

# ES-2110/2210

## 10.4" Open Frame and Rugged Panel Mount Monitor



### Features

- 10.4" LCD supports 800 x 600 pixels and operating temperature (-0 ~ 50° C)
- Resistive, Capacitive, SAW or IR touchscreen and 3 mm tempered glass options
- Versatile mounting brackets
- Modular architecture for efficient integration
- Special back cover designed for 3.5" / 5.25" SBCs and ARK-1000 / 3000 / 4000 series box computers
- Sunlight readable option
- Ultra-high brightness up to 1000 nit with LED backlight option
- Rugged aluminum front bezel design (ES-2210)
- VGA or LVDS interface (S-Video optional)

### Introduction

The Advantech ES-2110/2210 Embedded Open Frame and Rugged Panel Mount Monitor series offer flexible options for LCD, touchscreen, signal interface and chassis mounting. The back cover has mounting holes for industry standard 3.5" and 5.25" SBCs; Advantech DSA-2100 and DSA-3300 Digital Signage Players; DVS-350 Digital Video Platforms; and ARK-1000, ARK-3000 and ARK-4000 series Embedded Box Computers. The series supports panel and VESA mounting, and is supplied with four versatile mounting brackets for different integration applications. The Advantech Display Solutions Selection Wizard (<http://www.advantech.com.tw/ePlatform/DS/dsw.aspx>) enables easy selection of model numbers by choosing the required options.

### Specifications

- I/O Ports** 15-pin D-sub, DC power input, RS-232 port, Power Switch and OSD keys (Auto-tune, menu, decrease, increase)
- Display Input Signal** Analog RGB, 0.7 VP-P / 75 Ohm, optional LVDS
- Multi-Scan Mode** Multi-Scan Mode supports VGA, SVGA
- OSD Control** Keys: Auto-tune, menu, decrease and increase  
Functions: Brightness, Contrast, Clock, Phase, Horizontal Position, Vertical Position and Sharpness
- Power** External 50 W power adapter, with AC 100 ~ 240 V input and DC +12 V @ 4.16 A output
- Dimensions (W x H x D)** Please refer to the product dimension diagram on next page
- Weight** ES-2110: 3.0 kg  
ES-2210: 3.8 kg

### Environment

- Operating Temperature** -0 ~ 50° C (32 ~ 122° F)
- Storage Temperature** -20 ~ 60° C (-4 ~ 140° F) for standard LCDs
- Humidity** 5 ~ 95% @ 40° C, non-condensing
- Shock** 10 G peak acceleration (11 ms duration)
- EMC Approved** CE FCC

### Display

Feature	Standard / (OEM)	NEW	NEW
		Sunlight Readable	Ultra-high Brightness
Size	10.4"	10.4"	10.4"
Resolution (pixels)	800 x 600 SVGA	800 x 600 SVGA	800 x 600 SVGA
Number of Colors	262K	262K	262K
Viewing Angle (L/R/U/D)	60°/60°/35°/65°	60°/60°/35°/65°	60°/60°/35°/65°
Brightness (nit)	230 / 400	600	1000
Contrast Ratio	500:1	500:1	500:1
Response Time (ms)	35	25	25
Lamp Life (hrs)	20,000 / 50,000	50,000	50,000
Long-term Support	Yes	Yes	Yes
Anti-reflection	N/A	Yes	Yes

