

VCO-6000

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

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
- 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
- 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)
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

DISPLAY

VGA	Yes (by optional split cable)
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)
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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)
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

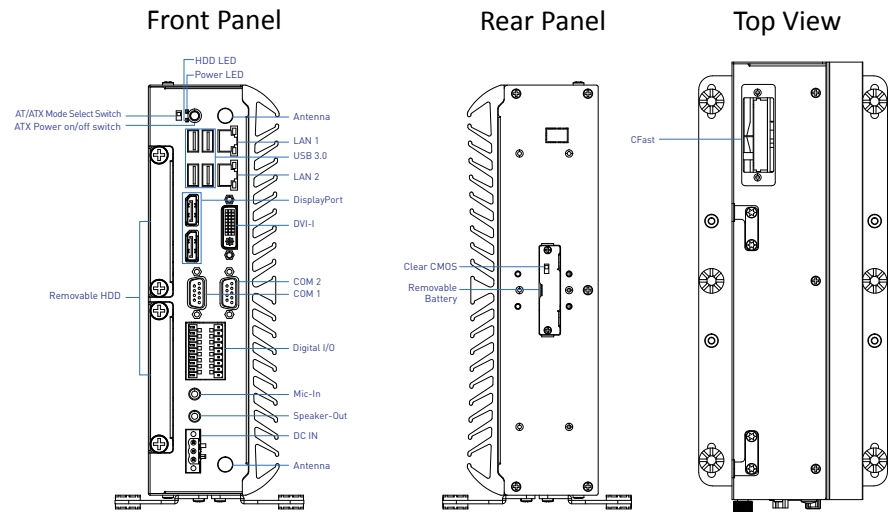
PHYSICAL

Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	77 (W) x 256 (D) x 240 (H) mm
Weight	3.83 kg
Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

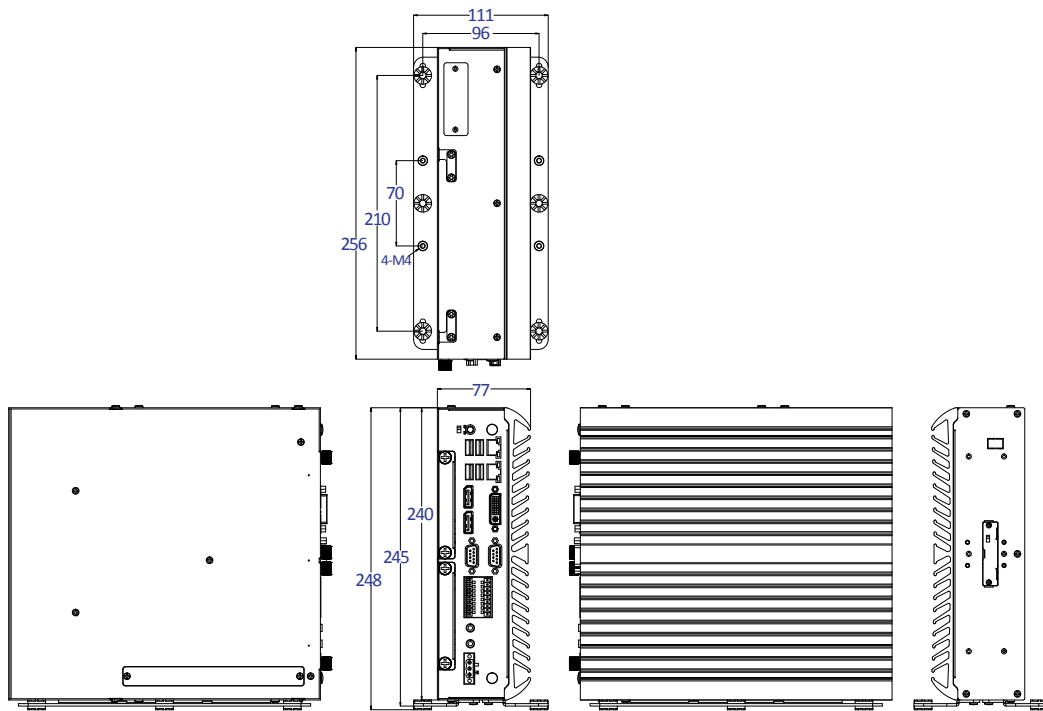
† The environmental specification covers the bare bone systems and does not include other components environmental specification.

