ACS-1000

Qualcomm® Dragonwing IQ9 Series High-Performance Automotive Computing System

Features

- Advanced Qualcomm® IQ9 platform delivers up to 100 TOPS AI performance
- Supports Linux (Yocto-based BSP) on Qualcomm® IQ9 platform
- Supports up to 16 GMSL2 cameras or up to 16 analog cameras
- 2 × 2.5GbE LAN and 4 × GigE PoE+ Ports
- Supports up to 3 × DisplayPort outputs
- Supports 5G / 4G LTE / Wi-Fi / Bluetooth (Optional)
- M.2 expansion for NVMe storage and wireless modules
- Designed for automotive and intelligent edge AI applications

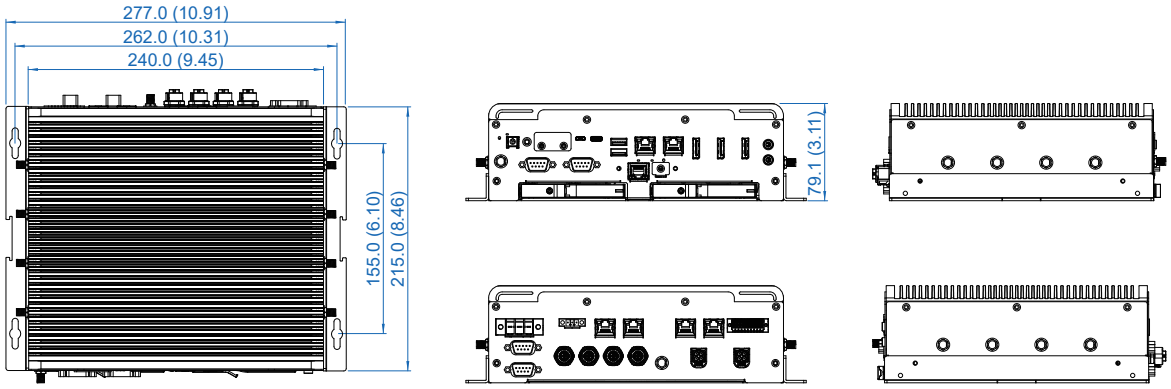
Specifications

System	
Processor	Qualcomm® Dragonwing IQ9075 System-On-Module
CPU	Octa-Core Kyro Gen 6
GPU	Adreno™ 663 GPU
Memory	Up to 36 GB LPDDR5 @ 3200MHz
OS	Qualcomm Linux Yocto
I/O Interface	
Serial	2 COM RS232/422/485 DB9 Connector (by cable)
USB	▪ 2 USB 3.1 Type A ▪ 1 USB 3.1 Type C (Image Port) ▪ 1 Micro USB (Debug console)
Display	3 DisplayPort
CAN Bus	2 Isolated CAN-FD DB9 Connector (by cable)
DIO	16-bit Isolated DIO (8DI, 8DO)
SIM	2 Nano SIM Slot
Storage	▪ 2 2.5" SSD Tray ▪ 1 Micro SD
Audio	1 Mic-in/ Line-out Header
Button	▪ 1 Power Button with 2-color LED ▪ 1 Reset Button ▪ 1 Force Recovery Button
LED	▪ 1 Power LED (2 color) ▪ 1 HDD LED
Antenna	▪ 2 Rear Antenna Hole ▪ 8 Side Antenna Hole
Expansion	
M.2	▪ 2 M.2 Key B Socket (3042/3052, USB 3.0, USB 2.0, with dual SIM) ▪ 1 M.2 Key E Socket (2230/3042, PCIe x1, USB 2.0,UART)
Storage	
M.2	1 M.2 Key M Socket (2280, PCIe x4)
Camera	
TVI	M12 connectors
GMSL	Mini Fakra-z connectors

Ethernet	
LAN 1 to LAN 2	2.5GigE LAN RJ45 Connector (Optional X-coded M12 by rework)
LAN 3 to LAN 6	GigE PoE+ LAN by Intel I350, RJ45 (Optional X-coded M12 by rework)
Power	
Power Input	9V to 50V DC-IN (9V for power-on only)
Power Interface	3-pin Terminal Block V+, V-
Ignition Control	16-mode Software Ignition Control
Shutdown Mode/PW Consumption	MCU Power source 13mA
Others	
OOB	Out-of-band management by Nuvoton NUC980 (by OOB-100, Optional)
TPM	SLB 9673 XU2.0 FW26.10 with I2C interface (Optional)
Volt & Current Sensor	Detect DC-IN Volt & Current (UART to OOB)
Mechanical	
Dimensions	240mm x 215mm x 79.1mm (9.45'' x 8.46'' x 3.11'')
Weight	5.5 kg (12.13lb)
Mounting	Wallmount
Environment	
Operating Temperature	-40°C to 70°C
Storage Temperature	-40°C to 85°C
Humidity	5% to 95% Humidity, Non-condensing
Relative Humidity	95% at 70°C
Shock and Vibration	MIL-STD-810G
EMC	CE, FCC, EN50155, EN50121-3-2

Dimensions

Unit : mm/ inch



Order Information

ACS-1100	ACS-1100, Qualcomm IQ9075M, on board 36GB RAM, 128GB UFS, 2 2.5GigE LAN, 2 USB 3.1, 3DP, 2 COM, 2 isolated CAN-FD, 4 M.2, 2 Nano SIM, 4 PoE, 8 TVI M12
ACS-1100-OOB	ACS-1100-OOB. Qualcomm IQ9075M, on board 36GB RAM, 128GB UFS, 2 2.5GigE LAN, 2 USB 3.1, 3DP, 2 COM, 2 isolated CAN-FD, 4 M.2, 2 Nano SIM, 4 PoE, Allxon OOB Module, 8 TVI M12
ACS-1200	ACS-1200, Qualcomm IQ9075M, on board 36GB RAM, 128GB UFS, 2 2.5GigE LAN, 2 USB 3.1, 3DP, 2 COM, 2 isolated CAN-FD, 4 M.2, 2 Nano SIM, 4 PoE, 16 GMSL
ACS-1200-OOB	ACS-1200-OOB, Qualcomm IQ9075M, on board 36GB RAM, 128GB UFS, 2 2.5GigE LAN, 2 USB 3.1, 3DP, 2 COM, 2 isolated CAN-FD, 4 M.2, 2 Nano SIM, 4 PoE, Allxon OOB Module, 16 GMSL
ACS-1300	ACS-1300, Qualcomm IQ9075M, on board 36GB RAM, 128GB UFS, 2 2.5GigE LAN, 2 USB 3.1, 3DP, 2 COM, 2 isolated CAN-FD, 4 M.2, 2 Nano SIM, 4 PoE, 4 TVI M12, 8 GMSL
ACS-1300-OOB	ACS-1300-OOB, Qualcomm IQ9075M, on board 36GB RAM, 128GB UFS, 2 2.5GigE LAN, 2 USB 3.1, 3DP, 2 COM, 2 isolated CAN-FD, 4 M.2, 2 Nano SIM, 4 PoE, Allxon OOB Module, 4 TVI M12, 8 GMSL

Accessories

PWA-160WB-WT	160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -40°C to +70°C
PWA-180WB	180W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
PWA-280WB-WT	280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -40°C to +70°C
GMSL Camera Kit	GMSL Camera with mini Fakra-Z connector
TVI Camera Kit	TVI Camera with M12 connector
M.2 Storage Module	M.2 Key M/Key B PCIe Storage Module
5G Module	5G Module with Antenna
4G Module	4G/GPS Module with Antenna
WiFi & Bluetooth	WiFi & Bluetooth Module with Antenna

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