



FANLESS EMBEDDED SYSTEMS

VCO-6044P series

Superior Machine Vision System with LGA 1151 for Intel® 6th/7th Gen Processor and Q170 PCH, 4x PCI



FEATURES

- LGA 1151 socket for 6th/7th Gen. Intel® Core™ i7/i5/i3 or Pentium® / Celeron® Desktop Processor
- Intel® Q170 chipset
- 2x 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
- 2x 2.5" SATA HDD Bay, 2x mSATA (shared by 2x mini PCIe), and 1x CFast supporting RAID 0, 1, 5, 10
- 3x full-size mini PCIe for communication or expansion modules
- 4x RS-232/422/485 (w/ 2x internal), 4x USB 3.0, TPM 2.0
- 4x PCI expansion
- 8x DI + 8x DO with isolation
- 9 to 50VDC wide range power input supporting AT/ATX mode
- -25°C to 70°C extended operating temperature

SPECIFICATIONS

System

Processor	Support 6 th & 7 th Gen Intel® Core™ i7 / i5 / i3 / Pentium® / Celeron® Desktop Processor (LGA 1151)
	- 7 th Gen Intel® Core™ i7-7700T, Quad Core, 8MB cache, up to 3.8 GHz
	- 7 th Gen Intel® Core™ i5-7500T, Quad Core, 6MB cache, up to 3.3 GHz
	- 7 th Gen Intel® Core™ i3-7101TE, Dual Core, 3MB Cache, 3.4 GHz
	- 6 th Gen Intel® Core™ i7-6700TE, Quad Core, 8MB cache, up to 3.4 GHz
	- 6 th Gen Intel® Core™ i5-6500TE, Quad Core, 6MB Cache, up to 3.3 GHz
	- 6 th 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)
Audio Codec	Realtek ALC888S
System Memory	2x 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

DVI	1x DVI-I
DisplayPort	2x DisplayPort
Multiple Display	Triple Display

Storage

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

Expansion

Mini PCI Express	3x Full-size Mini PCIe (shared by 2x mSATA)
PCI	4x PCI
Card Dimension	235 (L) x 112 (H) mm

I/O

COM	2x RS-232/422/485 2x RS-232/422/485 (internal)
USB	4x USB 3.0
LAN	2x RJ45
Audio	1x Mic-in, 1x Speaker-out
DIO	8 in / 8 out (Isolated)
Universal I/O Bracket	1x Universal I/O Bracket (By mini PCIe interface)
Others	2x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch

Operating System

Windows	6 th Gen CPU: Windows 10, Windows 7, WES7 7 th Gen CPU: Windows 10
Linux	Linux kernel 4.X

Power

Power Mode	AT, ATX
Power Supply Voltage	9~50VDC
Power Connector	3-pin Terminal Block
Power Adaptor	Optional AC/DC 24V/5A, 120W
Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection

Environment

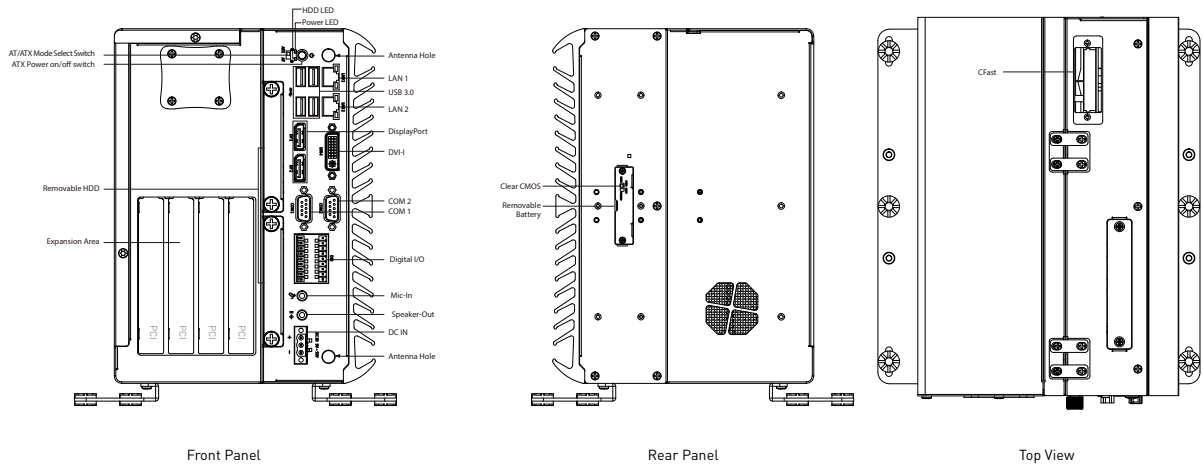
Operating Temp.	-25°C to 70°C
Storage Temp.	-40°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Vibration	With SSD: 3 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 50G, half sine, 11ms
Standards / Certification	CE, FCC Class A