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6000	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH

OPTIONAL ACCESSORIES

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

VCO-6011E

Superior Machine Vision System with LGA 1151 for
Intel® 6th/7th Gen Processor and Q170 PCH, 1x PCIe x16

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
- 1x PCIe x16 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
- 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)
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

DISPLAY

VGA	Yes (by optional split cable)
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	1x PCIe x16

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)
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

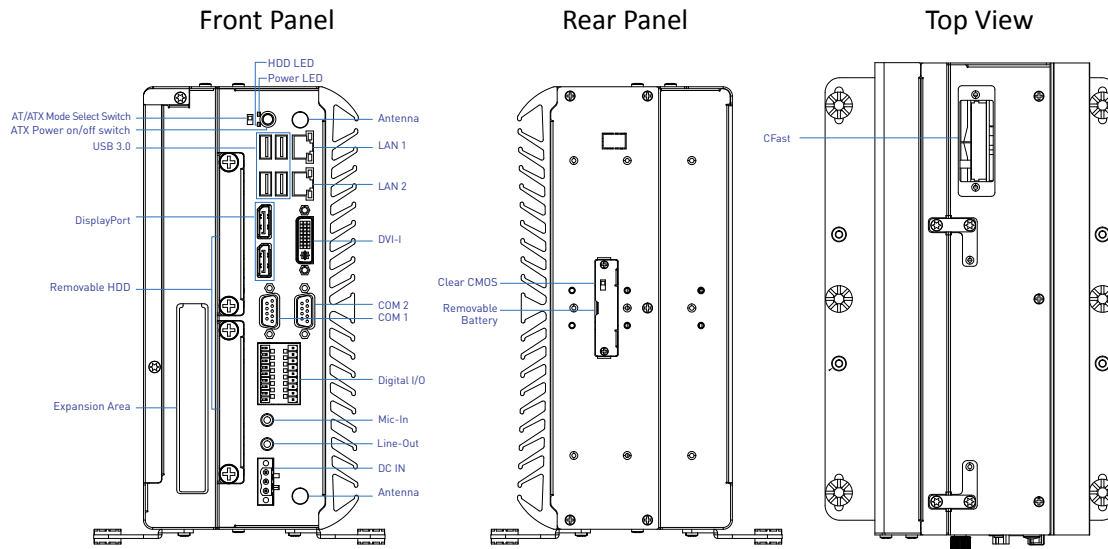
PHYSICAL

Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	117 (W) x 256 (D) x 240 (H) mm
Weight	5.37 kg
Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

