8 x Interchangeable Display Modules for

TPC-B300/B510/B520/B520L/B610 Computing Box

Interchangeable Display Modules with 12" XGA / 15" XGA / 17" SXGA/ 19" SXGA / 15.6" FHD / 18.5" FHD / 21.5" FHD / 23.8" FHD



Features

- Modular front display design in three application-based module categories, enabling flexible configurations
- Front panel module with P-CAP multi-touch sensor available in various sizes
- Industrial-grade LED LCD
- System status LED indicators in front panel
- IP66-rated front panel and panel mount
- Rear mounted computing box or monitor box module is compulsory to activate display module
- Sunlight readable w/ high luminance (available in 12", 15", 15.6" and 21.5")

Introduction

Advantech's modular display series offers various display modules ranging between 12.1" and 23.8" inches in size to go with selections of computing boxes (TPC-B300/TPC-B510/TPC-B520/TPC-B520L/TPC-B610) for multiple configurations that can be flexibly adapted to various scenarios. Modular display series are equipped with industrial grade LCD and Projected Capacitive touch screens, providing the best user experience and reliable operation. The modular design ensures flexible configuration and easy maintenance/upgrades. Its robust enclosure is equipped with a die-cast aluminum alloy front bezel and IP66 rating for protection from dust and water ingress.

Specifications

Part Number for Cost Effective version		FPM-D12T-CE	FPM-D15T-CE	FPM-D17T-CE	FPM-D19T-CE
LCD Panel	Display Size	12"	15"	17"	19"
	Display Type	XGA TFT LED LCD	XGA TFT LED LCD	SXGA TFT LED LCD	SXGA TFT LED LCD
	Aspect Ratio	4:3		5:4	
	Max. Resolution	1024 x 768	1024 x 768	1280 x 1024	1280 x 1024
	Max. Color	16.2M	16.7M	16.7M	16.7M
	Luminance	600 cd/m²	300 cd/m²	350 cd/m²	350 cd/m²
	Viewing Angle (H/V)	178°/178°	176°/176°	160°/140°	170°/160°
	Backlight Life	50,000 hr	70,000 hr	50,000 hr	50,000hr
	Contrast Ratio	1000:1	2000:1	800:1	1000:1
Touchscreen	Type	PCAP	PCAP	PCAP	PCAP
	Light Transmission	Above 88%	Above 88%	Above 88%	Above 88%
	Anti-Glare Treatment	Yes	Yes	Yes	Yes
	Built-In iKey	N/A	N/A	N/A	N/A
Expandability	NFC Support on Front Panel	N/A	N/A	N/A	N/A
Environment	Operating 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)
	Storage Temperature	-30~70 °C (-22~158 °F)	-30~70 °C (-22~158 °F)	-30~70 °C (-22~158 °F)	-30~70 °C (-22~158 °F)
	Ingress Protection	Font IP66	Font IP66	Font IP66	Font IP66
Housing Color	Panel Frame and Back Cover	Pantone 432C	Pantone 432C	Pantone 432C	Pantone 432C

Part Number for Cost Effective version		FPM-D15W-FCE	FPM-D18W-FCE	FPM-D21W-CE	FPM-D24W-CE
LCD Panel	Display Size	15.6"	18.5"	21.5"	23.8"
	Display Type	FHD TFT LED LCD	FHD TFT LED LCD	FHD TFT LED LCD	FHD TFT LED LCD
	Aspect Ratio	16:9			
	Max. Resolution	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
	Max. Color	16.7M	16.7M	16.7M	16.7M
	Luminance	450 cd/m²	350 cd/m²	250 cd/m²	350 cd/m²
	Viewing Angle (H/V)	170°/170°	178°/178°	178°/178°	178°/178°
	Backlight Life	50,000 hr	50,000 hr	50,000 hr	30,000 hr
	Contrast Ratio	800:1	1000:1	1000:1	1000:1
Touchscreen	Type	PCAP	PCAP	PCAP	PCAP
	Light Transmission	Above 88%	Above 85%	Above 88%	90% ± 3%
	Anti-Glare Treatment	Yes	Yes	Yes	Yes
	Built-In iKey	N/A	N/A	N/A	N/A
Expandability	NFC Support on Front Panel	N/A	N/A	N/A	N/A
Environment	Operating Temperature	-20~60 °C (-4~140 °F)	-20~60 °C (-4~140 °F)	0~55 °C (32~131 °F)	0~55 °C (32~131 °F)
	Storage Temperature	-30~70 °C (-22~158 °F)	-30~70 °C (-22~158 °F)	-20~60 °C (-4~140 °F)	-20~60 °C (-4~140 °F)
	Ingress Protection	Font IP66	Font IP66	Font IP66	Font IP66
Housing Color	Panel Frame and Back Cover	Pantone 432C	Pantone 432C	Pantone 432C	Pantone 432C

