SD-5210G Series

10th Gen Intel® Xeon® / Core™ i9 CPU & NVIDIA® Quadro® GPU w/ 10 x GbE (Optional 8 x PoE)/ 3 x COM/ 3 x DP/ 2 x HDMI/ 4 x USB 3.2 5Gbps/ 9-48V Input AI GPU Computing

Features

- **10th Gen Intel® Xeon® W-1290TE / i9-10900TE**
- **NVIDIA® Quadro® RTX A4500/A2000/3000 & NVIDIA® Quadro® T1000**
- **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 Mini PCIe expansion slots**
- **Dual Hot-swappable SATA Storage RAID 0, 1, 5**
- **9~48V DC Power Input**
- **Operating Temp.: -40~70°C**
- **10 x GbE RJ45 (Optional 8 x PoE & 8 x M12 X-Code Connectors)**
- **Rolling Stock EN 50155 & EN 50121-3-2 Certified**

SD-5210(G)

SD-5210(G)-M12X

POE GPS Wireless Wide Range Delay Time

Introduction

10th Gen Intel® Xeon®/Core™ i9 10-cores processor and NVIDIA® Quadro® GPU both powers SD-5210G Series in AI GPU computing. It can provide high computing performance on graphic processing by harnessing the power of its graphics processing unit (GPU). SD-5210G features the dual hot-swappable SATA storage RAID 0, 1, 5, allowing more hardware maintenance and expansion flexibility. SD-5210G offers the best solution for customers, and it can be adapted to various industrial requirements, including Smart Solutions (Smart Patrol, Smart Factory Automation Control System), Surveillance Systems (Bus Surveillance Fleet Management, Outdoor Video Surveillance System), and Visual Management (Automatic License Plate Recognition, Vision Control System, Mining Machines).

Specification

System	
CPU	Intel Gen10 Xeon W-1290TE (20M Cache 1.8GHz 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 5Gbps Ports
LAN	10 x RJ45 Ports for GbE (Optional 8 with M12 X Coded Connectors and 8 x PoE Total Max.120W)
Video Port	3 x DP (Intel built-in GPU), 2 x HDMI Ports (MXM Graphics)
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	1x M.2 A-E Key 2230 slot, 1 x M.2 B Key 3042 Slot w/ 2 x SIM Card Sockets for WWAN
	2 x Full Mini-PCIe Slots and 1 x Full Mini-PCIe Slot w/ USB interface only for WWAN sharing 2 x SIM Card Sockets with M.2 B Key 3042 Slot
Software	
Operating System	Windows 10 64bit, Ubuntu 20.04 64bit

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 representative for more information.
Graphics	
CPU Built-in Graphics	Intel® UHD Graphics 630 for z9/i9/i7/i5/i3, Intel® UHD Graphics 610 for G5900TE
	Max Resolution (DP 1.2) : 4096 x 2340 @ 60Hz
MXM Graphics (Optional)	NVIDIA® Quadro® RTX A4500 Mobile GPU NVIDIA® Quadro® RTX A2000 Mobile GPU NVIDIA® Quadro® RTX 3000 Mobile GPU NVIDIA® Quadro® T1000 Mobile GPU Max Resolution: 1920 x 1080 @ 60Hz without HDMI Audio
Environmental	
Operating Temp.	-40°C ~ 70°C w/0.6 m/s airflow (for barebone system) *The operating temp. varies by accessories installed.
Storage Temp.	-40°C ~ 80°C
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, ECE R118, EN50155, EN45545-2 R25
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 (Optional)	Internal Battery Kit for 10 Mins Operating (Charging Temp. 0~45°C, Discharging Temp. -10~60°C) **UPS backup time varies depending on actual overall system power consumption and battery is required to be charged before using.

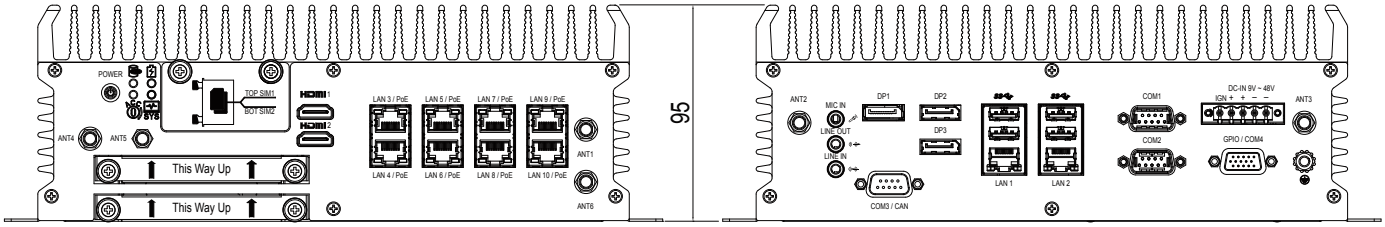
All specifications are subject to change without notice.

