SD5210-M12X

Intel Gen 10th 10 Cores Xeon, i9 CPU w/ 10 x GbE (2 x RJ45 and 8 x M12 X Coded Connectors)/ 3 x COM/ 3 x DP/ 4 x USB 3.2 Gen 1x1/ 9-48V Input AI GPU Computing

Features

- **Intel GEN 10th 10 Cores Xeon W-1290TE / i9-10900TE**
- **8 x DI, and 4 x DO and 3 x RS-232/422/485**
- **1 x M.2 B key, 1 x M.2 A-E key & 3 x MiniPCIe expansion slots**
- **Dual Hot Swappable SATA Storage RAID 0,1,5**
- **9-48V DC Input and Operating Temp.: -40~70°C**
- **2 x RJ45 Ports and 8 x M12 X Coded Connectors for GbE**
- **Rolling Stock EN 50155 and EN 50121-3-2 certified**

POE   GPS   Wireless   Wide Range   Delay Time

Introduction

The SD5210(G)-M12X is powered by Intel GEN 10th 10 Cores Xeon W-1290TE / i9-10900TE AI GPU Computing. Specifically designed for railway rolling stock applications, it guarantees reliable performance, withstanding environmental disturbances such as severe shock and vibration in railway vehicle applications. SD5210(G)-M12X features 8 x M12 X Coded Connectors for GbE and certified Rolling Stock EN50155 & EN 50121-3-2 that cater to rolling stock's application including traffic safety systems, passenger information systems, broadcasting systems as well as surveillance systems and more. Furthermore, with the new Intel Gen 10 Comet Lake and NVIDIA® GeForce GTX 1650 or GTX 1060 technology's outstanding performance, SD5210(G)-M12X can effectively support smart public transit systems, offering solutions to enhance the operational efficiency of railways and railway station management.
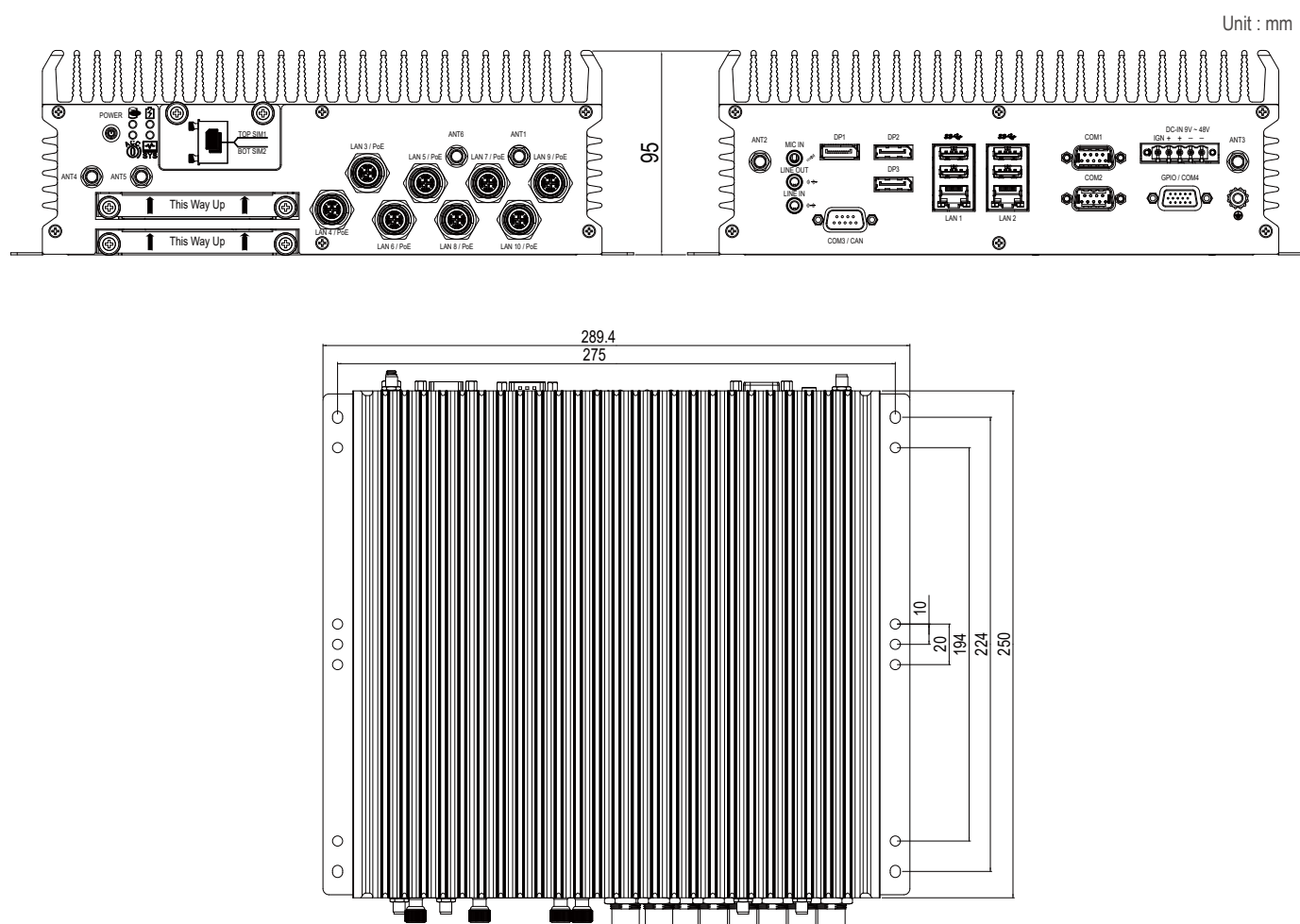
Specifications

