



FANLESS EMBEDDED SYSTEMS

## ACO-6011P series

Surveillance Applied System with LGA 1151 for Intel® 6<sup>th</sup>/7<sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 1x PCI Expansion



### SPECIFICATIONS

#### System

|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor | Support 6 <sup>th</sup> & 7 <sup>th</sup> Gen Intel® Core™ i7 / i5 / i3 / Pentium® / Celeron® Desktop Processor (LGA 1151)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|           | <ul style="list-style-type: none"> <li>- 7<sup>th</sup> Gen Intel® Core™ i7-7700T, Quad Core, 8MB cache, up to 3.8 GHz</li> <li>- 7<sup>th</sup> Gen Intel® Core™ i5-7500T, Quad Core, 6MB cache, up to 3.3 GHz</li> <li>- 7<sup>th</sup> Gen Intel® Core™ i3-7101TE, Dual Core, 3MB Cache, 3.4 GHz</li> <li>- 6<sup>th</sup> Gen Intel® Core™ i7-6700TE, Quad Core, 8MB cache, up to 3.4 GHz</li> <li>- 6<sup>th</sup> Gen Intel® Core™ i5-6500TE, Quad Core, 6MB Cache, up to 3.3 GHz</li> <li>- 6<sup>th</sup> Gen Intel® Core™ i3-6100TE, Dual Core, 4MB Cache, 2.7 GHz</li> <li>- Intel® Pentium® G4400TE, Dual Core, 3MB Cache, 2.4 GHz</li> <li>- Intel® Celeron® G3900TE, Dual Core, 2MB Cache, 2.3 GHz</li> </ul> |

|                |                                                                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| System Chipset | Intel® Q170 Express Chipset                                                                                                                       |
| LAN Chipset    | GbE1: Intel® I210-AT (Support Wake-on-LAN and PXE)<br>GbE2: Intel® I219LM (Support Wake-on-LAN and PXE)<br>GbE3-GbE10: Intel® I350-AM4 (Optional) |
| 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 2.0                                                                                                                                           |

#### Display

|                  |                               |
|------------------|-------------------------------|
| VGA              | Yes (by optional split cable) |
| DVI              | 1x DVI-I                      |
| DisplayPort      | 2x DisplayPort                |
| Multiple Display | Triple Display                |

#### Storage

|            |                                                                                             |
|------------|---------------------------------------------------------------------------------------------|
| SSD/HDD    | 2x Internal 2.5" SATA HDD Bay<br>2x Removable 2.5" SATA HDD Bay<br>Support RAID 0, 1, 5, 10 |
| mSATA      | 2x mSATA (Shared by 2x Mini PCIe)                                                           |
| SIM Socket | 2x External SIM socket, 1x Internal SIM socket                                              |

#### Expansion

|                       |                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------|
| Mini PCI Express      | 3x Full-size Mini PCIe                                                                                                   |
| PCI                   | 1x PCI                                                                                                                   |
| 4-Port GbE (Optional) | 4-port GbE module with Intel® I350-AM4 Chipset, RJ-45 or M12 connector (PoE optional)<br>Occupied one Universal I/O Slot |
| 2-Port GbE (Optional) | 2-Port RJ45 10GbE with Intel X710-AT2 Chipset<br>Occupied one Universal I/O Slot                                         |
| 4-Port USB (Optional) | 4-Port USB with Renesas uPD720201K8 host controller<br>Occupied one Universal I/O Slot                                   |

### FEATURES

- LGA 1151 socket for 6<sup>th</sup>/7<sup>th</sup> 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
- 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
- 2x universal bracket (for mini PCIe application)
- 5x RS-232/422/485 (w/ 3x internal), 6x USB 3.0, 2x USB 2.0 (internal), TPM 2.0
- 1x PCI expansion
- 8x DI + 8x DO with isolation
- 9 to 24VDC wide range power input supporting AT/ATX mode
- -25°C to 70°C extended operating temperature
- Power ignition management

|                       |                                                                                    |
|-----------------------|------------------------------------------------------------------------------------|
| Card Dimension        | 235 (L) x 112 (H) mm                                                               |
| I/O                   |                                                                                    |
| COM                   | 2x RS-232/422/485, 3x RS-232/422/485 (internal)                                    |
| USB                   | 6x USB 3.0, 2x USB 2.0 (internal)                                                  |
| LAN                   | 2x RJ45                                                                            |
| Audio                 | 1x Mic-in, 1x Speaker-out                                                          |
| DIO                   | 8 in / 8 out (Isolated)                                                            |
| Universal I/O Bracket | 3x Universal I/O Bracket (By mini PCIe interface)                                  |
| Others                | 6x WiFi Antenna Holes<br>1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off |

