

# ITA-580

## 11th Gen Intel® Core™ H-Series platform EN50155 Fanless Computer; Compliant for Rolling Stock Applications

Preliminary

Fully Compliant with  
EN 50155



### Features

- 11th Gen Intel® Core™ H-Series platform with RM590E
- SuperCap-based power backup module for power failure
- Featured Time-Sensitive Network technology
- Virtualization ability for multi tasks acceptable
- Support advanced 5G and Wi-Fi 6 wireless connectivity
- LAN bypass for redundant connectivity to communicate with other devices
- Compliant with EN 50155 OT4
- Wide range 24 - 110Vdc power input, compliant with EN 50155
- Support variety of communication modules by iDoor technology
- No RED certification

### Introduction

ITA-580 series powered by Intel 11th Gen. processors with reliable ECC function and built-in 2 x DisplayPort interfaces, 3 x 2.5 GbE ports (with LAN bypass) in M12 X-Coded and wide range 24V - 110VDC input, the computer is also featured TPM 2.0 and 4 x 2.5-inch SSD removable tray. Advantech iDoor tech and multi-expandable socket allow users to fulfill diverse application by expanding a variety of communication modules, including 5G, Wi-Fi 6, GPS, MVB and CANBus. ITA-580 is fully compliance with EN 50155, EN 50121-3-2, EN 50121-4 and EN 45545-2 test standard, and ensure stability and reliability system operations on railway critical applications.

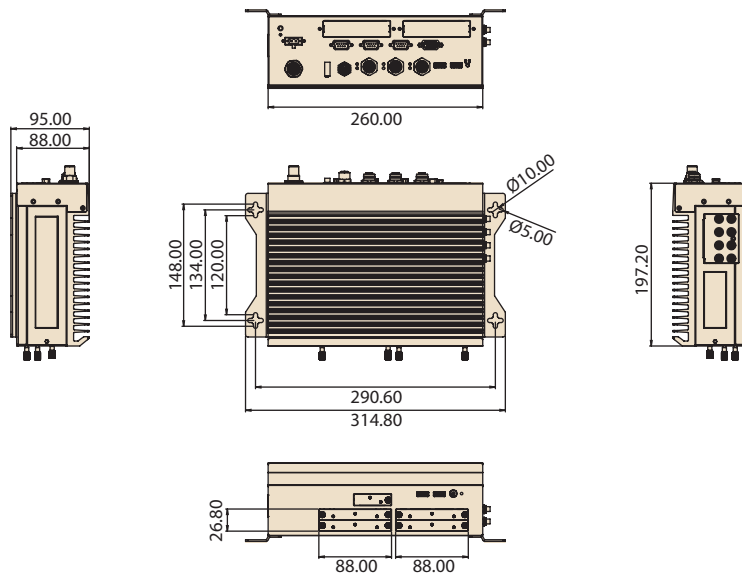
### Specifications

	CPU	Xeon W-11865MLE	i7-11850HE	i5-11550HE	Celeron 6600HE
System Chipset	Base frequency/Turbo Boost	2.6/4.7 GHz	2.6/4.7GHz	2.6/4.5GHz	2.6 GHz/ NA
	L3 Cache	24M	24M	12M	8M
	Cores/Threads	8 P-core/16T	8 P-core/16T	6 P-core/12T	2 P-core/2T
	Chipset	RM590E			
	BIOS	AMI UEFI 256Mbit			
	Technology	Dual channel DDR4 3200 MHz			
Memory	ECC	ECC onboard	Non-ECC	Non-ECC	Non-ECC
	SO-DIMM slot	1			
	On-board RAM	8GB (Default)/16GB (Optional)			
	Max. Capacity	Up to 32GB			
Security	TPM	TPM 2.0			
Graphics	Chipset	Intel® UHD Graphics for 11th Gen Intel® Processors			
	Max. Frequency	1.35 GHz	1.35 GHz	1.35 GHz	1.1 GHz
I/O	USB	4 x USB 3.1 (Gen.1), Type-A connectors 1 x USB 2.0. M12 A-Coded (F)			
	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			
	Display	2 x DP port (max resolution up to 4096 x 2304 at 60 Hz)			
	Audio	1 x DB9, 1 x Line-out, 1 x Mic-in			
Ethernet	Controller	Intel 3 x i226-IT (Industrial-grade)			
	Transmission Speed	10/100/1000/2500 Mbps			
	Connector	3 x M12 X-Coded(F), LAN#2/3 with bypass as optional			
Storage	SSD easy-swap tray	Max to 4 x 2.5" 7mm SSD, support RAID 0/1/5/10			
	mSATA	1 x mSATA slot			
Others	Mini PCIe	2 x Mini PCIe Socket (Full size)			
	M.2	2 x M.2 3042/3052 B+M Key / 1 x M.2 2230 A+E Key			
	PCIe	1 x PCIe16 or 2 x PCIe8			
	SIM card	4 x micro SIM slot, each M.2 slot supports dual micro SIM cards			
LED & Button	LED	1 x power, 1 x storage, 1 x battery, 1 x reserve			
	Button	1 x Power on / off switch 1 x Reset button			
Power	Input Voltage	24 - 110Vdc power input, compliant with EN 50155			
	Connector	1 x M12 K-Coded (M) 5 pin			
	Ignition	Enable range from 10 to 30Vdc with 2.5KV isolation			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1-255 sec/min			
Environment	Temperature	Operating (with Industrial SSD)		Non-operating	
	Humidity	-40 ~ 70 °C			
		5% ~ 95% @ 40 °C (Non-Condensing)			
Mechanical	Dimension (W x H x D)	260 x 88 x 197.2 mm / 10.24 x 3.46 x 7.76 inch 314 x 95 x 197.2 mm/12.36 x 3.74 x 7.76 inch with mounting kit			
	Install	Wall-mount by mounting bracket			
	Ingress Protection	IP40 rating			
Software	Operating System	Windows 10, 11, Linux			
Certification	EMC	CE/FCC Class A, CCC			
	Safety	UL, CB, CCC, BSMI			
EN 50155 Compliance	Operating temperature classes	EN 50155:2021 OT4 (-40 ~ 70 °C)			
	Shock and Vibration	IEC 61373 body mount class B			
	Interruptions of Voltage Supply	Class S2: 10 ms interruptions			
	Supply Change Over	Class C1: at 0.6 Un during 100 ms without interruptions			
	EMC	EN 50121-3-2/EN 50121-4			
Fire protection	EN45545-2:2020 HL3				

