10.4" Touchscreen Liquid Crystal Display

Introduction

The E-Plex® 350LCD series is a family of liquid crystal-displays that have been designed to give the customer a choice of desired features without requiring a traditional operating system on a PC. An integrated touch screen interface allows for monitoring and controlling of different key subsystems, all from one location.

In addition to the system display and control features, the 350LCD series module can double as a video display for inputs from satellite TV, VCR, DVD, DVR, video game consoles, security cameras, and any other video source that supports RCA and S-Video connectivity. For example, you can watch your favorite DVD on the 350LCD, and with a quick touch of the screen, all the controls and monitoring of your system are available for you to access.

Key Features

- 640 x 480 color display.
- 10.4" Diagonal transmissive display.
- Supports NTSC and PAL video formats.
- Integrated resistive touch screen.
- LEN value 2.

Design Specifications

- Shock (non-operating): Maximum of 50G, pulse width of 11ms with a half sine wave, ±X, ±Y, ±Z once in each direction.
- Moisture resistance: IP20.
- PCB characteristics: UL94V-0.
- Vibration: (non-operating): Frequency of 10~57Hz with vibration width (one side) of 0.075mm, 58~500 Hz with 1G sweep time of 11 minutes, 3 hours duration (1 hour for each direction X, Y, Z).

Electrical Specifications

Voltage	7VDC to 32VDC
Current, Total	0.75A to 2A
Electroluminescent (EL) Backlight	2CCFT (E)
Display Size	260mm (10.4 in)
Dot Format (HxV)	640 x 480 dot (RGB)
Dot Pitch (HxV)	0.11 mm x 0.33 mm
Colors	262,144 colors
Brightness	250 cd/m^2
Contrast Ratio	70:1 (transmissive mode)
Power Consumption	6.8W

Physical Specifications

Front Bezel	Polycarbonate
Back Cover	Stainless Steel
PC Board	ULV94-0 FR4
Mounting Bracket	Stainless Steel
Operating Temperature	0°C to 60°C
Storage Temperature	-30°C to 70°C
Operating Humidity	5% to 90% (non-condensing RH)
Weight	2.38 lb (38 ounces)
Overall Length	7.8" (198.1 mm)
Overall Width	10.4" (264.2mm)
Overall Height	1.99" (50.5mm)
Recommended Wire Specification for E-Plex Twisted Pair [1]	16 AWG (1.3 mm) - Unshielded, twisted pair General purpose: Belden 1035 A - Non-tinned Marine: Belden 9410 - Tinned

Wiring Specifications

Terminal Connector Specifications	Tin-plated male 0.250" quick-connect tabs
Mating Connector Specification	0.250" female spade terminal

NOTE: *1. Unrestricted topology: Star, Tree, Daisy Chain configurations all valid.*

Typical Wiring Instructions

Recommended Wire Gauge	16 AWG (1.6 mm²)
Terminal Connector	0.25" tin plated male quick-connect tabs
RCA Video Input	Standard RCA cable/jack
S-Video Input	Standard S-Video cable

Connection Specifications

Pin #	Pin Description	Inputs & Outputs	Remarks
1	E-Plex Data Bus + (grey)	I / O	20 mA max E-Plex load
2	E-Plex Data Bus – (purple)	I / O	20 mA max E-Plex load
3	Battery + (red)	I	Max 2A draw
4	RCA Video 1	I	—
5	RCA Video 2	I	—
6	RCA Video 3	I	—
7	RCA Video 4	I	—
8	S-Video 1	I	—
9	S-Video 2	I	—