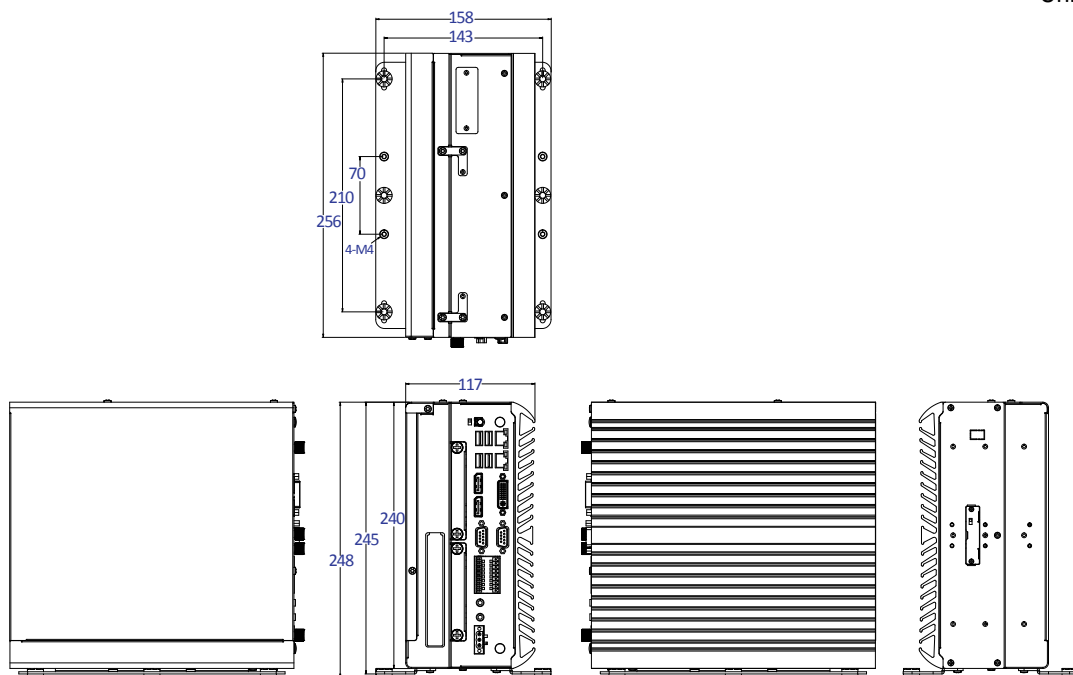
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EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6011E	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 1x PCIe x16

OPTIONAL ACCESSORIES

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



VCO-6011P



Superior Machine Vision System with LGA 1151 for
Intel® 6th/7th Gen Processor and Q170 PCH, 1x 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
- 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
- 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)

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

DISPLAY

VGA Yes (by optional split cable)

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 1x PCI

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)

Others 2x WiFi Antenna Holes
1x Power Switch, 1x AT/ATX Switch

OPERATING SYSTEM

Windows 6th Gen CPU: Windows 10, Windows 7, WES7
7th 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 117 (W) x 256 (D) x 240 (H) mm

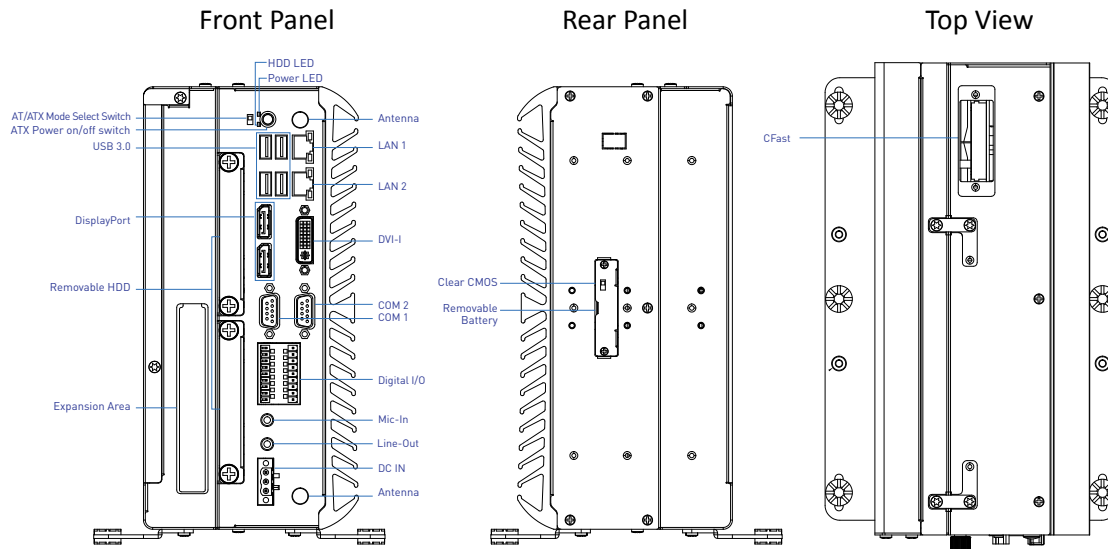
Weight TBD

Mounting Wall / Book Mounting
DIN-Rail Mounting (Optional)

