

# ITA-8120

## EN 50155 12.1" Fanless Railway Touch Panel PC with Intel Atom® x7-E3950 Processor



### Features

- Intel Atom® x7-E3950 quad-core processor
- 12.1" LCD panel (600 nits) with 1024 x 768 resolution
- EN 50155 temperature class OT4+ST1: -40 ~ 70 °C/-40 ~ 158 °F (85 °C/185 °F for 10 minutes)
- EN 50155 power input range: 24/48/72/110 V<sub>DC</sub> (±40%)
- Fanless design for minimal maintenance
- Anti-shock and vibration tolerance
- IP65-rated front panel
- UIC 612-01 keypad layout
- Optional Expansion - MVB, CAN and GSM-R
- No RED Certification



### Introduction

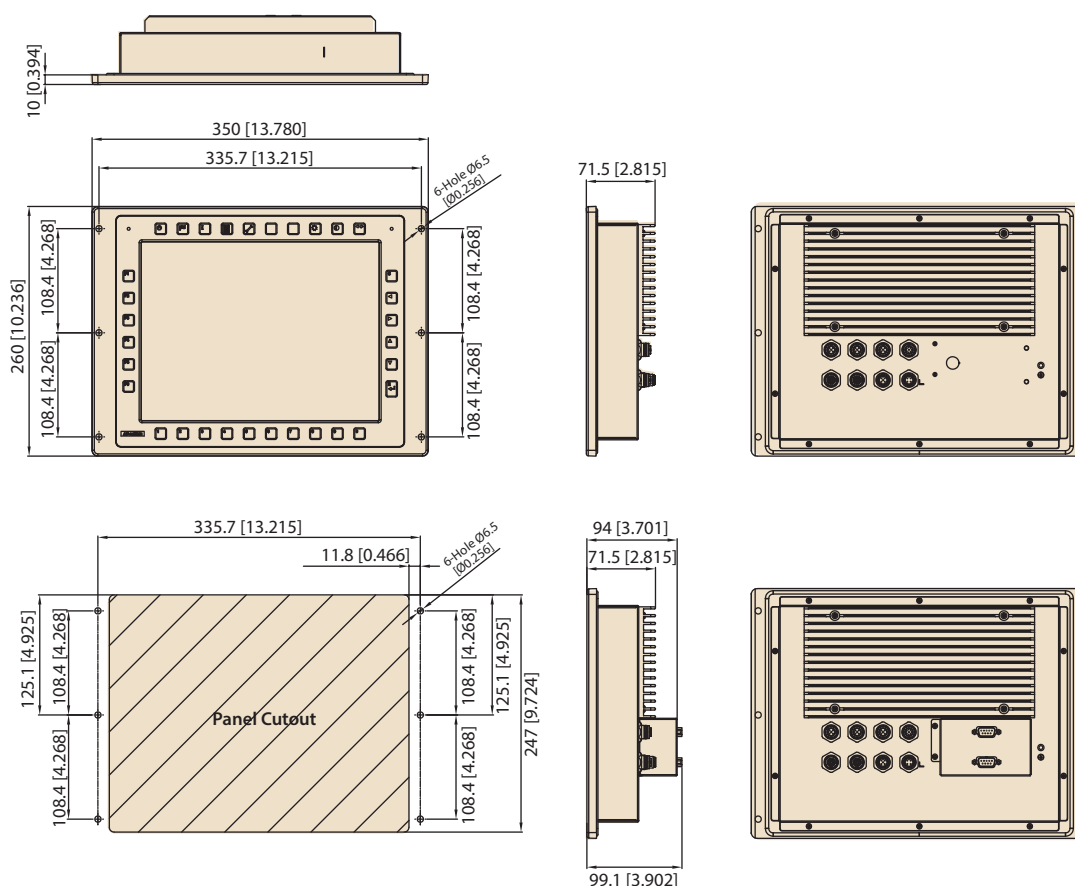
Advantech's ITA-8120 touch panel PC is a fanless human machine interface (HMI) aimed at railway applications. ITA-8120 features a 12.1" display with projective capacitive touchscreen. The panel's small and flat design offers space savings for installation in driver cabins, while the configuration flexibly allows it to be adjusted for specific applications and different train models. Designed to withstand operation in harsh environments, ITA-8120 supports a wide operating temperature range (-40 ~ 70 °C/-40 ~ 158 °F) which meets EN 50155 railway regulations.