Typical Wiring Diagram
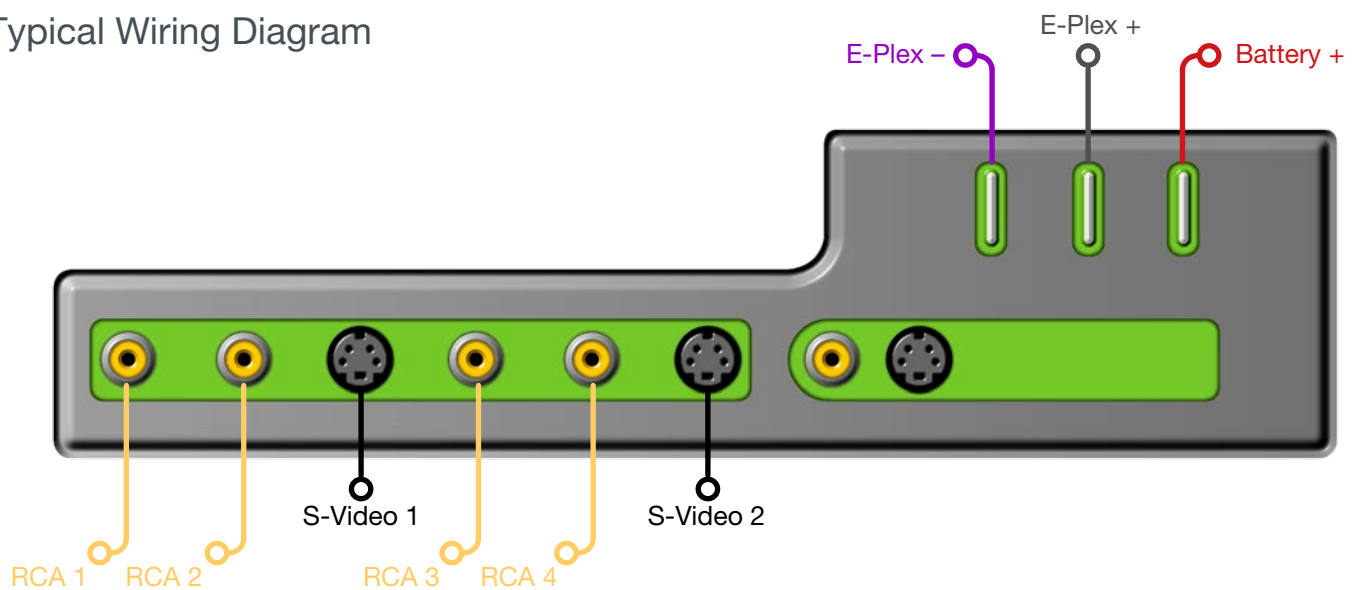
Ordering Information
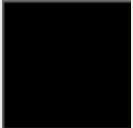
Description	E-Plex Part Number
350LCD Series - 10.4" Touchscreen Liquid Crystal Display	EP-SCREEN-10-350LCD-TX

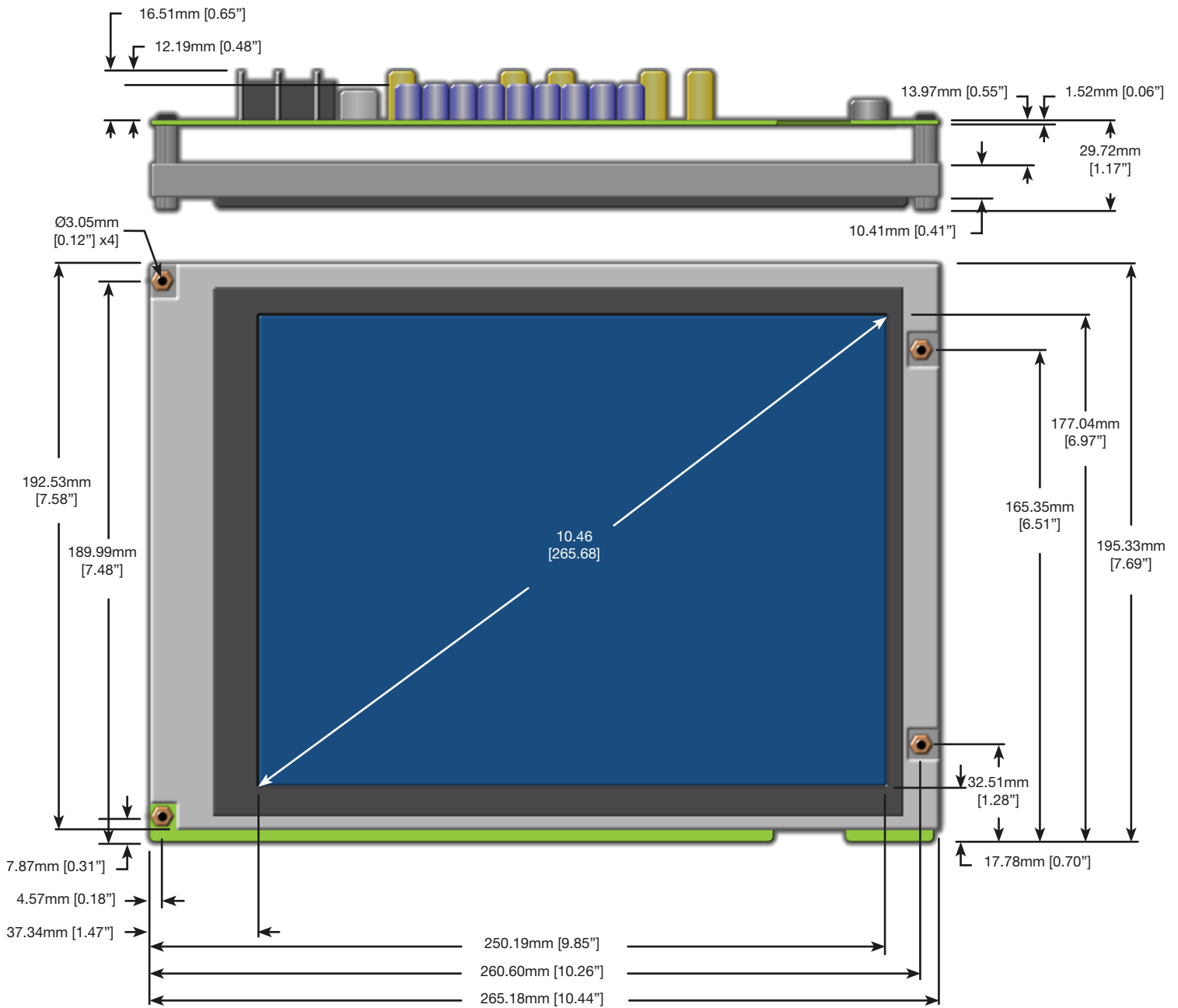The standard screen kit includes a back cover and mounting bracket.