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

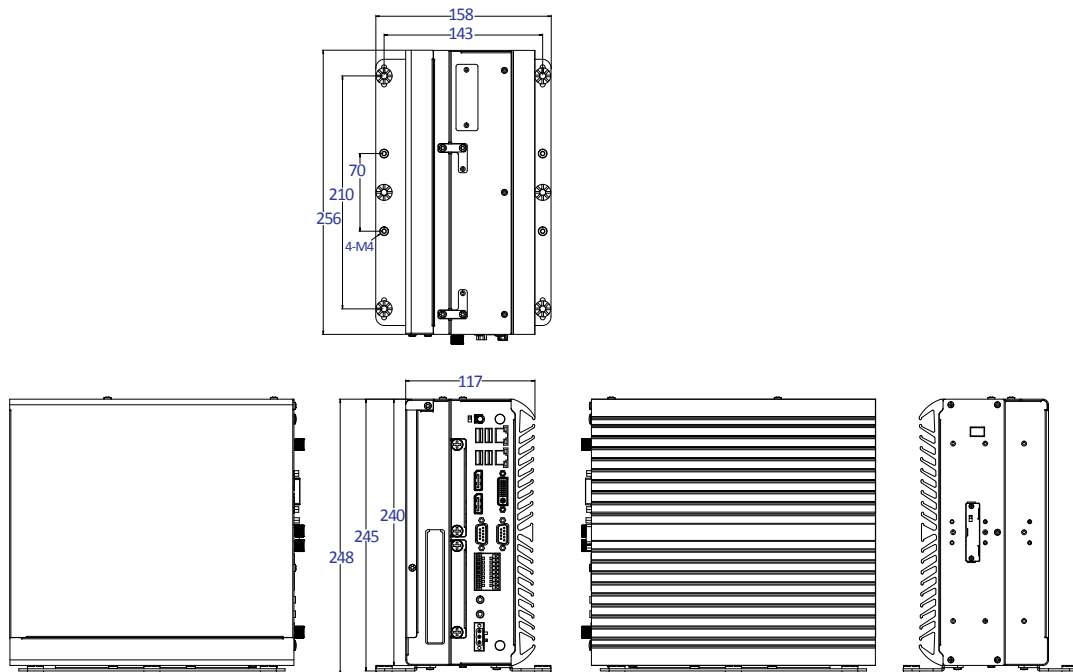
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EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6011P	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 1x PCI

OPTIONAL ACCESSORIES

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



VCO-6022E



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

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
- 22x 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
- 2x PCIe x8 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
 - 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)
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

DISPLAY

VGA	Yes (by optional split cable)
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 x 16 slot with 8-lane Gen3 PCIe Signal

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)
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