### Operating System

|         |                                                                                             |
|---------|---------------------------------------------------------------------------------------------|
| Windows | 6 <sup>th</sup> Gen CPU: Windows 10, Windows 7, WES7<br>7 <sup>th</sup> Gen CPU: Windows 10 |
| Linux   | Linux kernel 4.X                                                                            |

### Power

|                        |                                                                                      |
|------------------------|--------------------------------------------------------------------------------------|
| Power Mode             | AT, ATX                                                                              |
| Power Supply Voltage   | 9~24VDC                                                                              |
| Power Ignition Sensing | Power Ignition Management                                                            |
| Power Connector        | 3-pin Terminal Block                                                                 |
| Power Adaptor          | Optional AC/DC 24V/5A, 120W<br>Optional AC/DC 24V/9.2A, 220W                         |
| Power Protection       | OVP (Over Voltage Protection)<br>OCP (Over Current Protection)<br>Reverse Protection |

### Environment

|                           |                                                                                        |
|---------------------------|----------------------------------------------------------------------------------------|
| Operating Temp.           | -25°C to 70°C                                                                          |
| Storage Temp.             | -30°C to 85°C                                                                          |
| Relative Humidity         | 10% to 95% (non-condensing)                                                            |
| Vibration                 | With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis<br>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,<br>EMC Conformity with EN50155 & EN50121-3-2                  |

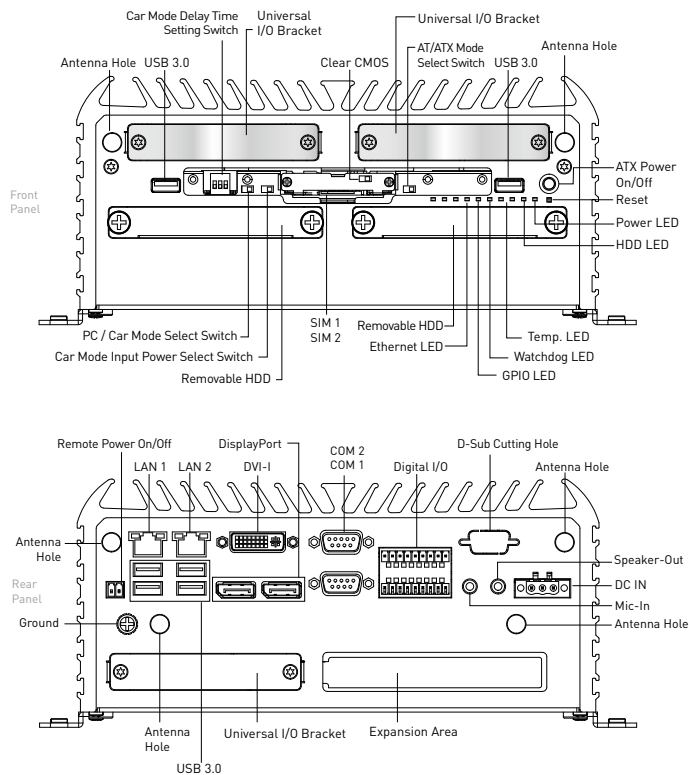
### Physical

|              |                                         |
|--------------|-----------------------------------------|
| Construction | Extruded Aluminum with Heavy Duty Metal |
| Dimension    | 240 (W) x 261 (D) x 107 (H) mm          |
| Weight       | 5.17 ~ 6.21 kg                          |
| Mounting     | Wall Mounting                           |

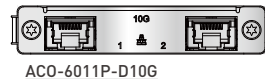
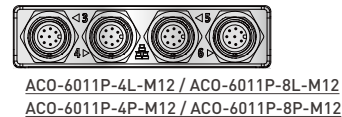
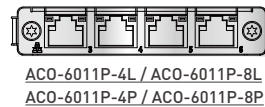
\* All specifications and photos are subject to change without notice.

