



FANLESS EMBEDDED SYSTEMS

ACO-3000 series

Vehicle Applied Fanless Embedded System with 5th Gen Intel® Broadwell Core™ i5/i3 or Celeron® Processor, 2x LAN



FEATURES

- Intel® Core™ processor i5-5350U, up to 2.9GHz / i3-5010U, 2.1GHz or Celeron® 3765U, 1.9GHz
- 1x 204-pin DDR3L SODIMM. max up to 8GB
- Triple independent display supported by 1x DVI-I and 1x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x 2.5" SATA HDD bay and 2x mSATA supporting RAID 0, 1, 5, 10
- 2x full-size mini PCIe for communication or expansion modules, 2x SIM socket
- 1x universal bracket (for mini PCIe application)
- 4x RS-232/422/485, 2x USB 3.0, 2x USB 2.0
- 4x DI + 4x DO with isolation
- 9 to 48VDC wide range power input supporting AT/ATX mode
- -40°C to 70°C extended operating temperature
- Power ignition management

SPECIFICATIONS

System

Processor	5 th Gen Intel® Core™ i5-5350U Processor, Dual Core, 3MB Cache, up to 2.9 GHz 5 th Gen Intel® Core™ i3-5010U Processor, Dual Core, 3MB Cache, 2.1 GHz 5 th Gen Intel® Celeron® Processor 3765U, Dual Core, 2MB Cache, 1.9 GHz
System Chipset	SoC integrated
LAN Chipset	GbE1: Intel® I210-AT (Support Wake-on-LAN and PXE) GbE2: Intel® I218-LM (Support Wake-on-LAN and PXE) GbE3-GbE6: Intel® I210-AT (Optional)
Audio Codec	Realtek ALC888S
System Memory	1x 204-Pin DDR3L 1333/1600MHz SODIMM. Max. up to 8GB
BIOS	AMI 128Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset

Display

VGA	Yes (by optional split cable)
DVI	1x DVI-I
DisplayPort	1x DisplayPort
Multiple Display	Triple Display

Storage

SSD/HDD	1x Internal 2.5" SATA HDD Bay 1x Removable 2.5" SATA HDD Bay Support RAID 0, 1, 5, 10
mSATA	2x mSATA (shared by 2x Mini PCI Express)
SIM Socket	2x External SIM socket

Expansion

Mini PCI Express	2x Full-size Mini PCIe
4-Port GbE (Optional)	Up to one 4-port GbE module with Intel® I210-AT Chipset RJ-45 or M12 connector with PoE option One universal I/O slot occupied for one 4-port module

I/O

COM	4x RS-232/422/485
USB	2x USB 3.0, 2x USB 2.0
LAN	2x RJ45
Audio	1x Mic-in, 1x Speaker-out
DIO	4 in / 4 out (Isolated)
Universal I/O Bracket	1x Universal I/O Bracket (By mini PCIe interface)
Others	4x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off

Operating System

Windows	Windows 10, Windows 8.1, WES8.1, Windows 7, WES7
Linux	Linux kernel 3.X

Power

Power Mode	AT, ATX
Power Supply Voltage	9~48VDC
Power Ignition Sensing	Power Ignition Management
Power Connector	3-pin Terminal Block
Power Adaptor	Optional AC/DC 12V/5A, 60W Optional AC/DC 24V/9.2A, 220W
Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection

Environment

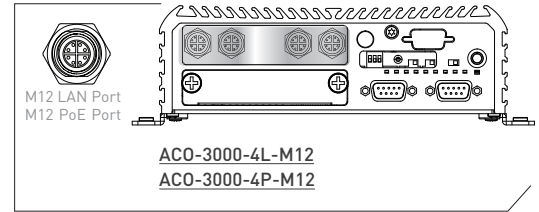
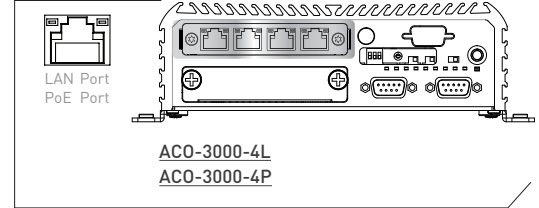
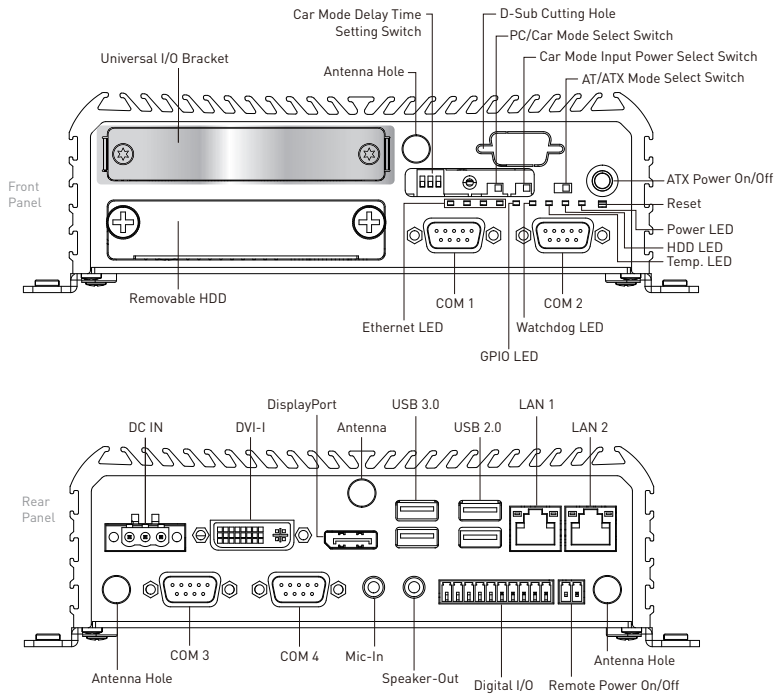
Operating Temp.	-40°C to 70°C
Storage Temp.	-40°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Vibration	With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 50G, half sine, 11ms
Standards / Certification	CE, FCC Class A, E-Mark, EMC Conformity with EN50155 & EN50121-3-2