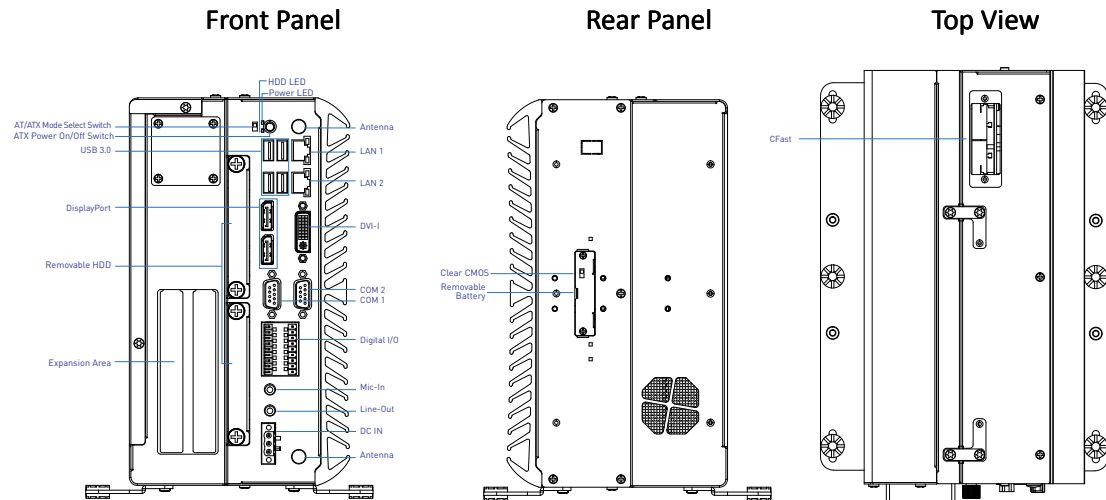
PHYSICAL

Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	137 (W) x 256 (D) x 240 (H) mm
Weight	TBD
Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

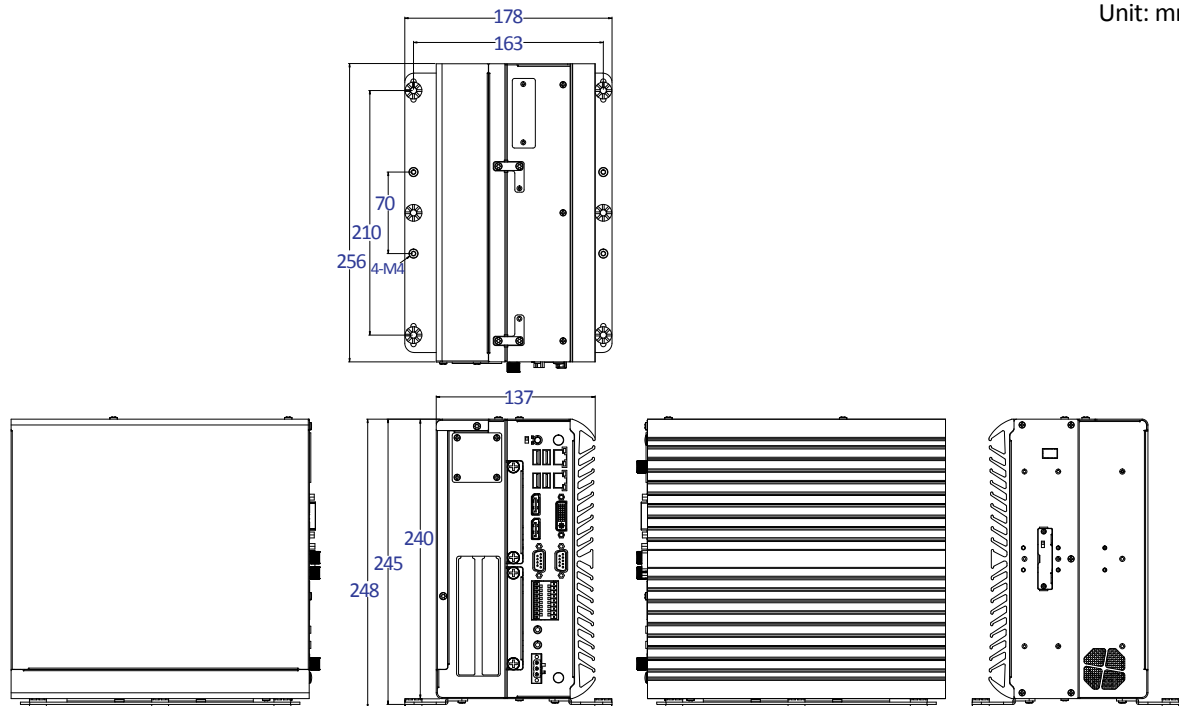
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EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6022E	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 2x PCIe x8