If you are rear mounting the screen this is all the hardware you'll need. If you are front mounting the screen the choice of five bezels are available.
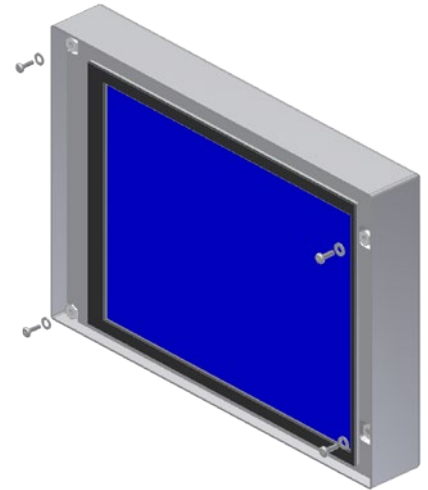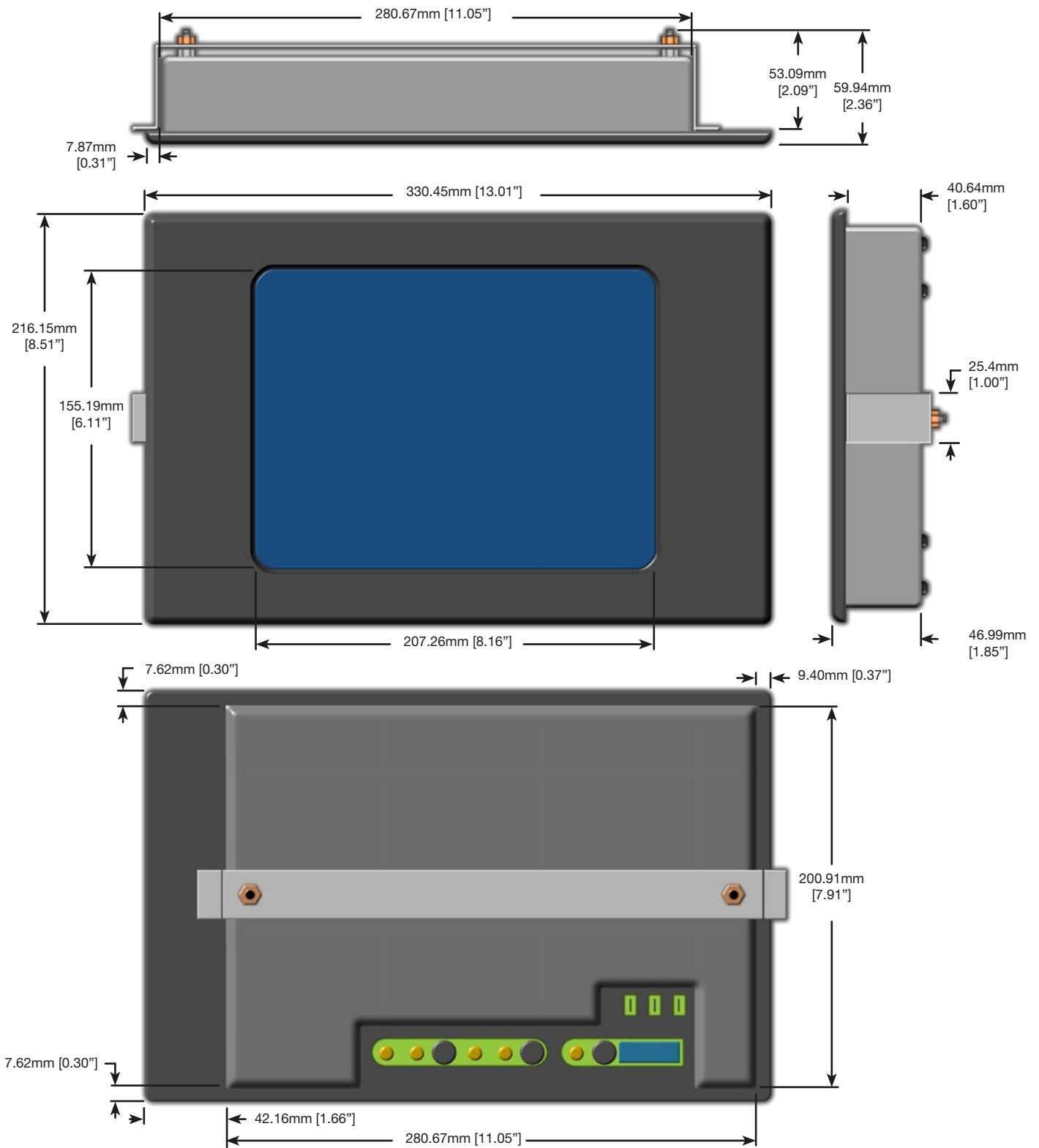
Standard Bezel Options