System

CPU	Intel Gen10 Xeon W-1290TE (20M Cache 2.0GHz up to 4.6GHz)*
	Intel Gen10 Core i9-10900TE (20M Cache 2.0GHz up to 4.5GHz)
	Intel Gen10 Core i7-10700TE (16M Cache 2.0GHz up to 4.4GHz)
	Intel Gen10 Core i5-10500TE (12M Cache 2.3GHz up to 3.7GHz)
	Intel Gen10 Core i3-10100TE (6M Cache 2.3GHz up to 3.6GHz)
	Intel Gen10 Core G5900TE (4M Cache 3.0GHz)
	* Use only with Intel W480E
Chipset	Q470E / W480E
Memory	2 x DDR4 2666/2933 MHz SO-DIMM up to 64GB (Optional ECC support with Xeon W-1290TE)
LAN Chipset	9 x Intel i210-AT and 1 x i219LM (iAMT9.5 w/ i5, i7 only) Gb/s Ethernet Controllers Onboard Support PXE and WOL
Watchdog	1 ~ 255 Level Reset
TPM	2.0

I/O

Serial Port	3 x RS 232/422/485 (option additional 1 x RS 232/422/485)
USB Port	4 x USB 3.2 Gen 1x1 Ports
LAN	2 x RJ45 Ports and 8 x M12 X coded connectors for GbE (Optional 8 x PoE total Max.120W)
Video Port	3 x DP
DIO Port	8 x DI (5~48VDC) and 4 x DO (5VDC, 100mA)
Audio	1 x Line-out, 1 x Line-in and 1 x Mic-in
Expansion Bus	2 x Full Mini-PCIe Slots, 1 x Mini-PCIe w/ USB interface only for WWAN sharing 2 x SIM Card Sockets with M.2 B Key 3042 slot, 1x M.2 A-E Key 2230 slot, 1 x M.2 B Key 3042 slot w/ 2 x SIM Card Sockets for WWAN

Graphics

CPU Built-in Graphics	Intel® UHD Graphics 630
	Max Resolution (DP1.2) : 4096x2304@60Hz

Storage

Type	2 x 2.5" Drive Bay for SATA Type HDD/SSD RAID 0, 1, 5
	1 x M.2 M key 2280 slot supports NVMe and SATA SSD
	* Thermal heatsink is required for M.2 storage. Please contact sales for more information.

Environmental

Operating Temp.	-40ºC ~ 70ºC w/0.6 m/S airflow
Storage Temp.	-40ºC ~ 80ºC
Relative Humidity	10% RH – 90% RH (non-condensing)
Vibration (with SSD)	IEC60068-2-64, random, 2.5G@5~500Hz, 1hr/axis
	MIL-STD-810G, Method 514.6, Procedure I, Cat.4, Operating
Shock	Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD
Certifications	CE, FCC Class A, E13, EN50155

Power Requirement

Power Input	9V - 48V DC Power Input
Power Protection	Automatics Recovery Short Circuit Protection
Power Mgmt.	Vehicle Power Ignition for Variety Vehicle
Power Off Control	Power off Delay Time Setting by BIOS and Software
Battery Backup (Option)	Internal Battery Kit for 10 Mins Operating (Operating Temp. -20 ~ 60ºC) *UPS backup time varies depending on actual overall system power consumption.

Mechanical

Construction	Aluminum Alloy
Mounting	Wall-mount
Weight	5300g (Barebone)
Dimensions	260(L) x 250(W) x 95(H) mm

All specifications are subject to change without notice.

Dimensions

Unit : mm

Ordering Information

Part Number	SD5210x-M12X-yy (x= P= w/PoE, x= Empty= w/o PoE, yy=Z9= W-1290TE, yy= i9= i9-10900TE, yy= i7= i7-10700TE, yy= i5= i5-10500TE, yy= i3= i3-10100TE, zz= C1= G5900TE)
Description	Intel Gen 10th 10 Cores Xeon, i9 CPU w/ 2 x RJ45 Ports and 8 x M12 X coded connectors for GbE/3 x COM/3 x DP/4 x USB 3.2 Gen 1
State of Origin	Made in China

Optional Accessories

DRAM	DDR4-2933 MHz SO-DIMM, 4GB~32GB, 0~70°C/-40~85°C
SSD	M.2 2280 B-M key NVMe TLC -40~85°C 64GB~1TB w/ Heatsink
	M.2 2280 B-M key SATA TLC -40~85°C 64GB~1TB w/ Heatsink
	2.5 inch SATA TLC -40~85°C 64GB~2TB
Wifi	M.2 2230 A-E key 802.3 a/b/g/n/ac
Modem	M.2 3042 B key LTE module
GPS	MiniPCIe GPS module
CANBUS	MiniPCIe CANBUS module
Battery backup kit	Battery Kit, 5200m/h, -30~60°C, discharge -20~60°C, operating about 10 mins
Power adapter	AC/DC 220W/24V or 280W/24V power adapter

All specifications are subject to change without notice.