



IN-VEHICLE COMPUTER

ACO-6000-KBL-16XM12

Surveillance Applied Computer with 6th/7th Gen Intel® Core™ Processor and Q170 PCH, 2x LAN, 16x M12 LAN

Features

- LGA 1151 socket for 6th /7th Gen. Intel® Core™ i7/i5/i3 or Pentium® / Celeron® Desktop Processor
- Intel® Q170 Chipset
- 2x 260-pin DDR4 SODIMM. Max up to 32GB
- Triple independent display supported by 1x DVI-I and 2x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 16x Intel® GbE with M12 connector
- 4x 2.5" SATA HDD bay and 2x mSATA supporting RAID 0, 1, 5, 10
- 3x Full-size mini PCIe for communication or expansion modules, 3x SIM socket
- 5x RS-232/422/485 (w/ 3x internal), 6x USB 3.0, 2x USB 2.0 (internal)
- 8x DI + 8x DO with Isolation
- 2x Universal Bracket (For mini PCIe application)
- 9 to 48VDC wide range power input supporting AT/ATX mode
- -25°C to 70°C extended operating temperature
- Power ignition management

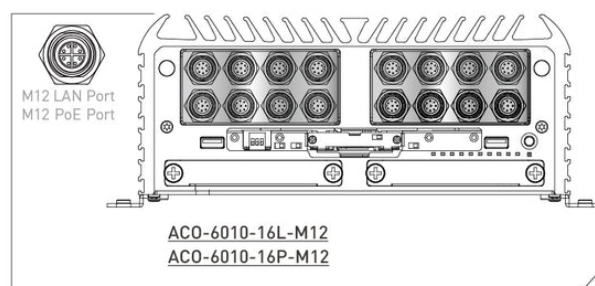
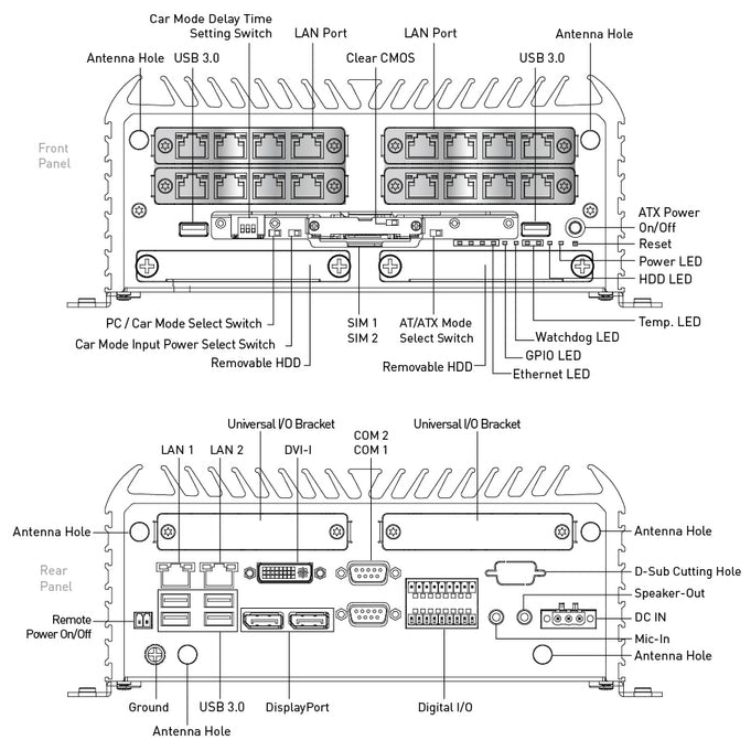


Specifications

System	
Processor	Support 6th & 7th Gen Intel® Core™ i7 / i5 / i3 / Pentium® / Celeron® Desktop Processor (LGA 1151)
	• 7th Gen Intel® Core™ i7-7700T, Quad Core, 8MB cache, up to 3.8 GHz • 7th Gen Intel® Core™ i5-7500T, Quad Core, 6MB cache, up to 3.3 GHz • 7th Gen Intel® Core™ i3-7101TE, Dual Core, 3MB Cache, 3.4 GHz • 6th Gen Intel® Core™ i7-6700TE, Quad Core, 8MB Cache, up to 3.4 GHz • 6th Gen Intel® Core™ i5-6500TE, Quad Core, 6MB Cache, up to 3.3 GHz • 6th Gen Intel® Core™ i3-6100TE, Dual Core, 4MB Cache, 2.7 GHz • Intel® Pentium® G4400TE, Dual Core, 3MB Cache, 2.4 GHz • Intel® Celeron® G3900TE, Dual Core, 2MB Cache, 2.3 GHz
System Chipset	Intel® Q170 Express Chipset
LAN Chipset	• GbE1: Intel® I210-AT (Support Wake-on-LAN and PXE) • GbE2: Intel® I219LM (Support Wake-on-LAN and PXE) • GbE3~GbE18: Intel® I350-AM4
Audio Codec	Realtek ALC888S
System Memory	2x 260-Pin DDR4 1866/2133MHz SODIMM. Max. up to 32GB
BIOS	AMI 128Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 1.2
Display	
Display Port	2x DP
DVI	1x DVI-I
Multiple Display	Triple Display
Storage	
mSATA	2x mSATA (shared by 2x Mini PCIe)
SIM Socket	2x External SIM socket 1x Internal SIM Socket
SSD/HDD	2x Internal 2.5" SATA HDD Bay 2x Hotswap 2.5" SATA HDD Bay Support RAID 0, 1, 5, 10
Expansion	
Mini PCIe	3x Full-size Mini PCIe
Expansion Modules	4-port GbE module with Intel® I350-AM4 Chipset, RJ-45 or M12 connector (PoE optional)
I/O	
Audio	1x Mic-in, 1x Line-out
COM	5x RS-232/422/485
DIO	8 in / 8 out (Isolated)
LAN	2x GbE RJ45 16x GbE M12 (Module)
PoE	16x IEEE 802.3at (25.5W) GbE M12 (Module)
Universal I/O Bracket	2x Universal I/O Bracket (Base Model)
USB	6x USB 3.0, 2x USB 2.0
Others	6x WiFi Antenna Holes 1x Power Switch (front), 1x AT/ATX Switch (front) PC/Vehicle Mode, Vehicle Voltage, Delay Off Time (front) 1x Remote Power On/Off (rear)
Operating System	
Windows	6th Gen CPU: Windows 10, Windows 7, WES7 7th Gen CPU: Windows 10
Linux	Linux kernel 4.X

