

ITA-5231S

Intel® 6th Generation Core™ i Processor Fanless System; EN 50155 Compliant for Railway Applications



Features

- Intel Skylake-H platform with QM170
- Fanless computer for railway vehicle applications, fully compliant with EN 50155
- Satisfies temp. standard: EN 50155 TX (-40 ~ 70° C) and IEC 61373 body mount class B
- Compliant with EN 50121-3-2/ EN 50121-4 EMC test standard
- Ruggedized connectors (M12) used for communication and power ports
- Support easy-swap 4 x 2.5" SSD/HDD (15mm) storage module with key lock
- No RED Certification

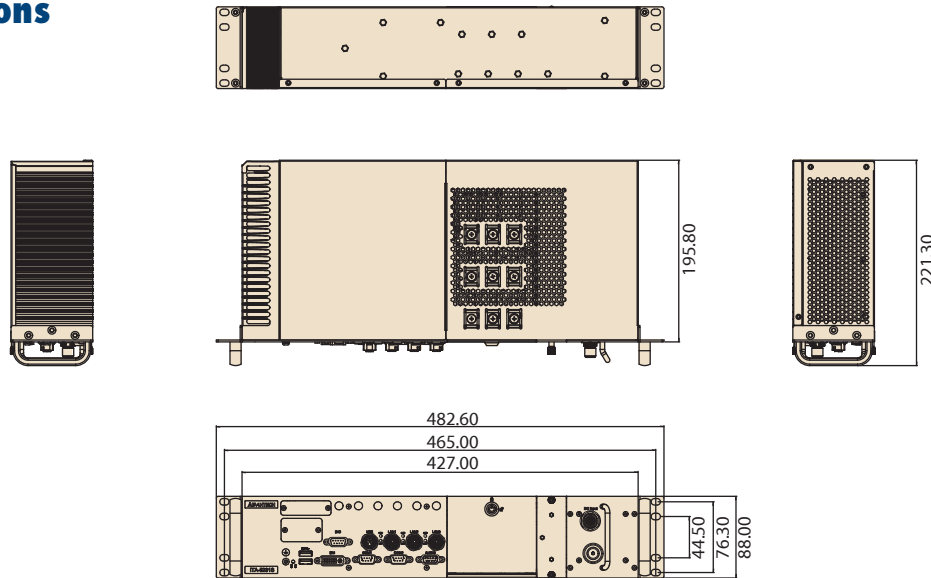


Specifications

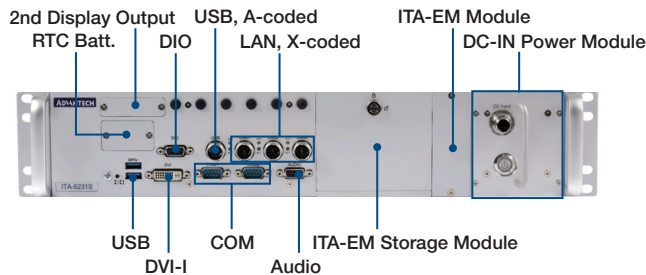
System Chipset	CPU	Intel® Core™ i7-6822EQ	i5-6442EQ	Celeron® G3902E
	Base Frequency/Turbo Boost	2.0/2.8 GHz	1.9/2.7GHz	1.6GHz/NA
	L3 Cache	8M	6M	2M
	Cores/Threads	4C/8T	4C/4T	2C/2T
	Chipset	QM170		
Memory	BIOS	AMI SPI 128Mbyte Flash		
	Technology	8GB on board memory, DDR4 2133MHz		
	SODIMM slot	1		
Graphics	Max. Capacity	Up to 16GB		
	Chipset	Intel HD Graphics 530	Intel HD Graphics 530	Intel HD Graphics 510
	VRAM	Shared with system memory up to 512MB		
	Display	DVI-I: 1920x1200 @ 60Hz		
I/O	USB	2 x USB3.0 with Type A 1 x USB2.0 with M12 A-coded(F) 4-pin		
	Serial Port	2 x DB9, RS-232/422/485 with 2KV Isolation, supports auto-flow control		
	DIO	1 x DB9, 4-bit DI/ 4-bit DO with 2KV Isolation		
	Main Display	1 x DVI-I (optional to DVI-D+VGA via Y cable)		
	Audio	1 x DB9, 1 x speaker-out with 2 x 4W amplifier, 1 x Mic-in		
Ethernet	Controller	Intel i210-IT /i219LM (industrial)		
	Interface	10/100/1000 Mbps		
	Connector	Up to 3 x M12 X-coded(F), LAN1/LAN2 with i210-IT and LAN3 with i219-LM		
Storage	HDD/SSD easy-swap module	4 x 2.5" SSD/HDD (15mm) with key latch design, supports RAID 0,1,5,10		
	mSATA	1 x mSATA slot on board		
Others	Mini PCIe	3 x Mini PCIe Socket (full size)		
	SIM card	2 x SIM slot		
LED & Button	LED	1 x Power, 1 x storage, 1 x alert, 1 x BATT		
	Button	1 x Power on/off switch 1 x Reset button		
Power	Input Voltage	DC 24V input compliant with EN50155 class S2/C2 (optional DC 48/72/110V input)		
	Connector	1 x M12 S-coded(M) 4-pin		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1~255 sec/min		
