G Stand Kit



FPM-5151G-SMKE
FPM-5151G / FPM-5171G Stand Kit



FPM-2150G-SMKE
FPM-2150G Stand Kit



IPPC-6192A-RMKE
IPPC-6192A/FPM-5191G Rack Mount Kit



IPPC-6172A-RMKE
IPPC-6172A/FPM-5171G Rack Mount Kit



IPPC-6152A-RMKE
IPPC-6152A/FPM-5151G Rack Mount Kit



FPM-2150G-RMKE
FPM-2150G Rack-Mount Kit



FPM-3150G-RMKE
FPM-3150G Rack-Mount Kit



FPM-3060G-VMKE
FPM-3060G VESA-Mount Kit

Accessories



PWR-246E

Ind. DC to DC Converter w/24-48 V_{DC} Power Input



1757002742

Adapter AC 90-264V 57W SPU63-105



1702031801

Power Cable UK Plug 1.8 M



1702002600

Power Cable US Plug 1.8 M



1702002605

Power Cable EU Plug 1.8 M



1702031836

Power Cable China/Australia Plug 1.8 M

1

Operator Panels

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USB DAQ

LCD Kit Selection Guide

LCD kits (ES-1000 series) provide cost effective display solutions that are seamlessly compatible with all Advantech SBC/AIMB boards. They also come with inverters, cables and the assurance of long-term industrial component support.



ES-1000 Series

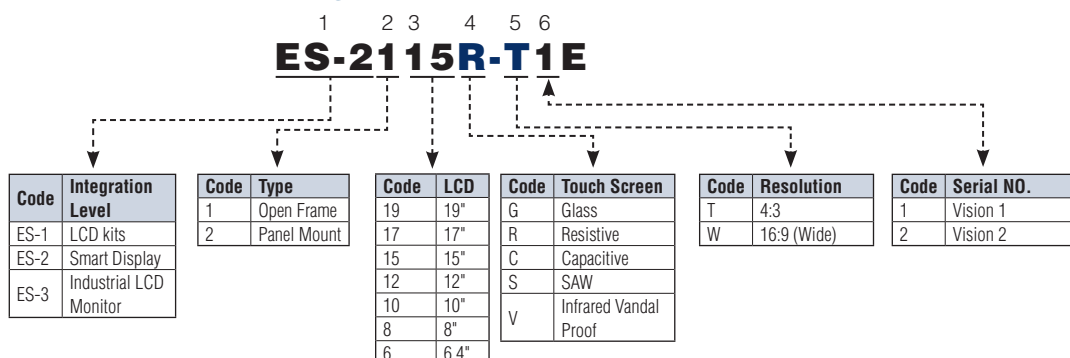
Display Size	6.5"	8.4"	10.4"	12.1"	12.1"	15"	17"
Model Name	ES-1106N-EVA-03E	ES-1108N-ESA-03E	ES-1110N-ESA-03E	ES-1112N-ESA-03E	ES-1112N-EXA-03E	ES-1115N-EXA-03E	ES-1117N-LEA-A3E
Description	6.5" SVGA LED Backlit LCD Kit	8.4" SVGA LED Backlit LCD Kit	10.4" SVGA LED Backlit LCD Kit	12.1" SVGA LED Backlit LCD Kit	12.1" XGA LED Backlit LCD Kit	15" XGA LED Backlit LCD Kit	17" SXGA TFT-LCD kit
Resolution (Pixels)	640 x 480	800 x 600	800 x 600	800 x 600	1024 x 768	1024 x 768	1280 x 1024
View Angle (L/R/U/D)	80°/80°/70°/70°	80°/80°/80°/60°	80°/80°/60°/80°	80°/80°/65°/75°	80°/80°/65°/75°	80°/80°/80°/60°	85°/85°/80°/85°
Brightness	700 (cd/m²)	450 (cd/m²)	400 (cd/m²)	450 (cd/m²)	500 (cd/m²)	350 (cd/m²)	380 (cd/m²)
Contrast Ratio	600/1	600/1	700/1	700/1	700/1	700/1	1000/1
Signal Interface	18/24 -bit LVDS	18/24 -bit LVDS	18/24 -bit LVDS	18/24 -bit LVDS	18/24 -bit LVDS	18/24 -bit LVDS	Dual 24-bit LCDS
Supply Voltage	3.3 (V)	3.3 (V)	3.3 (V)	3.3 (V)	3.3 (V)	3.3 (V)	5 (V)
Backlight (hrs)	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	CCFL, 4-tubes, 50,000 hrs
Operating Temperature	-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	-30 ~ 80° C	0~65° C	0~50° C
Power Consumption	3 (W)	4.2 (W)	5.2 (W)	5.76 (W)	TBA	8.8 (W)	25.2 (W)
Response Time (ms)	25 (msec)	30 (msec)	30 (msec)	35 (msec)	35 (msec)	8 (msec)	5 (msec)
Standard LCD Cable Length	500 mm	500 mm	50 mm	500 mm	500 mm	500 mm	500 mm
Weight	170 (g)	290 (g)	360 (g)	580 (g)	495 (g)	1100 (g)	2000 (g)
Outline Dimensions (W x H x D)	153 x 118 x 10.9	203 x 142.5 x 8	243 x 184 x 8	279 x 209 x 9	279 x 209 x 9	326.5 x 253.5 x 12	358.5 x 296.5 x 15.8

