

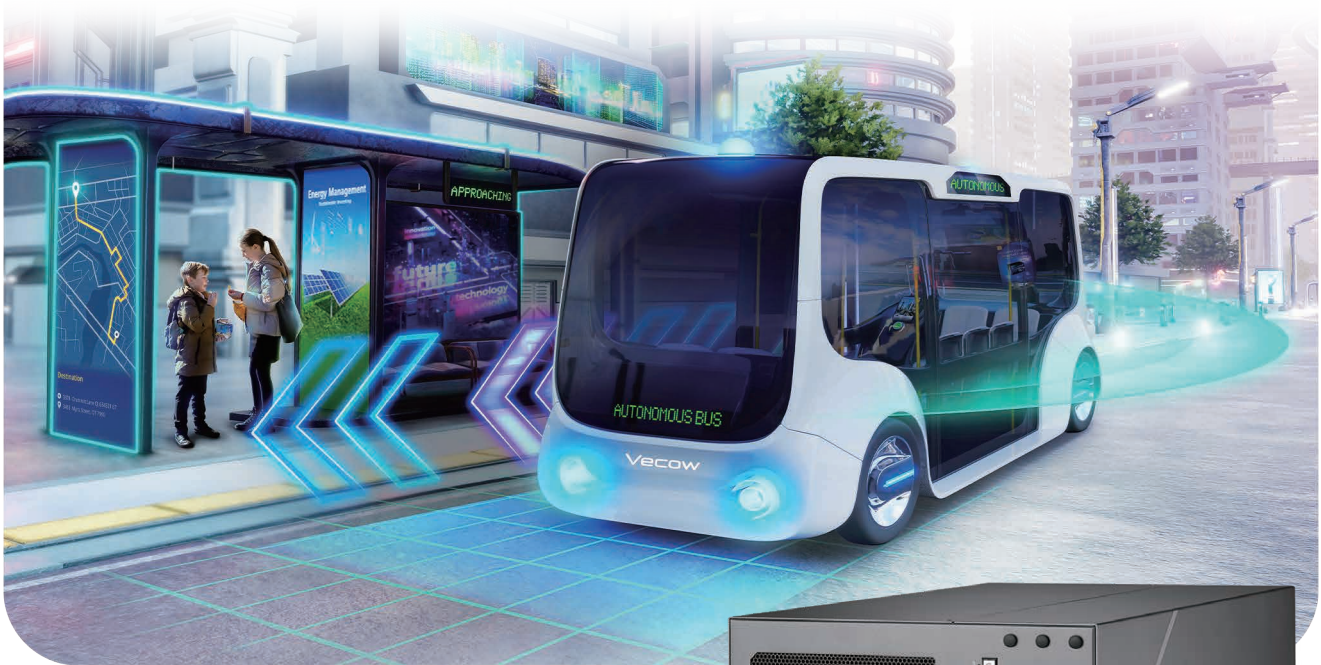
ICS

1000



Server-grade Intel® Xeon® D-2800/D-2700 Processor

Expandable GPU-accelerated System with Discrete Graphics



^ Autonomous Driving

- Server-level Platform : Intel® Xeon® D-2800/D-2700 Processor (Eddy Lake D)
- Max 1800W power budget supports dual 900W NVIDIA® or AMD 2-slot full-length graphics card
- Flexible Power Input Design with Software Ignition Control : DC 16V to 50V or AC 220V
- 2 10G SFP+, 4 GigE LAN, 4 USB, 16-bit Isolated DIO
- Max 6 PCIe expansions : PCIe 4.0 x16, PCIe x8, PCIe x2
- Multiple 5G/WiFi 6/4G/LTE/GPRS/UMTS, 2 Front-access 2.5" SSD/HDD Tray
- Supports Intel® vPro, Intel® QAT (QuickAssist Technology), and TPM 2.0
- Optional supports TSN and Intel® TCC
- Fully supports OpenVINO™ Toolkit for optimized performance and deep learning inference
- Supports remote devices Out-Of-Band management functions powered by Allxon



▼ Robotic Control



^ Public Security

intel
partner
Gold
IoT Solutions

OpenVINO™



Vecow

Specifications

System

Processor	- 16-core Intel® Xeon® D-2876NT Processor (Eddy Lake D HCC) - 12-core Intel® Xeon® D-2752TER Processor (Ice Lake D HCC)
BIOS	AMI
SIO	IT8786E
Memory	8 DDR4 UDIMM/RDIMM 2933MHz, up to 512GB (ECC UDIMM only)
OS	Windows 10, Windows Server, Linux