Environmental	Operating	Non-operating		
	Temperature	-40~70 °C with SSD/0~55 °C with HDD -40 ~ 85 °C		
Mechanical	Humidity	5% ~ 95% @ 40 °C (Non-condensing)		
	Dimension (W x H x D)	427 x 88 x 195.8 mm (16.81" x 3.46" x 7.71")/482.6 x 88 x 221.3 mm (19" x 3.46" x 8.71") with mounting kits		
Certification	Install	Rack-mounting		
	EMC	CE/FCC Class A, CCC		
EN 50155 Compliance	Safety	UL, CB, CCC		
	Ambient Temperature	EN 50155 TX (-40 ~ 70 °C)		
	Shock and Vibration	IEC 61373 body mount class B		
	Interruptions of Voltage Supply	Class S2		
	Supply Change Over	Class C2		
EMC	EN 50121-3-2, EN 50121-4			

Dimensions

Unit: mm



Front View



Ordering Information

Voltage (M12-S-Male)	Part Number	Processor	Memory (GB)	GbE (M12-X-F)	USB2.0 (M12-A-F)	USB3.0 (Type A)	miniPCIe	2.5" SSD	mSATA slot	COM	DIO	Display
24V _{DC}	ITA-5231S-L7A1	i7-6822EQ	8	3	1	2	3	Up to 4	1	2	4DI/4DO	DVI-I
	ITA-5231S-L5A1	i5-6442EQ	8	3	1	2	3	Up to 4	1	2	4DI/4DO	DVI-I
72/110V _{DC}	ITA-5231S-S7A1	i7-6822EQ	8	3	1	2	3	Up to 4	1	2	4DI/4DO	DVI-I
	ITA-5231S-S5A1	i5-6442EQ	8	3	1	2	3	Up to 4	1	2	4DI/4DO	DVI-I
	ITA-5231S-S0A1	G3902E	8	3	1	2	3	Up to 4	1	2	4DI/4DO	DVI-I

ITA-5231 Series supports various I/O expansion. For more specifications, please contact your distributor or sales representative.

Optional List

Part Number	Description
ITA-EM-SR51-00A1E	Easy-swap module, 4 x RS232/422/485 with 2KV isolation
ITA-EM-CN51-00A1E	Easy-swap module, 2 x CAN ports with 2KV isolation
ITA-EM-PE51-00A1E (Note 1)	2 PoE: Each port max to 7.5W @ 52V _{DC} 1 PoE: Up to 15.4W @ 52V _{DC}
ITA-EM-NC51-00A1E	2-Port M12 GbE module
ITA-EM-BA51-00A1E	14.4V 2500mAh, discharging for 30mins @ 55 °C and charging for 3hrs @ 40 °C

Note1: Only supports EN 50155 T2 class: -40 ~ 55 °C

Part Number	Description
FRU-ITA5831-0001	External cable USB to M12
FRU-ITA5831-0002	External cable Power to M12
FRU-ITA5831-0003	External cable Y cable DVI+VGA
FRU-ITA5831-0004	External cable Audio cable
FRU-ARS2600-0001	External cable RJ45 to M12
Y5D5231005	External connector LAN X-coded
Y5A5231004	External connector PWR S-coded
Y5D5231004	External connector USB A-coded