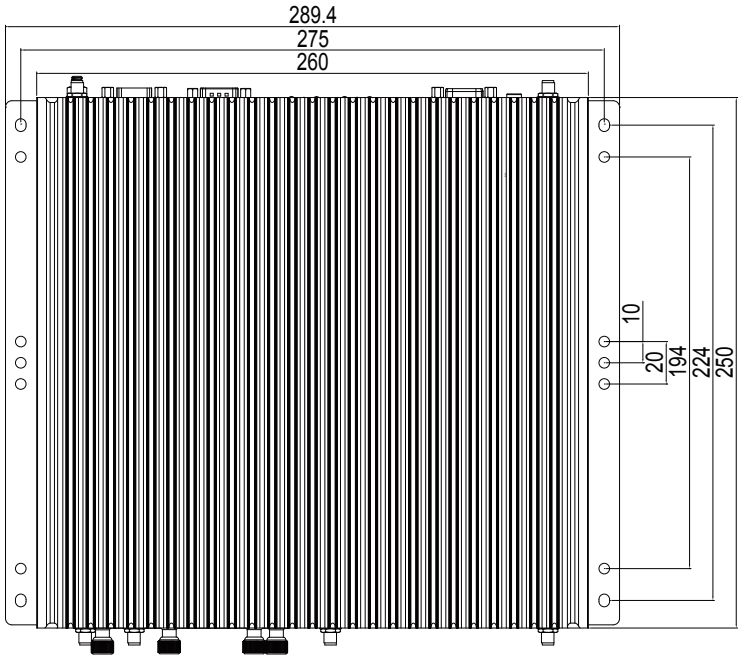
Mechanical	
Construction	Aluminum Alloy
Mounting	Wall-mount
Weight	5300g (Barebone)
Dimensions	260(L) x 250(W) x 95(H) mm

Dimensions

*2 x HDMI for model with optional discrete GPU SKU only.

Unit : mm





Ordering Information

Part Number	SD-5210xyy-zz (x= P= w/PoE, x= Empty= w/o PoE, yy=G6=RTX 3000, yy=G7=T1000, zz=Z9= W-1290TE, zz= i9 = i9-10900TE, zz= i7= i7-10700TE, zz= i5= i5-10500TE, zz= i3= i3-10100TE, zz= C1= G5900TE)
Description	Intel 10th Gen 10 Cores Xeon, i9 CPU w/ NVIDIA® Quadro® GPU Option/ 10 x GbE (Optional 8 x PoE)/ 3 x COM/ 3 x DP/ 2 x HDMI/ 4 x USB 3.2 Gen 5Gbps/ 9-48V Input AI GPU Computing
State of Origin	Made in China

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Optional Graphics

Model	MXM Graphics	Graphic Memory	CUDA Cores	Tensor Cores	RT Cores	System Operating Temp.
SD-5210G6	NVIDIA® Quadro® RTX 3000	6GB GDDR6	1920	240	30	0°C ~ 60°C w/0.6 m/s airflow
SD-5210G7	NVIDIA® Quadro® T1000	4GB GDDR6	896	N/A	N/A	0°C ~ 70°C w/0.6 m/s airflow
SD-5210G8	NVIDIA® Quadro® RTX A4500	16GB GDDR6	5888	184	46	0°C ~ 60°C w/0.6 m/s airflow
SD-5210G9	NVIDIA® Quadro® RTX A2000	8GB GDDR6	2560	80	20	0°C ~ 70°C w/0.6 m/s airflow

Optional Accessories

DRAM	DDR4 SO-DIMM, 4GB~32GB, -40~85°C
SSD	M.2 2280 Key B-M NVMe TLC -40~85°C 64GB~2TB w/ Heatsink
	M.2 2280 Key B-M SATA TLC -40~85°C 64GB~2TB w/ Heatsink
	2.5 inch SATA TLC -40~85°C 64GB~2TB
Wifi	M.2 2230 Key A-E 802.11 a/b/g/n/ac, Wi-Fi 6E
Modem	M.2 3042 Key B 5G & LTE Module
GPS	MiniPCIe GPS Module
CANBUS	MiniPCIe CANBUS Module
Battery backup kit	BAT-5200 Battery Kit, 5200m/h, -30~60°C, Discharge -20~60°C, Operating About 10 Mins
Power adaptor	AC/DC 24V Power Adapter

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