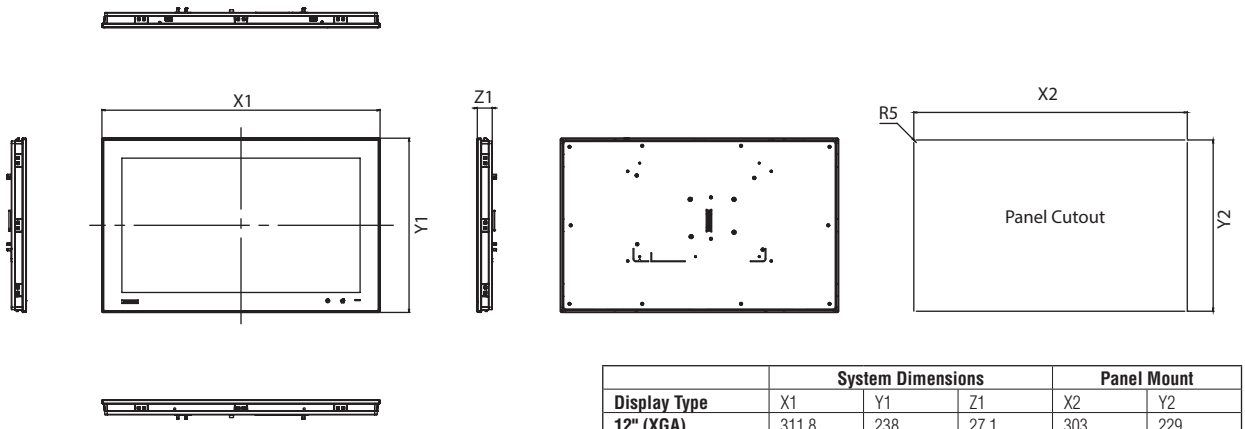
All product specifications are subject to change without notice.

Specifications (Cont.)

Part Number for High Brightness Version		FPM-D12T-HE	FPM-D15T-HE	FPM-D15W-FHE	FPM-D21W-HE
LCD Panel	Display Size	12"	15"	15.6"	21.5"
	Display Type	XGA TFT LED LCD	XGA TFT LED LCD	FHD TFT LED LCD	FHD TFT LED LCD
	Aspect Ratio	4:3		16:9	
	Max. Resolution	1024 x 768	1024 x 768	1920 x 1080	1920 x 1080
	Max. Color	16.7M	16.2M	16.7M	16.7M
	Luminance	1000 cd/m²	1,800 cd/m²	1,200 cd/m²	1,400 cd/m²
	Viewing Angle (H/V)	178°/174°	160°/150°	178°/178°	178°/178°
	Backlight Life	50,000 hr	50,000 hr	50,000 hr	50,000hr
	Contrast Ratio	1000:1	800:1	800:1	1000:1
Touchscreen	Type	PCAP	PCAP	PCAP	PCAP
	Light Transmission	Above 88%	Above 88%	Above 88%	Above 88%
	Anti-Glare Treatment	Yes	Yes	Yes	Yes
	Built-In iKey	N/A	N/A	N/A	N/A
Expandability	NFC Support on Front Panel	N/A	N/A	N/A	N/A
Environment	Operating 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)
	Storage Temperature	-30~70 °C (-22~158 °F)	-30~70 °C (-22~158 °F)	-30~70 °C (-22~158 °F)	-30~70 °C (-22~158 °F)
	Ingress Protection	Font IP66	Font IP66	Font IP66	Font IP66
Housing Color	Panel Frame and Back Cover	Pantone 432C	Pantone 432C	Pantone 432C	Pantone 432C

Dimensions

Unit: mm



	System Dimensions			Panel Mount	
Display Type	X1	Y1	Z1	X2	Y2
12" (XGA)	311.8	238	27.1	303	229
15" (XGA)	383.2	307.3	27.5	374.5	298.5
15.6" (FHD)	419.7	269	30	412.4	261.7
17" (SXGA)	410.4	343.4	28.3	401.3	334.8
18.5" (FHD)	488	309	30.3	479.3	300.3
19" (SXGA)	454	379.8	51.5	443.5	369.3
21.5" (FHD)	558.4	349.8	30.3	550.3	341.8
23.8" (FHD)	595.9	374.1	30.3	587	365.3

Ordering Information

Panel Module P/N	FPM-D12T-CE**	FPM-D15T-CE	FPM-D17T-CE	FPM-D19T-CE	FPM-D15W-FCE	FPM-D18W-FCE	FPM-D21W-CE	FPM-D24W-CE
Description	12.1" XGA TFT LED LCD Standard	15" XGA TFT LED LCD Standard	17" SXGA TFT LED LCD Standard	19" SXGA TFT LED LCD Standard	15.6" FHD TFT LED LCD Standard	18.5" FHD TFT LED LCD Standard	21.5" FHD LED LCD Standard	23.8" FHD TFT LED LCD Standard

Panel Module P/N	FPM-D12T-HE**	FPM-D15T-HE	FPM-D15W-FHE	FPM-D21W-HE
Description	12.1" XGA TFT LED LCD High Brightness	15" XGA TFT LED LCD High Brightness	15.6" FHD TFT LED LCD High Brightness	21.5" FHD LED LCD High Brightness