OPTIONAL ACCESSORIES

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



VCO-6022P



Superior Machine Vision System with LGA 1151 for
Intel® 6th/7th Gen Processor and Q170 PCH, 2x 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
- 2x 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



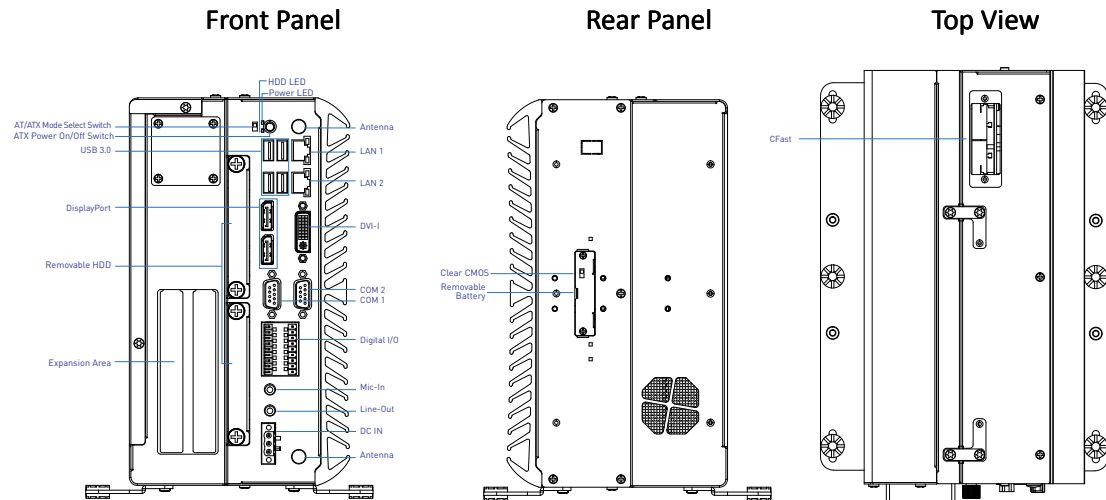
SPECIFICATIONS

SYSTEM		I/O	
Processor		COM	2x RS-232/422/485 2x RS-232/422/485 (internal)
Support 6 th & 7 th Gen Intel® Core™ i7 / i5 / i3 / Pentium® / Celeron® Desktop Processor (LGA 1151)		USB	4x USB 3.0
- 7 th Gen Intel® Core™ i7-7700T, Quad Core, 8MB cache, up to 3.8 GHz		LAN	2x RJ45
- 7 th Gen Intel® Core™ i5-7500T, Quad Core, 6MB cache, up to 3.3 GHz		Audio	1x Mic-in, 1x Speaker-out
- 7 th Gen Intel® Core™ i3-7101TE, Dual Core, 3MB Cache, 3.4 GHz		DIO	8 in / 8 out (Isolated)
- 6 th Gen Intel® Core™ i7-6700TE, Quad Core, 8MB cache, up to 3.4 GHz		Others	2x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch
- 6 th Gen Intel® Core™ i5-6500TE, Quad Core, 6MB Cache, up to 3.3 GHz		OPERATING SYSTEM	
- 6 th Gen Intel® Core™ i3-6100TE, Dual Core, 4MB Cache, 2.7 GHz		Windows	6 th Gen CPU: Windows 10, Windows 7, WES7 7 th Gen CPU: Windows 10
- Intel® Pentium® G4400TE, Dual Core, 3MB Cache, 2.4 GHz		Linux	Linux kernel 4.X
- Intel® Celeron® G3900TE, Dual Core, 2MB Cache, 2.3 GHz		POWER	
System Chipset	Intel® Q170 Express Chipset	Power Mode	AT, ATX
LAN Chipset	GbE1: Intel® I210-AT (Support Wake-on-LAN and PXE) GbE2: Intel® I219LM (Support Wake-on-LAN and PXE)	Power Supply Voltage	9~50VDC
Audio Codec	Realtek ALC888S	Power Connector	3-pin Terminal Block
System Memory	2x DDR4 1866/2133MHz SODIMM. Max. up to 32GB	Power Adaptor	Optional AC/DC 24V/5A, 120W
BIOS	AMI 128Mbit SPI BIOS	Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection
Watchdog	Software Programmable Supports 1~255 sec. System Reset	ENVIRONMENT	
DISPLAY		Operating Temp.	-25°C to 70°C
VGA	Yes (by optional split cable)	Storage Temp.	-40°C to 85°C
DVI	1x DVI-I	Relative Humidity	10% to 95% (non-condensing)
DisplayPort	2x DisplayPort	Vibration	With SSD: 3 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Multiple Display	Triple Display	Shock	With SSD: 50G, half sine, 11ms
STORAGE		Standards / Certification	CE, FCC Class A
SSD/HDD	2x Removable 2.5" SATA HDD Bay Support RAID 0, 1, 5, 10	PHYSICAL	
mSATA	2x mSATA (shared by 2x Mini PCI Express)	Construction	Extruded Aluminum with Heavy Duty Metal
CFast	1x CFast	Dimension	137 (W) x 256 (D) x 240 (H) mm
EXPANSION		Weight	TBD
Mini PCI Express	3x full-size Mini PCIe (shared by 2x mSATA)	Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)
PCI	2x PCI		