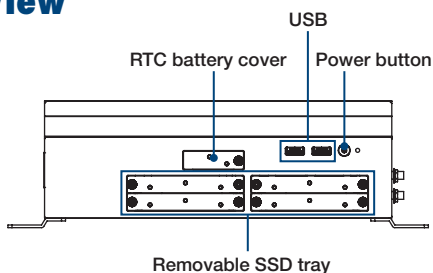
## Dimensions

**Preliminary**

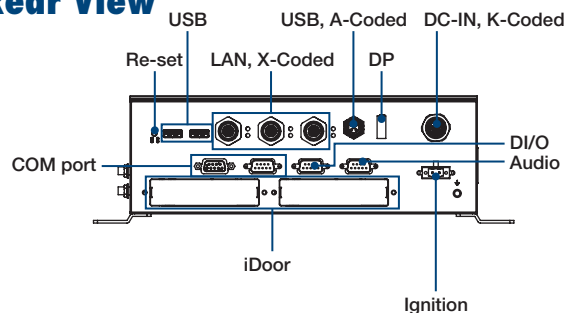
Unit: mm



## Front View



## Rear View



## Ordering Information

M12 S-Coded, M	Part Number	Processor	Onboard RAM	ECC	M12 X-Coded, F	TSN	USB2.0 M12 A-Coded, F	USB 3.1	mPCIe / M.2	2.5" SSD	mSATA slot	COM	Digital I/O	DP port
24V <sub>DC</sub> ~ 110V <sub>DC</sub>	ITA-580-W9A1	W-11865MLE	8GB	Yes	3	Yes	1	4	2 / 3	Up to 4	1	2	4DI/4DO	2
	ITA-580-W7A1	i7-11850HE	8GB	N/A	3	Yes	1	4	2 / 3	Up to 4	1	2	4DI/4DO	2
	ITA-580-W5A1	i5-11500HE	8GB	N/A	3	Yes	1	4	2 / 3	Up to 4	1	2	4DI/4DO	2
	ITA-580-W0A1	6600HE	8GB	N/A	3	Yes	1	4	2 / 3	Up to 4	1	2	4DI/4DO	2

ITA-580 offers various I/O expansion, for specification customization, please contact your distributor or sales representative.

## Optional List

Part Number	Description
ITA-EM-BA62-00A1E	SuperCap-based, 2400 watt-second, 500,000 charge/discharge cycles, OCP and OVP design, operating temperature from -25 to 55°C, discharge button for maintenance
FRU-ITAUSB-0001	USB cable: M12 A-Coded-> USB Type A,10cm
FRU-ITALAN-0003	LAN cable: M12 X-Coded-> RJ45,10cm
FRU-ITAPWR-0004	M12 K-Coded 5 pin Female power cable 1.5m
FRU-ITAAUD-0001	Audio cable: DB9 (F) -> 3.5mm audio jack, Mic-in and Line-out, 20cm