Note: Display modules **cannot** work independently. A computing box (TPC-B200/B300/B510/B520/B520L/B610) is compulsory to operate the display module.
*High Brightness Display module only compatible w/ TPC-B300/B510/B520/B520L/B610.
**TPC-B610 does not support FPM-D12T-BE, -CE and -HE

Configurable Rear Computing Box

Box Module P/N	Description
TPC-B300-J20A	Intel® Celeron® J6412 2.6 GHz Processor (10W)
TPC-B300-E20A	Intel® Atom™ X6425E 3.0 GHz Processor (12W)
TPC-B510-833BE	Intel® Core™ i3-8145UE 2.20GHz Dual-core Processor, 8G DDR4 RAM
TPC-B510-853BE	Intel® Core™ i5-8365UE 1.60 GHz Quad-core Processor, 8G DDR4 RAM
TPC-B510-873BE	Intel® Core™ i7-8665UE 1.70GHz Quad-core Processor, 8G DDR4 RAM
TPC-B520L-C30A	Intel® Core™ i3-N305 1.80 GHz Octo-core Processor
TPC-B520-D50A	Intel® Core™ i5-1335UE 1.30 GHz Deca-core Processor
TPC-B520-D70A	Intel® Core™ i7-1365URE 1.70 GHz Deca-core Processor
TPC-B610H-A00A	Intel® 10th Gen. Core™ i CPU Socket (LGA1200), H420E, PCIex16, PCI
TPC-B610W-A00A	Intel® 10th Gen. Core™ i CPU Socket (LGA1200), W480E, PCIex16, PCIex4, NVMe, RAID 0/1, ECC

Optional Accessories

Part Number	Description
98R1B300V00*	TPC-B300 VESA mount kit for FPM-D Series

*Note: 98R1B300V00 VESA mounting kit is only required for B300

Packing List

FPM-D12T-BE/CE/HE

Item	Part No.	Depiction	Qty
CLAMPER	1962055040	CLAMPER PPC-55 M1632611 A2	8
CLAMPER Screw	1935042520	Screw M4x25L R/S D=8.3 H=2.5 (2+) ST BZn	8
WARRANTY	2190000902	CARDBOARD-WARRANTY REV. A2	1

FPM-D15W-FBE/FCE/FHE

Item	Part No.	Depiction	Qty
CLAMPER	1960018986T000	Clamper-bezel M5 for TPC-1770 A1	10
CLAMPER Screw	1935052000	Screw M5x20L R/S D=9 H=3 (2+) ST N	10
WARRANTY	2190000902	CARDBOARD-WARRANTY REV. A2	1

FPM-D15T-BE/CE/HE

Item	Part No.	Depiction	Qty
CLAMPER	1962055040	CLAMPER PPC-55 M1632611 A2	10
CLAMPER Screw	1935042520	Screw M4x25L R/S D=8.3 H=2.5 (2+) ST BZn	10
WARRANTY	2190000902	CARDBOARD-WARRANTY REV. A2	1

FPM-D17T-BE/CE

Item	Part No.	Depiction	Qty
CLAMPER	1960018986T000	Clamper-bezel M5 for TPC-1770 A1	10
CLAMPER Screw	1935052000	Screw M5x20L R/S D=9 H=3 (2+) ST Ni	10
WARRANTY	2190000902	CARDBOARD-WARRANTY REV. A2	1

FPM-D18W-BE/FCE

Item	Part No.	Depiction	Qty
CLAMPER	1960018986T000	Clamper-bezel M5 for TPC-1770 A1	12
CLAMPER Screw	1935052000	Screw M5x20L R/S D=9 H=3 (2+) ST Ni	12
WARRANTY	2190000902	CARDBOARD-WARRANTY REV. A2	1

FPM-D19T-BE/CE

Item	Part No.	Depiction	Qty
CLAMPER	1960064704T000	Clamper for PPC-3120	12
CLAMPER Screw	1930005598	Screw SP/S M6*21L D=9 H=2+ ST BZn	12
WARRANTY	2190000902	CARDBOARD-WARRANTY REV. A2	1

FPM-D21W-BE/FCE/FHE

Item	Part No.	Depiction	Qty
CLAMPER	1960018986T000	Clamper-bezel M5 for TPC-1770 A1	12
CLAMPER Screw	1935052000	Screw M5x20L R/S D=9 H=3 (2+) ST Ni	12
WARRANTY	2190000902	CARDBOARD-WARRANTY REV. A2	1

FPM-D24W-BE/CE

Item	Part No.	Depiction	Qty
CLAMPER	1960018986T000	Clamper-bezel M5 for TPC-1770 A1	14
CLAMPER Screw	1935052000	Screw M5x20L R/S D=9 H=3 (2+) ST Ni	14
WARRANTY	2190000902	CARDBOARD-WARRANTY REV. A2	1

FPM-DXXX-CE/HE Photo









*Note: Request to order TPC-B Series HMI computing module

Please note: If some optional modules are offered with the system, additional system certificates may be required in certain regions/countries.
Please contact Advantech for certificate compliance.