Physical

Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	177 (W) x 256 (D) x 240 (H) mm
Weight	5.94 kg
Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)

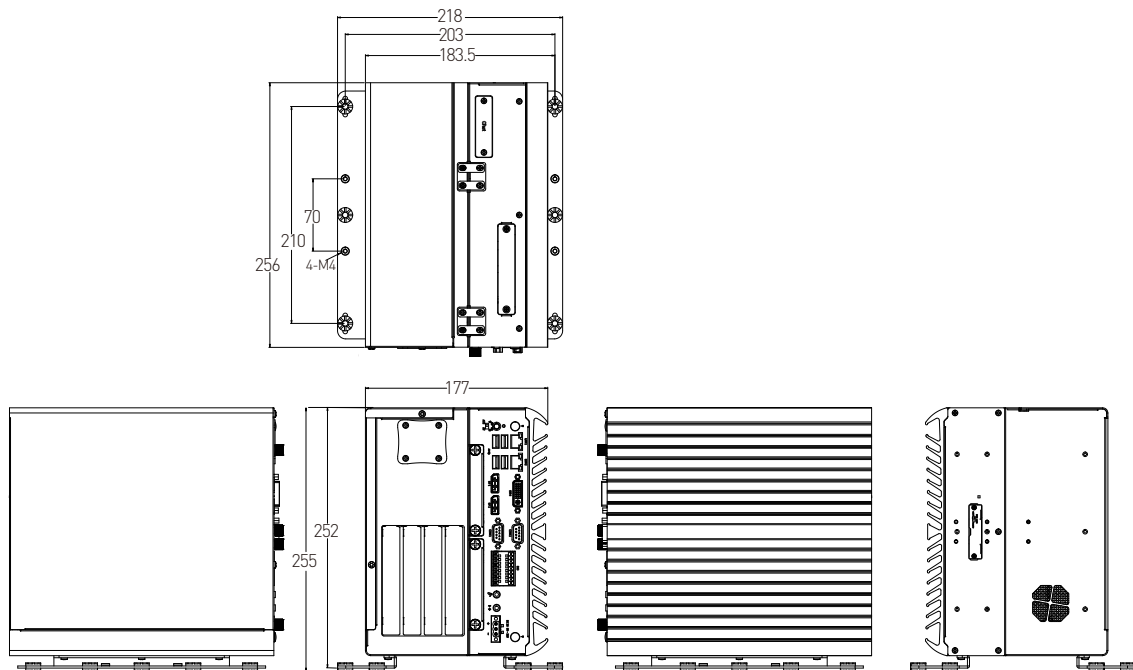
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EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm





VCO-6044P series

ORDERING INFORMATION

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

AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6044P	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 4x PCI



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

www.candtsolution.com



FANLESS EMBEDDED SYSTEMS

VCO-6044C series

Superior Machine Vision System with LGA 1151 for Intel® 6th/7th Gen Processor and Q170 PCH, 2x PCIe x4, 1x PCIe x8, 1xPCI



FEATURES

- LGA 1151 socket for 6th/7th Gen. Intel® Core™ i7/i5/i3 or Pentium® / Celeron® Desktop Processor
- Intel® Q170 chipset
- 2x 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
- 2x 2.5" SATA HDD Bay, 2x mSATA (shared by 2x mini PCIe), and 1x CFast supporting RAID 0, 1, 5, 10
- 3x full-size mini PCIe for communication or expansion modules
- 4x RS-232/422/485 (w/ 2x internal), 4x USB 3.0, TPM 2.0
- 2x PCIe x4, 1x PCIe x8, and 1x PCI expansion
- 8x DI + 8x DO with isolation
- 9 to 50VDC wide range power input supporting AT/ATX mode
- -25°C to 70°C extended operating temperature

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
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System Chipset	Intel® Q170 Express Chipset
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BIOS	AMI 128Mbit SPI BIOS
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Display

DVI	1x DVI-I
DisplayPort	2x DisplayPort
Multiple Display	Triple Display

Storage

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

Expansion

Mini PCI Express	3x Full-size Mini PCIe (shared by 2x mSATA)
PCI Express	2x PCIe x4, 1x PCIe x16 (8-lane)
PCI	1x PCI
Card Dimension	235 (L) x 112 (H) mm

I/O

COM	2x RS-232/422/485 2x RS-232/422/485 (internal)
USB	4x USB 3.0
LAN	2x RJ45
Audio	1x Mic-in, 1x Speaker-out
DIO	8 in / 8 out (Isolated)
Universal I/O Bracket	1x Universal I/O Bracket (By mini PCIe interface)
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Power Supply Voltage	9~50VDC
Power Connector	3-pin Terminal Block
Power Adaptor	Optional AC/DC 24V/5A, 120W
Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection

Environment

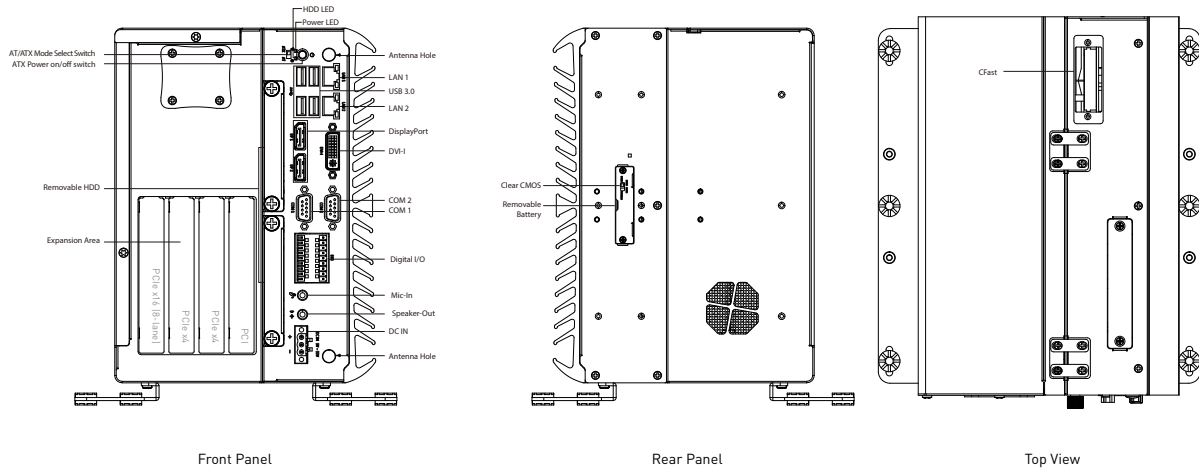
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Construction	Extruded Aluminum with Heavy Duty Metal
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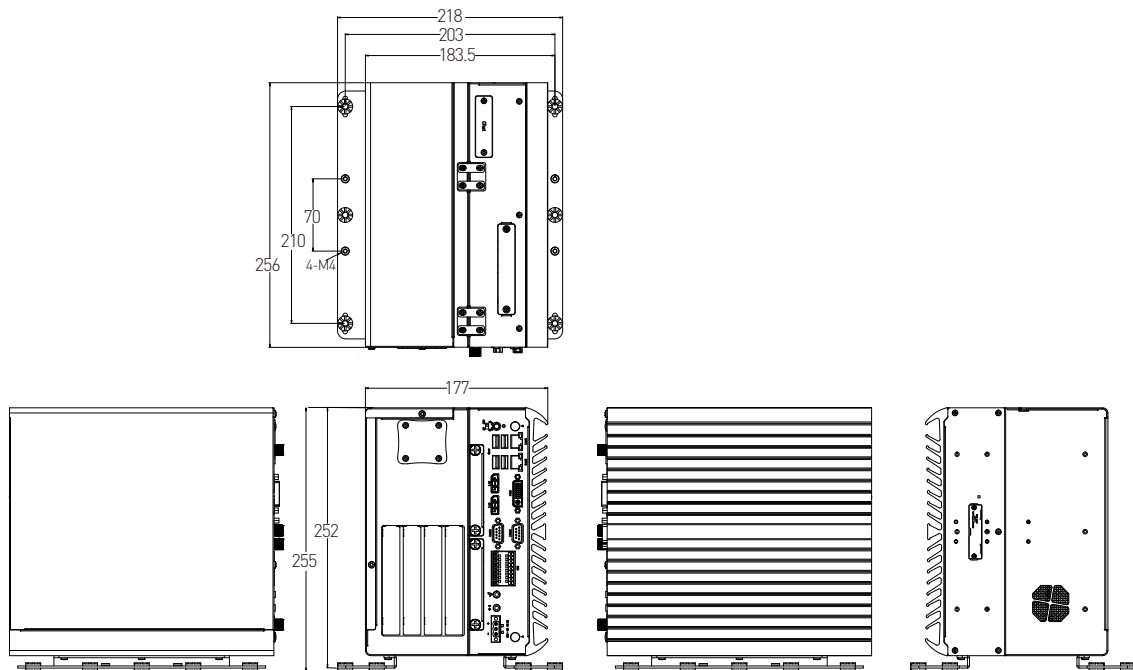
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Tel: +886-2-7731-7888 Fax: +886-2-7731-7855

Email: info@candtsolution.com

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

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

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