### Specifications

Computing System	CPU	Intel Atom® x7-E3950 quad-core processor
	Max Speed	2.00 GHz
	Memory	1 x DDR3L SODIMM (default 4GB, up to 8GB)
Storage	M.2	1 x M.2 2242 SSD (default 64 GB)
Graphics	Chipset	Intel® HD Graphics 505
Display	Display Type	12.1" TFT LCD panel
	Max. Resolution	1024 x 768 XGA
	Brightness	600 nits
	Contrast Ratio	1000:1
Touch Panel/Function Keys	Touch Type	Projected capacitive touchscreen (multi-touch)
	Brightness Adjustment	Auto (built-in light sensor)
	Function Keys	32 keypads (compliant with UIC 612-01 layout)
I/O	LAN	2 x 10/100/1000 Base-T Intel® I210 Ethernet interface (M12 X-coded 8 pin)
	USB	1 x USB 2.0 (M12 A-coded 4 pin)
	Series	2 x RS-422/485 (M12 A-coded 5 pin)
	Audio	Line-out, mic-in, isolated (M12 A-coded 5 pin)
Digital I/O	Input / Output	5-ch / 1-ch, isolated (M12 A-coded 8 pin)
Software	Operating System	Windows 10, Linux
Power	Connector	M12 A-coded 4 pin (Male)
	Input Voltage	24/48/72/110 V <sub>DC</sub> (±40%)
Environment	Operating Temperature	-40 ~ 70 °C/-40 ~ 158 °F (85 °C/185 °F for 10 minutes)
	Storage Temperature	-40 ~ 85 °C/-40 ~ 185 °F
	Relative Humidity	85% @ 40 °C (non-condensing)
	Shock, Vibration Tolerance	IEC 61373
	Ingress Protection	IP65-rated front panel
Physical Characteristics	Construction	Aluminum/Iron enclosure
	Dimensions (W x H x D)	350 x 260 x 71.5 mm (13.8 x 10.2 x 2.8 in)
	Weight	5 kg (11 lb)
Certifications	Railway	EN 50155:2017, EN 50121-3-2, EN 50121-4, IEC 60571, EN 45545-2
	EMC, Safety	CE/FCC Class A, UL 62368

## Dimensions

Unit: mm [inch]



## Ordering Information

Part Number	Processor	Input Voltage	Brightness	Function Keys	Auto Dimming	DDR3L	M.2 SSD
ITA-8120-L00A1	Intel® Atom™ x7-E3950 quad-core, 2.00 GHz	24-48V	600 nits	32	Yes	4GB	64GB
ITA-8120-L01A1	Intel® Atom™ x7-E3950 quad-core, 2.00 GHz	24-48V	600 nits	1	Yes	4GB	64GB
ITA-8120-S00A1	Intel® Atom™ x7-E3950 quad-core, 2.00 GHz	72-110V	600 nits	32	Yes	4GB	64GB
ITA-8120-S01A1	Intel® Atom™ x7-E3950 quad-core, 2.00 GHz	72-110V	600 nits	1	Yes	4GB	64GB

## Optional Accessories

Part Number	Description
ITA8-CBLE-01	Cable Kit 1 x Power : M12 A-coded 4 pin (F) to Y type terminals, 50cm 2 x COM : M12 A-coded 5 pin (M) to D-sub 9 pin (M), 20cm 2 x LAN : M12 X-coded 8 pin (M) to RJ45 (F), 100cm 1 x USB : M12 A-coded 4 pin (M) to USB Type-A (F), 50cm
ITA8-2DB9-01*	Expansion Kit provides extra connection for COM, CAN, DIO or MVB
ITA8-3SMA-01*	Expansion Kit provides extra connection for GPS, WiFi, LTE or GSM-R

\*Please contact for more detail information

For sales inquiries or additional information, please contact us at [transportation@advantech.com.tw](mailto:transportation@advantech.com.tw)