Physical

Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	185 (W) x 197 (D) x 57.4 (H) mm
Weight	2.16 ~ 2.54 kg
Mounting	Wall Mounting DIN-Rail Mounting(Optional)

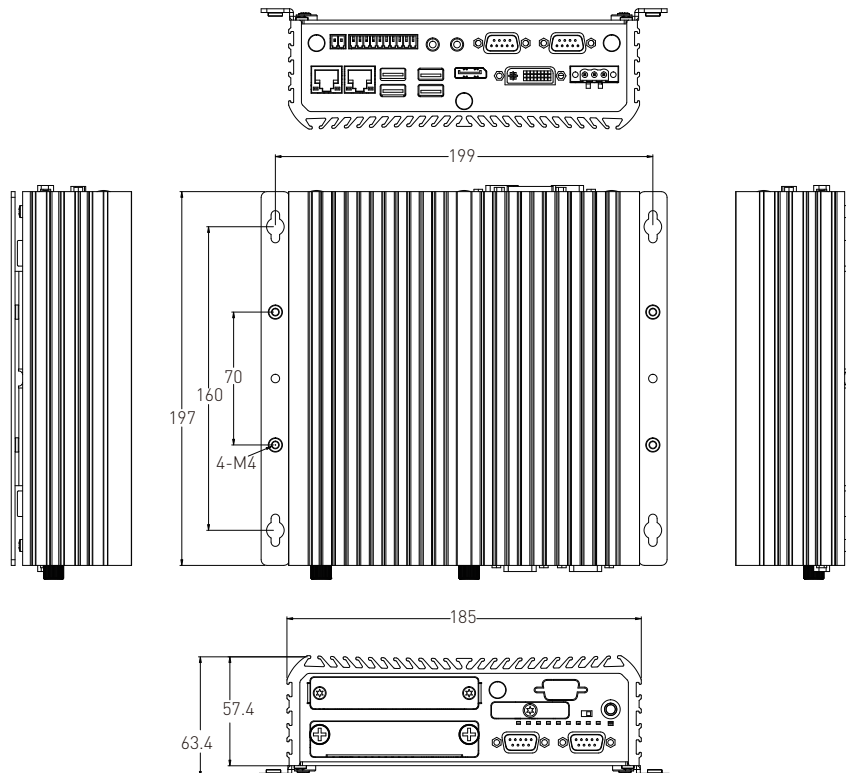
* All specifications and photos are subject to change without notice.

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



ORDERING INFORMATION

MODEL NO.	DESCRIPTION
1-E09A06007	Adapter AC/DC 12V 5A 60W 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
SFICBL022	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

PACKING LIST

- 1x ACO-3000 Series Embedded System
- 1x Utility DVD Driver
- 1x Wall Mount Kit
- 1x Accessory Kit
- 1x DVI to VGA Adapter

AVAILABLE MODELS

MODEL NO.	DESCRIPTION
ACO-3000-5350U	Vehicle Applied Fanless Embedded System with Intel® Core™ i5-5350U Processor, 2x LAN
ACO-3000-5010U	Vehicle Applied Fanless Embedded System with Intel® Core™ i3-5010U Processor, 2x LAN
ACO-3000-3765U	Vehicle Applied Fanless Embedded System with Intel® Celeron® 3765U Processor, 2x LAN
ACO-3000-4L-5350U	Vehicle Applied Fanless Embedded System with Intel® Core™ i5-5350U Processor, 6x LAN
ACO-3000-4L-5010U	Vehicle Applied Fanless Embedded System with Intel® Core™ i3-5010U Processor, 6x LAN
ACO-3000-4L-3765U	Vehicle Applied Fanless Embedded System with Intel® Celeron® 3765U Processor, 6x LAN
ACO-3000-4L-M12-5350U	Vehicle Applied Fanless Embedded System with Intel® Core™ i5-5350U Processor, 2x LAN, 4x M12 LAN
ACO-3000-4L-M12-5010U	Vehicle Applied Fanless Embedded System with Intel® Core™ i3-5010U Processor, 2x LAN, 4x M12 LAN
ACO-3000-4L-M12-3765U	Vehicle Applied Fanless Embedded System with Intel® Celeron® 3765U Processor, 2x LAN, 4x M12 LAN
ACO-3000-4P-5350U	Vehicle Applied Fanless Embedded System with Intel® Core™ i5-5350U Processor, 2x LAN, 4x PoE
ACO-3000-4P-5010U	Vehicle Applied Fanless Embedded System with Intel® Core™ i3-5010U Processor, 2x LAN, 4x PoE
ACO-3000-4P-3765U	Vehicle Applied Fanless Embedded System with Intel® Celeron® 3765U Processor, 2x LAN, 4x PoE
ACO-3000-4P-M12-5350U	Vehicle Applied Fanless Embedded System with Intel® Core™ i5-5350U Processor, 2x LAN, 4x M12 PoE
ACO-3000-4P-M12-5010U	Vehicle Applied Fanless Embedded System with Intel® Core™ i3-5010U Processor, 2x LAN, 4x M12 PoE
ACO-3000-4P-M12-3765U	Vehicle Applied Fanless Embedded System with Intel® Celeron® 3765U Processor, 2x LAN, 4x M12 PoE