Ordering Information

LVDS Cable Category vs. CPU Board

LCD Series	LVDS Cable	Matching Advantech CPU Card
ES-1106N-EVA-03E ES-1108N-ESA-03E ES-1110N-ESA-03E ES-1112N-ESA-03E ES-1112N-EXA-03E ES-1115N-EXA-03E ES-1117N-LEA-A3E ES-1119N-LEA-A3E	- 01E or -W1E	PCI-6872/6871, PCA-6774/6773, PCM-9371/9372/9373/9375E/9377, PCM-9579/9577/9575, PCM-3370E/3353/4153
	- 03E or -W3E	PCM-9388/9387/9386/9381/9380, PCM-4390/4386/4381/4373/4372, PCM-3372/3386/3380, PCM-9590/9587/9586/9584/9582/9581/9580, AIMB-641/640/350/330V/330G/340/750/554/240/556, PCI-6886/6882/6881/6880/6872/6870/6780
	- 06E or -W6E	AIMB-250/251

Display Product Naming Rules



Open Frame Monitors

ES-2000 series are designed to meet the needs of customers who want to quickly and easily integrate their solutions with Advantech Embedded Box Computers such as ARK, EPBC, DVS and DSA.



ES-2100 Series

Model Name		ES-2106 Series	ES-2108 Series	ES-2110 Series	ES-2112 Series	ES-2115 Series	ES-2117 Series	ES-2119 Series
Description		6.5" Open Frame Monitor	8.4" Open Frame Monitor	10.4" Open Frame Monitor	12.1" Open Frame Monitor	15" Open Frame Monitor	17" Open Frame Monitor	19" Open Frame Monitor
Interface		VGA/LVDS	VGA/LVDS	VGA/LVDS	VGA	VGA/LVDS	VGA/LVDS	VGA/LVDS
Display (Standard)	Display Size	6.5"	8.4"	10.4"	12.1"	15"	17"	19"
	Panel Type	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	TFT LCD	TFT LCD
	Resolution	640 x 480 VGA	800 x 600 SVGA	640 x 480 VGA 800 x 600 SVGA	800 x 600 SVGA/ 1024x768 XGA	1024 x 768 XGA	1280 x 1024 SXGA	1280 x 1024 SXGA
	Number of Colors	16.2 M	262 K	262 K	262 K/ 260K	262 K	16.2 M	16.2 M
	Contrast Ratio	600:1	600:1	700:1	700:1	700:1	1000:1	2000:1
	Brightness	700	450	400	450/500	350	380	600
	Response Time	25	30	30	35	8	8	8
	Backlight MTBF	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	CCFL, 4-tubes, 50,000 hrs	CCFL, 4-tubes, 50,000 hrs
OSD Key Function	Viewing Angle L/R/U/D	80°/80°/70°/70°	80°/80°/80°/60°	80°/80°/60°/80°	80°/80°/65°/75°	80°/80°/80°/60°	85°/85°/80°/85°	89°/89°/89°/89°
	Brightness							
	Contrast							
	Clock							
	Phase	Yes	Yes	Yes	Yes	-	Yes	Yes
	Horizontal							
	Vertical							
Power Input	Sharpness							
	Power Input	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in
Operating Temperature (Standard)		-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	0 ~ 65° C	0 ~ 50° C	0 ~ 50° C
Dimensions (W x H x D)		190 x 142 x 40 mm (7.48" x 5.59" x 1.57")	256 x 193 x 47.3 mm (10.08" x 7.60" x 1.86")	203 x 184 x 45 mm (7.99" x 7.24" x 1.77")	352 x 251 x 49 mm (13.86" x 9.88" x 1.93")	326.5 x 253.3 x 50 mm (12.85" x 9.97" x 1.97")	402.1 x 320.4 x 56.24 mm (15.83" x 12.61" x 2.21")	446 x 364 x 56.58 mm (17.56" x 14.33" x 2.23")
Weight		1.3 kg (2.86 lb)	2.2 kg (4.84 lb)	2.5 kg (5.50 lb)	3 kg (6.60 lb)	3.4 kg (7.48 lb)	4 kg (8.50 lb)	5.6 kg (9.70 lb)
Touchscreen	Tempered Glass	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	5-Wire Resistive	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Capacitive	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SAW	-	Yes	Yes	Yes	Yes	Yes	Yes
	Infrared (Vandal Proof)	-	-	Yes	Yes	Yes	Yes	Yes
Interface for Touchscreen		RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB

Ordering Information

LVDS Series

Open Frame (LVDS) Series	LVDS Cable	Matching Advantech CPU Card
ES-2106R-LVA ES-2108R-LSA ES-2110R-LSA ES-2112R-LSA ES-2115R-LXA ES-2117R-LEA ES-2119R-LEA	- 01	PCA-6774, PCM-6773, PCI-6886, PCI-6881, PCI-6880, PCI-6872, PCM-9371, PCM-9373, PCM-9375, PCM-9575, PCM-9577, PCM-9579, PCM-3370E
	- 02	POS-761F, SOM-4450, SOM-4451, SOM-4475, SOM-4481, SOM-4486 w/SOM-DB4400, SOM-5780 w/SOM-DB5700
	- 03	PCM-9387, PCM-9386, PCM-9381, PCM-9380, PCM-3386, PCM-3380, PCM-9586, PCM-9582, PCM-9580, PCM-9581, AIMB-641, AIMB-640, AIMB-350, AIMB-340, AIMB-330G/V, POS-760, POS-7680
	- 05	ARK-1000 & ARK-3000 series

- Operator Panels
- Fanless Panel PCs
- Panel Computers
- Display Solutions
- Ethernet Switches
- Device Servers
- Serial Comm. Cards
- Video Surveillance
- Pre-Configured Systems
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- SBCs and Backplanes
- Industrial Motherboards
- Embedded IPCs
- Mobile Computers
- IPC Peripherals
- DAQ
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- USB DAQ

Rugged Panel Mount Monitors



ES-2200 Series

Model Name		ES-2206 Series	ES-2208 Series	ES-2210 Series	ES-2212 Series	ES-2215 Series	ES-2217 Series	ES-2219 Series
Description		6.5" panel mount monitor	8.4" panel mount monitor	10.4" panel mount monitor	12.1" panel mount monitor	15" panel mount monitor	17" panel mount monitor	19" panel mount monitor
Interface		VGA	VGA	VGA	VGA	VGA	VGA	VGA
Display (Standard)	Display Size	6.5"	8.4"	10.4"	12.1"	15"	17"	19"
	Panel Type	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	TFT LCD	TFT LCD
	Resolution	640 x 480 VGA	800 x 600 SVGA	640 x 480 VGA 800 x 600 SVGA	800 x 600 SVGA/1024 x 768 XGA	1024 x 768 XGA	1280 x 1024 SXGA	1280 x 1024 SXGA
	Number of Colors	16.2 M	262 K	262 K	262 K / 260 K	262 K	16.2 M	16.2 M
	Contrast Ratio	600:1	600:1	700:1	700:1	700:1	1000:1	2000:1
	Brightness	700	450	400	450/500	350	380	600
	Response Time	25	30	30	35	8	8	8
	Backlight MTBF	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	CCFL, 4-tubes, 50,000 hrs	CCFL, 4-tubes, 50,000 hrs
	Viewing Angle L/R/U/D	80°/80°/70°/70°	80°/80°/80°/60°	80°/80°/60°/80°	80°/80°/65°/75°	80°/80°/80°/60°	85°/85°/80°/85°	89°/89°/89°/89°
OSD Key Function	Brightness	Yes	Yes	Yes	Yes	-	Yes	Yes
	Contrast							
	Clock							
	Phase							
	Horizontal							
	Vertical							
	Sharpness							
Power Input		AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in	AC 100 ~ 240 V/ 12V DC in
Operating Temperature (Standard)		-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	0 ~ 65° C	0 ~ 50° C	0 ~ 50° C
Dimensions (W x H x D)		190 x 142 x 40 mm (7.48" x 5.59" x 1.57")	256 x 193 x 47.3 mm (10.08" x 7.60" x 1.86")	203 x 184 x 45 mm (7.99" x 7.24" x 1.77")	352 x 251 x 49 mm (13.86" x 9.88" x 1.93")	326.5 x 253.3 x 50 mm (12.85" x 9.97" x 1.97")	402.1 x 320.4 x 56.24 mm (15.83" x 12.61" x 2.21")	446 x 364 x 56.58 mm (17.56" x 14.33" x 2.23")
Weight		1.3 kg (2.86 lb)	2.2 kg (4.84 lb)	2.5 kg (5.50 lb)	3 kg (6.60 lb)	3.4 kg (7.48 lb)	4.0 kg (8.6 lb)	5.6 kg (9.70 lb)
Touch Screen	Tempered Glass	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	5-Wire Resistive	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Capacitive	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SAW	-	Yes	Yes	Yes	Yes	Yes	Yes
	Infrared (Vandal Proof)	-	-	Yes	Yes	Yes	Yes	Yes
Interface for Touchscreen		RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB

Power Cable Options

1702002600	Power Cable UL/CSA (USA) 180 cm
1702031801	Power Cable (UK) 5A-Fuse 180 cm
1702002605	Power Cable 220 V EUROPEAN 250 V/6 A (FRANCE) 180 cm

Outdoor Open Frames and Panel Mount Monitors



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Model Name		ES-2106/2206 Series	ES-2108/2208 Series	ES-2110/2210 Series	ES-2112/2212 Series	ES-2115/2215 Series	ES-2117/2217 Series	ES-2119/2219 Series
Description		6.5" Open Frame Monitor	8.4" Open Frame Monitor	10.4" Open Frame Monitor	12.1" Open Frame Monitor	15" Open Frame Monitor	17" Open Frame Monitor	19" Open Frame Monitor
Interface		VGA/LVDS	VGA/LVDS	VGA/LVDS	VGA	VGA/LVDS	VGA/LVDS	VGA/LVDS
Display (Standard)	Display Size	6.5"	8.4"	10.4"	12.1"	15"	17"	19"
	Panel Type	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	LED Backlit LCD	TFT LCD	TFT LCD
	Resolution	640 x 480 VGA	800 x 600 SVGA	640 x 480 VGA 800 x 600 SVGA	800 x 600 SVGA/ 1024x768 XGA	1024 x 768 XGA	1280 x 1024 SXGA	1280 x 1024 SXGA
	Number of Colors	16.2 M	262 K	262 K	262 K/260 K	262 K	16.2 M	16.2 M
	Contrast Ratio	600:1	600:1	700:1	700:1	700:1	1000:1	2000:1
	Brightness	700	450	400	450/500	350	380	600
	Response Time	25	30	30	35	8	8	8
	Backlight MTBF	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	LED Backlight 50,000 hrs	CCFL, 4-tubes, 50,000 hrs	CCFL, 4-tubes, 50,000 hrs
	Viewing Angle L/R/U/D	80°/80°/70°/70°	80°/80°/80°/60°	80°/80°/60°/80°	80°/80°/65°/75°	80°/80°/80°/60°	85°/85°/80°/85°	89°/89°/89°/89°
Display (Ultra High Brightness)	Brightness	-	-	1000	1000	1500	ODM	ODM
	Anti-Reflection	-	-	Yes	Yes	Yes	ODM	ODM
Display (Sunlight Readable + AR)	Brightness	600	450	500	450	550	450	450*
	Anti-Reflection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
OSD Key Function	Brightness							
	Contrast							
	Clock							
	Phase	Yes	Yes	Yes	Yes	-	Yes	Yes
	Horizontal							
	Vertical							
	Sharpness							
Power Input		AC 100 ~ 240 V/ 12 V DC in	AC 100 ~ 240 V/ 12 V DC in	AC 100 ~ 240 V/ 12 V DC in	AC 100 ~ 240 V/ 12 V DC in	AC 100 ~ 240 V/ 12 V DC in	AC 100 ~ 240 V/ 12 V DC in	AC 100 ~ 240 V/ 12 V DC in
Operating Temperature (Standard)		-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	-30 ~ 85° C	0 ~ 65° C	0 ~ 50° C (32 ~ 122° F)	0 ~ 50° C (32 ~ 122° F)
Dimensions (W x H x D) (mm)		190 x 142 x 40 mm (7.48" x 5.59" x 1.57")	256 x 193 x 47.3 mm (10.08" x 7.60" x 1.86")	203 x 184 x 45 mm (7.99" x 7.24" x 1.77")	352 x 251 x 49 mm (13.86" x 9.88" x 1.93")	326.5 x 253.3 x 50 mm (12.85" x 9.97" x 1.97")	402.1 x 320.4 x 56.24 mm (15.83" x 12.61" x 2.21")	446 x 364 x 56.58 mm (17.56" x 14.33" x 2.23")
Weight		1.3 kg (2.86 lb)	2.2 kg (4.84 lb)	2.5 kg (5.50 lb)	3 kg (6.60 lb)	3.4 kg (7.48 lb)	4.0 kg (8.6 lb)	5.6 kg (9.70 lb)
Touch Screen	Tempered Glass	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	5-wire Resistive	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Capacitive	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SAW	-	Yes	Yes	Yes	Yes	Yes	Yes
	Infrared (Vandal Proof)	-	-	Yes	Yes	Yes	Yes	Yes
Interface for Touchscreen		RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB	RS-232/USB
Sunlight Readable (Semi-Outdoor)		ES-2106C-VVA-SRE	ES-2108C-VSA-SRE	ES-2110C-VSA-SRE	ES-2112C-VSA-SRE	ES-2115C-VXA-SRE	ES-2117C-VEA-SRE	ES-2119C-VEA-SRE
Sunlight Readable (Pure-Outdoor)		-	ES-2108C-VSM-SRE	ES-2110C-VVM-HE	ES-2112C-VSM-HE	ES-2115C-VXM-HE	ODM	ODM