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

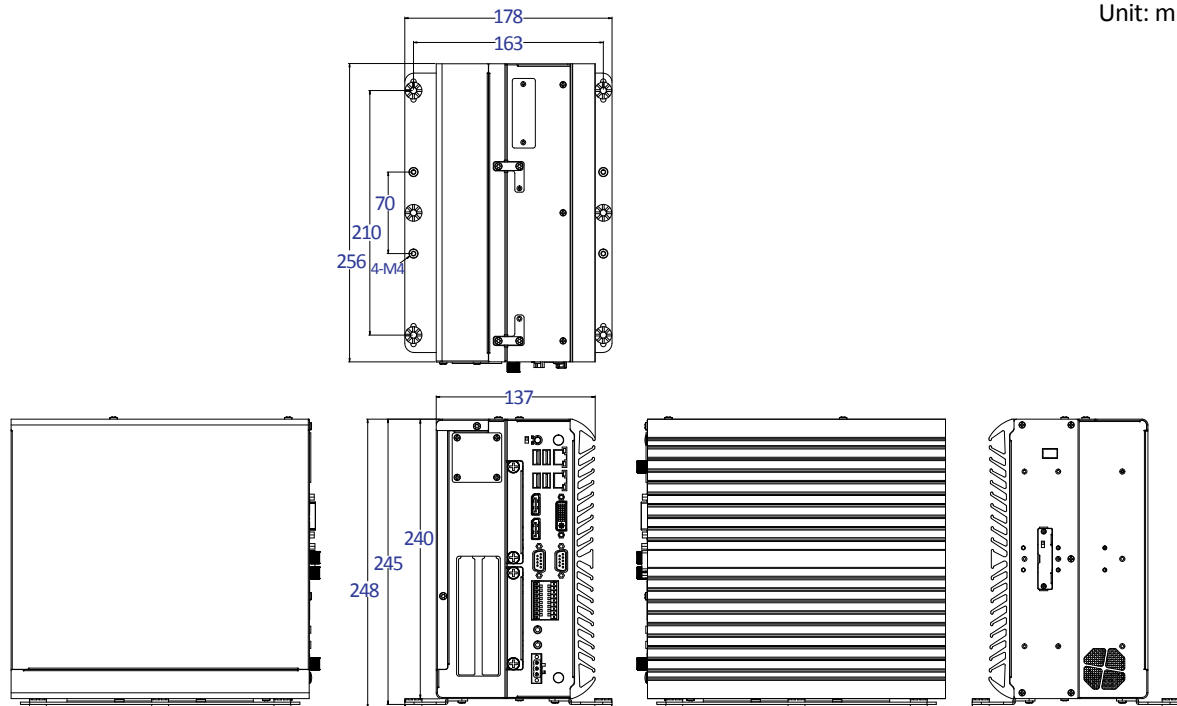
† The environmental specification covers the bare bone systems and does not include other components environmental specification.