Description	E-Plex Part Number	Colour
Flat Black	EP-BEZEL-350LCD-FB	
Gloss Black	EP-BEZEL-350LCD-GB	
Grey	EP-BEZEL-350LCD-GR	
Nickel	EP-BEZEL-350LCD-NI	
Satin Chrome	EP-BEZEL-350LCD-SC	

Dimensional Diagram (Screen and PCB)

16.51mm [0.65"]

12.19mm [0.48"]

13.97mm [0.55"]   1.52mm [0.06"]

29.72mm [1.17"]

10.41mm [0.41"]

Ø3.05mm [0.12"] x4

192.53mm [7.58"]

189.99mm [7.48"]

177.04mm [6.97"]

165.35mm [6.51"]

195.33mm [7.69"]

10.46 [265.68]

32.51mm [1.28"]

7.87mm [0.31"]

4.57mm [0.18"]

37.34mm [1.47"]

17.78mm [0.70"]

250.19mm [9.85"]

260.60mm [10.26"]

265.18mm [10.44"]

Dimensional Diagram (Screen with bezel, back cover and bracket)

280.67mm [11.05"]

53.09mm [2.09"]

59.94mm [2.36"]

7.87mm [0.31"]

330.45mm [13.01"]

216.15mm [8.51"]

155.19mm [6.11"]

207.26mm [8.16"]

40.64mm [1.60"]

25.4mm [1.00"]

46.99mm [1.85"]

7.62mm [0.30"]

9.40mm [0.37"]

200.91mm [7.91"]

7.62mm [0.30"]

42.16mm [1.66"]

280.67mm [11.05"]

Dimensional Diagram (Screen with back cover)

2.79mm [0.11"]

41.91mm [1.65"]

280.67mm [11.05"]

1.52mm [0.06"]

10.46 [265.68]

193.04mm [7.60"]

200.91mm [7.91"]

168.40mm [6.63"]

10.92mm [0.43"]

16.51mm [0.65"]

49.28mm [1.94"]

35.31mm 1.39

262.13mm [10.32"]

272.54 [10.73"]

46.23mm [1.82"]

E-PLEX

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