ES-2000 Series Overview

Seamless Integration with Advantech Box PC/IPC

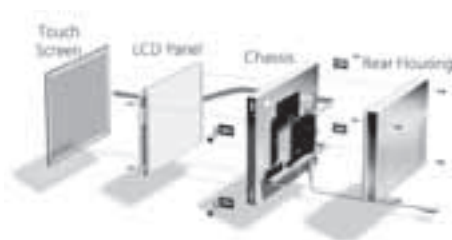
ES-2000 Series is a new type of display designed to meet the needs of customers who want to quickly and easily integrate their solutions with Advantech Embedded Box Computers such as ARK and DVS. Advantech offers two subcategories of the ES-2000 series: ES-2100 series (open frame display) and ES-2200 series (rugged panel mount display).



Benefits

- Flexible & customizable face plates for easy re-engineering
- Versatile interface options: LVDS, VGA (DVI, S-video option)
- Long-term industrial components support
- Fully integrated with all Advantech Box Computers
- Versatile sunlight readable options

ES-2000 Anatomy



Touchscreen Selection



- Tempered Glass
- Resistive
- Capacitive
- SAW
- Infrared Vandal Proof

Rugged Aluminum Front Bazel



- Versatile LCD size selection: 6.5" ~ 19"
- Industrial grade rugged front bezel design - ES-2200 series only

Customization Services

Wide Operating Temperature

ES-2000 series offers specially featured LCDs with a wide operating temperature (-20 ~ 70 °C). These special LCDs perfectly match operating environments with extreme temperatures.



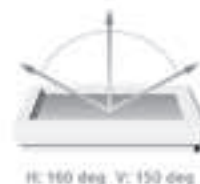
High Brightness

ES-2000 series offers specially featured LCDs with high brightness (1000, 1200, or 1500 nits). These special LCDs perfectly match outdoor/rooftop environments that need sunlight readable displays.



Wide View Angle

Wide viewing angle LCDs normally have 130° horizontal and 110° vertical viewing angles. ES-2000 series offers wider 160° horizontal and 150° vertical viewing angles. This enhanced all-round view enables a wider audience to see a single screen.



For more details, please check www.advantech.com