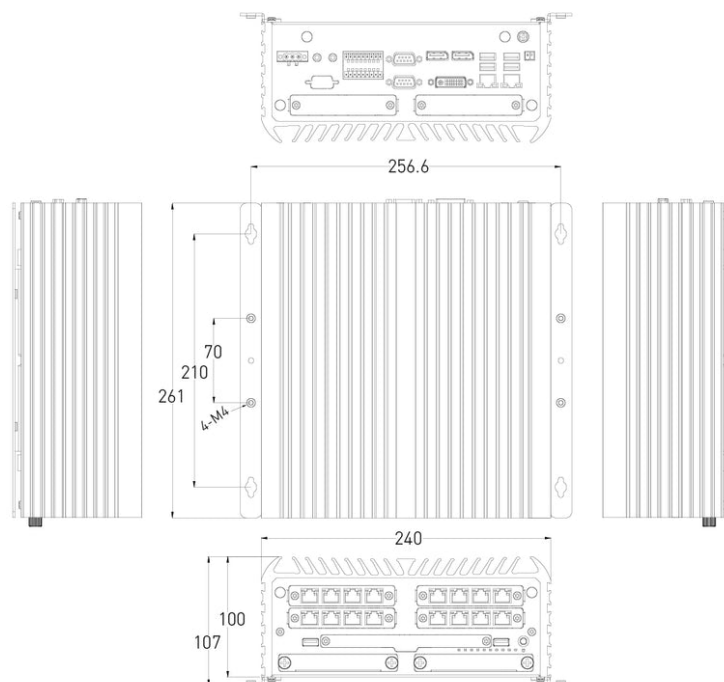
Power	
Power Adapter	220W, AC/DC 24V/5A
Power Mode	AT, ATX
Power Supply Voltage	9 ~ 48 VDC
Power Connector	3-pin Terminal Block
Power Protection	Over-Voltage Protection (OVP) Over-Current Protection (OCP) Reverse Polarity Protection (RPP)
Environment	
Operating Temperature	-13°F ~ 158°F (-25°C ~ 70°C)
Storage Temperature	-22°F ~ 185°F (-30°C ~ 85°C)
Relative Humidity	10% to 95% (non-condensing)
Certification	CE, FCC Class A, E-Mark, EMC Conformity with EN50155 & EN50121-3-2
Vibration	5 Grms, 5 ~ 500 Hz, 0.5 hr/axis (SSD) 1 Grms, 5 ~ 500 Hz, 0.5 hr/axis (HDD)
Shock	50G, half-sine, 11 ms (SSD)
Physical	
Dimensions	240 (W) x 261 (D) x 100 (H) mm
Weights	5.34 ~6.82 kg
Construction	Extruded aluminum with heavy duty metal
Mounting Options	Wall Mount

External I/O Mechanical Layout



Dimension

Unit: mm



Available Models

Model No.	Description
ACO-6000-KBL-16L-M12-P	In-Vehicle Computer with 7th Gen Intel® Core™ Processor and Q170 PCH, 2x LAN, 16x M12 LAN
ACO-6000-KBL-16P-M12-P	In-Vehicle Computer with 7th Gen Intel® Core™ Processor and Q170 PCH, 2x LAN, 16x M12 PoE LAN

Optional Accessories

Model No.	Description
1-E09A22801	Adapter AC/DC 24V/11.67A 280W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A22102	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch
999930	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

Packing List

- 1x ACO-6000-KBL-16XM12
- 1x Utility DVD Driver
- 1x Wall Mount Kit
- 1x Accessory Kit

Compliances and Standards

Shock	50G, half-sine, 11 ms (SSD) IEC60068-2-27:2008 Designed to comply with MIL-STD-810G Method 516.7 Procedure I
Vibration	5 Grms, 5 ~ 500 Hz, 0.5 hr/axis (SSD) 1 Grms, 5 ~ 500 Hz, 0.5 hr/axis (HDD) IEC60068-2-64:2008 Designed to comply with MIL-STD-810G Method 514.7 Procedure I
Operating Temperature	-13°F ~ 158°F (-25°C ~ 70°C) IEC60068-2-1:2007 (Cold test procedure) IEC60068-2-2:2007 (Dry heat test procedure) IEC60068-2-3:2007 (Damp heat, steady state, test procedure) IEC60068-2-14:2009 (Wide temperature range thermal shock)
EMI	• FCC Class A (47 CFR part 15.109 and part 15.107) • CE • ICES-003 • UKCA
EMC	• Railway EMC Compliance - EN 50155: 2017 - EN 50121-1: 2017 - EN 50121-3-2: 2016 • Industrial EMC Compliance - EN 61000-4-2: 2009 - EN IEC 61000-4-3: 2020 - EN 61000-4-4: 2012 - EN 61000-4-5: 2014 +A1: 2017 - EN 61000-4-6: 2014 • E-Mark (E13)

Exports And Tariff Codes

ECCN	5A992.c
HTS	8471.50.0150
ScheduleB	84.71

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