

# ITA-5231G

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



### Features

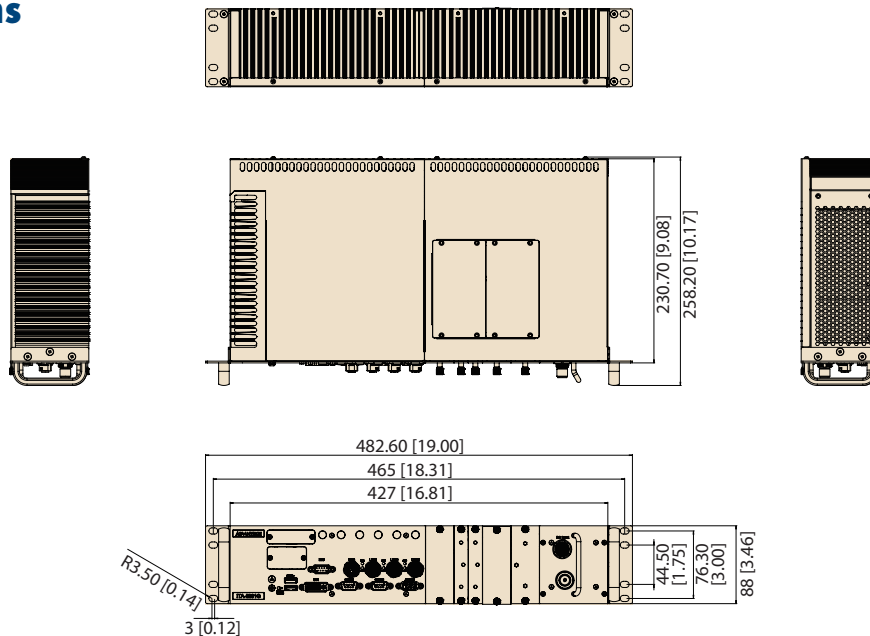
- Intel Skylake-H platform with QM170
- Fanless computer for railway vehicle applications, fully compliant with EN 50155
- Satisfies temp. standard: EN 50155 T2 (-40 ~ 55 °C) and IEC 61373 body mount class B including of MXM GPU module
- Compliant with EN 50121-3-2/ EN 50121-4 EMC test standard
- Ruggedized connectors (M12) used for communication and power ports
- Supports easy-swap storage module and I/O module
- Support GPU MXM 3.1 Type A module
- No RED Certification

### Specifications

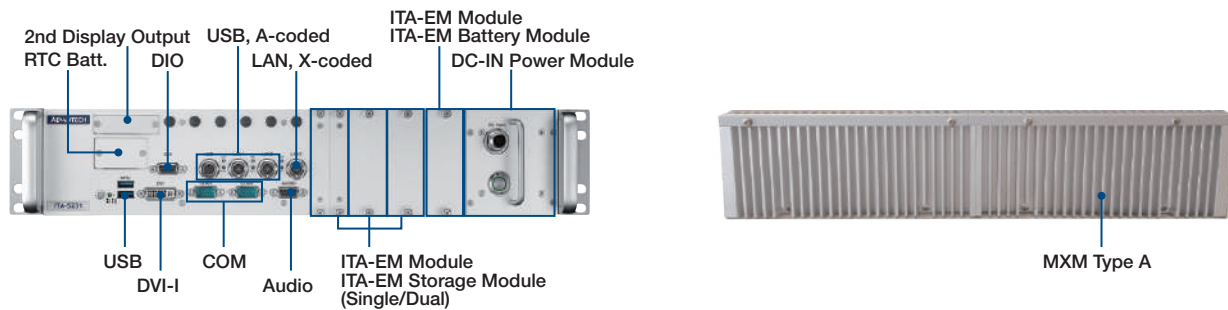
System Chipset	CPU	Intel® Core™ i7-6822EQ
	Base Frequency/Turbo Boost	2.0/2.8 GHz
	L3 Cache	8M
	Cores/Threads	4C/8T
	Chipset	QM170
Memory	BIOS	AMI SPI 128Mbyte Flash
	Technology	16GB on board memory, DDR4 2133MHz
	SODIMM slot	1
Graphics	Max. Capacity	Up to 32GB
	Chipset	Intel® HD Graphics 530
	VRAM	Shared with system memory up to 512MB
	GPU	1 x MXM Type A slot (GTX® 1050Ti; Quadro® P1000/P2000/T1000)
I/O	Display	DVI-I: 1920x1200 @ 60Hz
	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)
Ethernet	Audio	1 x DB9, 1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in
	Controller	Intel i210-IT /i219LM (industrial)
	Interface	10/100/1000 Mbps
Storage	Connector	3 x M12 X-coded(F), LAN1/LAN2 with i210-IT and LAN3 with i219-LM
	HDD/SSD easy-swap module	1 x ITA-EM-ST51-00A1E, supports 2 x 2.5" SSD (default setting) Max to 4 x 2.5" SSD (7mm/9.5mm), supports RAID 0,1,5,10
Others	mSATA	1 x mSATA slot on board
	Mini PCIe	3 x Mini PCIe Socket (full size)
LED & Button	SIM card	2 x SIM slot
	LED	1 x Power, 1 x storage, 1 x alert, 1 x battery
Power	Button	1 x Power on/off switch 1 x Reset button
	Input Voltage	DC 24V input compliant with EN50155 class S2/C2 (optional DC 48/72/110V input)
Watchdog Timer	Connector	1 x M12 S-coded(M) 4-pin
	Output	System reset
Environmental	Interval	Programmable 1~255 sec/min
	Temperature	Operating (with industrial/wide-temperature SSD/mSATA/ Industrial MXM GPU) Non-operating -40 ~ 55 °C -40 ~ 85 °C
	Humidity	5% ~ 95% @ 40 °C (Non-condensing)
Mechanical	Dimension (W x H x D)	427 x 88 x 230.7 mm (16.81" x 3.46" x 9.08")/482.6 x 88 x 258.2 mm (19" x 3.46" x 10.16") with mounting kits
	Install	Rack-mounting
Certification	EMC	CE/FCC Class A, CCC
	Safety	UL, CB, CCC
EN 50155 Compliance	Ambient Temperature	EN 50155 T2 (-40 ~ 55 °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 [inch]



## 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	MXM Slot	Display
24V <sub>DC</sub>	ITA-5231G-L7A1	i7-6822EQ	16	3	1	2	3	Up to 4	1	2	4DI/4DO	1	DVI-I
72/110V <sub>DC</sub>	ITA-5231G-S7A1	i7-6822EQ	16	3	1	2	3	Up to 4	1	2	4DI/4DO	1	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-NC51-00A1E	2-Port M12 GbE module
ITA-EM-ST51-00A1E	Easy-swap storage tray, support 2 x 2.5" SSD (7mm/9.5mm)
ITA-EM-ST52-00A1	Easy-swap storage tray, support 1 x U.2 SSD
ITA-EM-BA51-00A1E	14.4V 2500mAh, discharging for 30mins @ 55C and charging for 3hrs @ 40 °C

Note: Please refer to user manual for installation guide

PN	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
SKY-MXM-T1000	Quadro T1000, MXM3.1, Type A
SKY-MXM-P1000	Quadro P1000, MXM3.1, Type A
SKY-MXM-P2000	Quadro P2000, MXM3.1, Type A