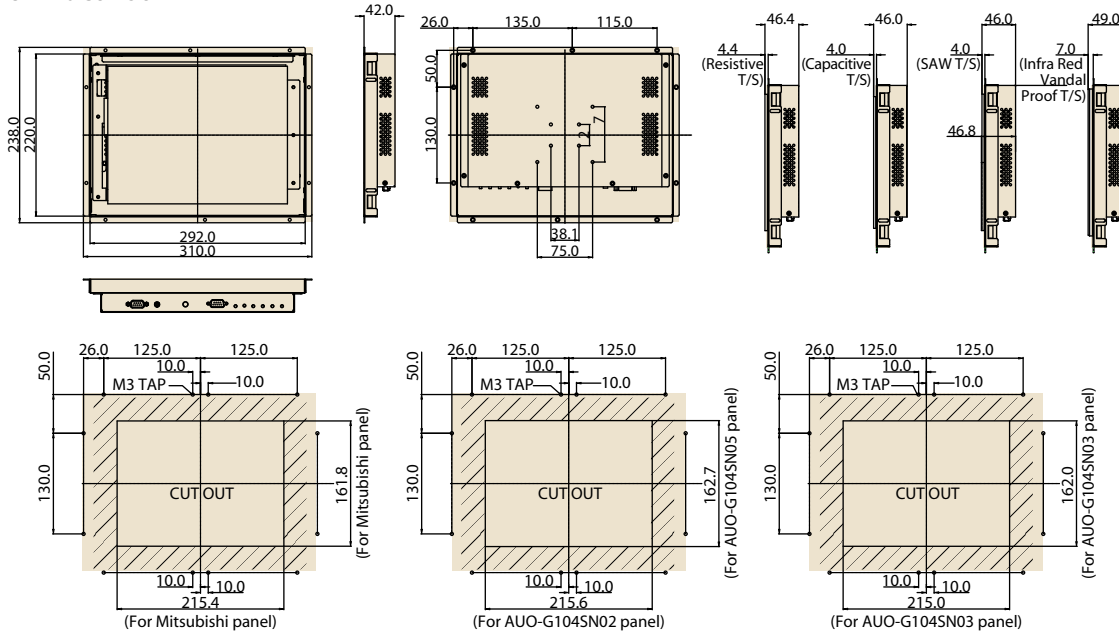
### Touchscreen

Type	Analog Resistive	Capacitive	SAW	Infrared
Thickness	2.67 mm	3.18 mm	3.0 mm	3.0 mm
Resolution	4096 x 4096	1024 x 1024	4096 x 4096	4096 x 4096
Light Transmission	80%	85%	92%	92%
Controller Interface	RS-232/USB	RS-232	RS-232/USB	RS-232/USB
Power Consumption	+5 V @ 200 mA	+5 V @ 100 mA	+5 V @ 75 mA	+5 V @ 150 mA
Touch Lifetime	35 million hrs	225 million hrs	50 million hrs	MTBF 100,000 hrs
Driver OS Support	DOS, Linux, Mac, Windows 95/98/NT/ME/CE/2000/XP			

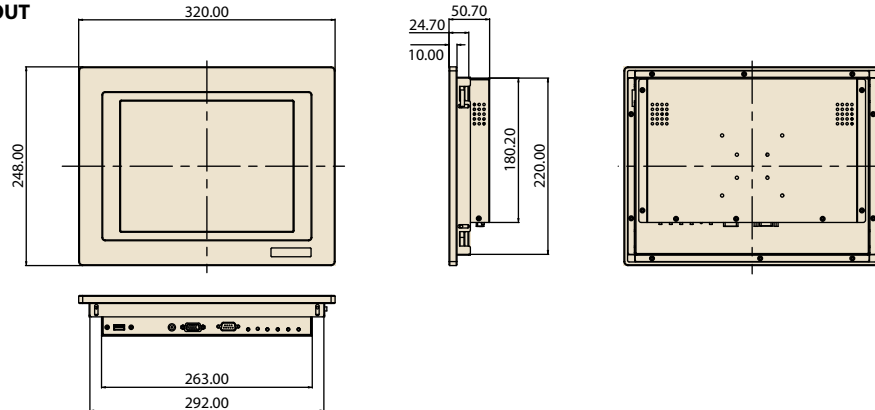
**Dimensions**

Unit: mm

**ES-2110 CUT OUT**



**ES-2210 CUT OUT**



**Ordering Information**

Part No.	Type	Brightness (nit)	Interface	Touchscreen	Touch Interface	Anti-reflection
ES-2110G-VSAE	Open Frame	230 / 400	VGA	Tempered Glass	N/A	N/A
ES-2110R-VSAE	Open Frame	230 / 400	VGA	5 wire Resistive	RS232/USB	N/A
ES-2110C-VSAE	Open Frame	230 / 400	VGA	Capacitive	RS232	N/A
ES-2110R-LSAE-05	Open Frame	230 / 400	LVDS	5 wire Resistive	RS232/USB	N/A
ES-2210R-VSAE	Rugged Panel Mount	231 / 400	VGA	5 wire Resistive	RS232/USB	N/A
ES-2210C-VSA-SRE	Rugged Panel Mount	600	VGA	Capacitive	RS232	Yes
ES-2110V-VSA-HE	Open Frame	1000	VGA	Infrared	RS232	Yes

**Notes:**

- (1) Recommend touch for sunlight readable outdoor solutions are with Capacitive, SAW and Infrared touch panel.
- (2) The above list are major part numbers for your reference. Other combinations of LCD, touch screen and signal interface features can be found in the Advantech Display Solutions Selection Wizard (<http://www.advantech.com.tw/ePlatform/DS/dsw.aspx>) or CTOS services to get your demand configuration and part numbers for ordering.
- (3) For special demands, welcome to use Display Solution DTOS service.