## ACO-6011P series

### EXTERNAL I/O MECHANICAL LAYOUT

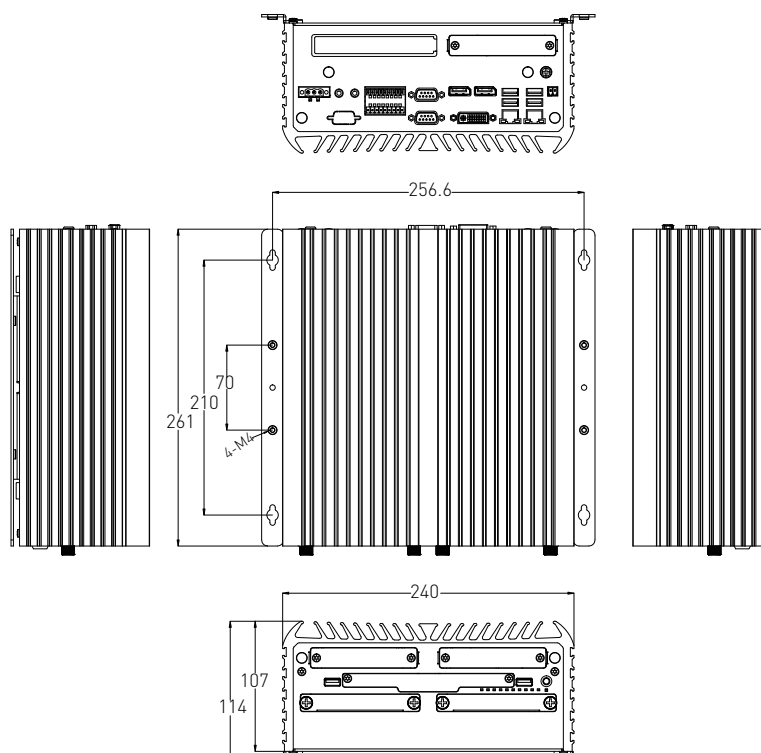


Universal I/O Bracket



### DIMENSION

Unit: mm





# ACO-6011P series

## ORDERING INFORMATION

| MODEL NO.   | DESCRIPTION                                                           |
|-------------|-----------------------------------------------------------------------|
| 1-E09A12002 | Adapter AC/DC 24V 5A 120W 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 |
| 1-TPCD00005 | 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-6000 Series Embedded System
- 1x Wall Mount Kit
- 1x Accessory Kit
- 1x DVI to VGA Adapter

## AVAILABLE MODELS

| MODEL NO.        | DESCRIPTION                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACO-6011P        | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 1x PCI Expansion             |
| ACO-6011P-4L     | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 6x LAN, 1x PCI Expansion             |
| ACO-6011P-4L-M12 | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 4x M12 LAN, 1x PCI Expansion |
| ACO-6011P-8L     | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 10x LAN, 1x PCI Expansion            |
| ACO-6011P-8L-M12 | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 8x M12 LAN, 1x PCI Expansion |
| ACO-6011P-4P     | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 4x PoE, 1x PCI Expansion     |
| ACO-6011P-4P-M12 | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 4x M12 PoE, 1x PCI Expansion |
| ACO-6011P-8P     | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 8x PoE, 1x PCI Expansion     |
| ACO-6011P-8P-M12 | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 8x M12 PoE, 1x PCI Expansion |
| ACO-6011P-D10G   | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 1x PCI Expansion, 2x 10G LAN |
| ACO-6011P-4U3    | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 1x PCI Expansion, 10x USB    |
| ACO-6011P-8U3    | Surveillance Applied Fanless System with LGA 1151 for Intel® 6 <sup>th</sup> /7 <sup>th</sup> Gen Processor and Q170 PCH, 2x LAN, 1x PCI Expansion, 14x USB    |



### C&T Solution Inc.

17F-2, No. 700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)

Tel: +886-2-7731-7888 Fax: +886-2-7731-7855

Email: [info@candtsolution.com](mailto:info@candtsolution.com)

[www.candtsolution.com](http://www.candtsolution.com)

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660