I/O Interface

Serial	4 COM RS-232/422/485
USB	- 2 USB 3.0 Type-A - 2 USB 2.0 Type-A
Isolated DIO	16 Isolated DIO : 8 DI, 8 DO
Display	VGA : Up to 1920 x 1080 @60Hz
LED	Power, HDD, Wireless, OOB
SIM Card	1 External Nano SIM Card Socket

Expansion

PCIe	ICS-1660 : 6 PCIe x16 slots with 4 PCIe 4.0 x8, 1 PCIe x8, 1 PCIe x2 signal ICS-1640 : 4 PCIe x16 slots with 2 PCIe 4.0 x16, 1 PCIe x8, 1 PCIe x2 signal
M.2	- 1 M.2 Key B Socket (3042/3052/2280, PCIe x2/USB 3.0) - 1 M.2 Key E Socket (2230, PCIe x1)

Storage

SATA	2 SATA III (6Gbps) support software RAID 0, 1
M.2	1 M.2 Key M Socket (2280/22110, PCIe x1/SATA)
Storage Device	2 Front-access 2.5" SSD/HDD Tray

Ethernet

LAN 1 to LAN 4	Intel® I350 GigE LAN
LAN 5 to LAN 6	10G SFP+ LAN by Intel® Xeon® SoC (OS Windows Server support only)

Power

Power Input	ICS-1600 : DC 16V to 50V ICS-1600A : AC 90V to 240V (2000W @220V for dual discrete graphics card operation)
Power Interface	ICS-1600 : 4-pin Terminal Block : V+, V+, V-, V- ICS-1600A : 3-pin C14-type AC Plug
Ignition Control	16-mode Software Ignition Control
Remote Switch	3-pin Terminal Block

Out-of-Band Management

MCU	Nuvoton NUC980
Interface	OOB LAN, 10/100Mb Ethernet LAN, RJ45 Connector
Remote Management	Support Remote Power ON/OFF, Reset and Power Cycling

Others

TPM	Infineon SLB9670 supports TPM 2.0, SPI Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
Smart Mgmt.	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

Mechanical

Dimensions	243.5mm x 271.3mm x 390.0mm (9.58" x 10.68" x 15.35")
Weight	10.2kg (22.48lb)
Mounting	Wallmount by mounting bracket

Environment

Operating Temperature	ICS-1600 : -25°C to 45°C ICS-1600A : -5°C to 45°C
Storage Temperature	ICS-1600 : -40°C to 85°C (-40°F to 185°F) ICS-1600A : -20°C to 85°C (-4°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @45°C
Shock/Vibration	- Operating, MIL-STD-810G, Procedure I - Railway Applications : Rolling Stock Equipment, Shock and Vibration Tests
EMC	CE, FCC, EN50155, EN50121-3-2

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Order Information

Model	LAN		PCIe			SSD Tray	Power Input
	10G SFP+	1G	x16	x8	x2		
ICS-1640-2876NT	2	4	2	1	1	2	DC
ICS-1640A-2876NT							AC
ICS-1660-2876NT			-	5			DC
ICS-1660A-2876NT							AC
ICS-1640-2752TER			2	1			DC
ICS-1640A-2752TER							AC
ICS-1660-2752TER			-	5			DC
ICS-1660A-2752TER							AC

Accessories

DDR4 64G	Certified DDR4 64GB 2933MHz RAM (RDIMM only)
DDR4 32G	Certified DDR4 32GB 2933MHz RAM
DDR4 16G	Certified DDR4 16GB 2933MHz RAM
DDR4 8G	Certified DDR4 8GB 2933MHz RAM
PWS-1000W-24V	1000W, 24V, 90V AC to 264V AC Power Supply
PWS-1500W-24V	1500W, 24V, 90V AC to 264V AC Power Supply
PWS-3000W-24V	3000W, 24V, 90V AC to 264V AC Power Supply
TMK2-20P-100	Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
TMK2-20P-500	Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
TMB-TMBK-20P	Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
M.2 Storage Module	M.2 Key M/Key B Storage Module
5G Module	5G Module with Antenna
4G Module	4G/GPS Module with Antenna
WiFi & Bluetooth	WiFi & Bluetooth Module with Antenna

Dimensions & Drawing

Unit : mm (inch)