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6022P	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 2x PCI

OPTIONAL ACCESSORIES

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



VCO-6022C



Superior Machine Vision System with LGA 1151 for
Intel® 6th/7th Gen Processor and Q170 PCH, 1x PCIe x16, 1x 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
- 1x PCIe x16 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



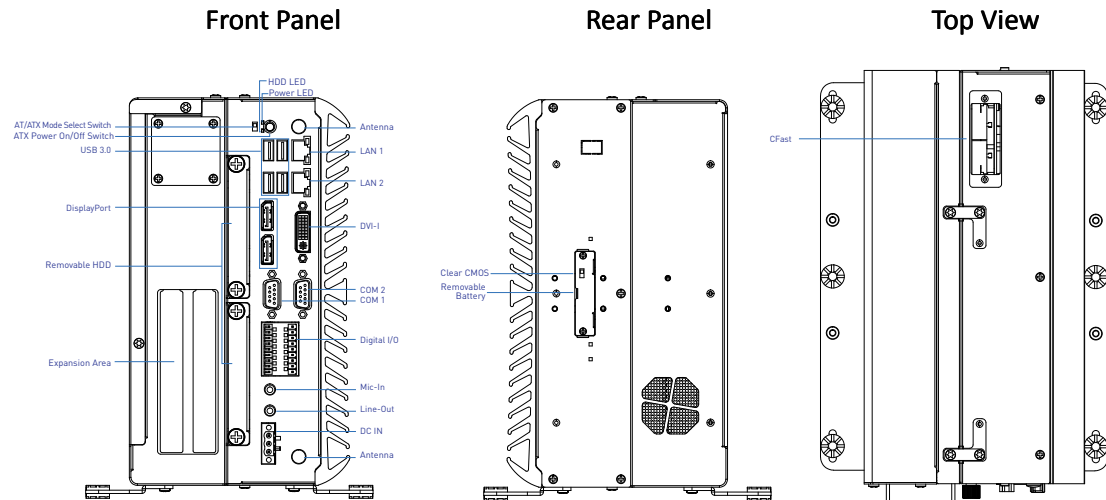
SPECIFICATIONS

SYSTEM		I/O	
Processor		COM	2x RS-232/422/485 2x RS-232/422/485 (internal)
Support 6 th & 7 th Gen Intel® Core™ i7 / i5 / i3 / Pentium® / Celeron® Desktop Processor (LGA 1151)		USB	4x USB 3.0
- 7 th Gen Intel® Core™ i7-7700T, Quad Core, 8MB cache, up to 3.8 GHz		LAN	2x RJ45
- 7 th Gen Intel® Core™ i5-7500T, Quad Core, 6MB cache, up to 3.3 GHz		Audio	1x Mic-in, 1x Speaker-out
- 7 th Gen Intel® Core™ i3-7101TE, Dual Core, 3MB Cache, 3.4 GHz		DIO	8 in / 8 out (Isolated)
- 6 th Gen Intel® Core™ i7-6700TE, Quad Core, 8MB cache, up to 3.4 GHz		Others	2x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch
- 6 th Gen Intel® Core™ i5-6500TE, Quad Core, 6MB Cache, up to 3.3 GHz		OPERATING SYSTEM	
- 6 th Gen Intel® Core™ i3-6100TE, Dual Core, 4MB Cache, 2.7 GHz		Windows	6 th Gen CPU: Windows 10, Windows 7, WES7 7 th Gen CPU: Windows 10
- Intel® Pentium® G4400TE, Dual Core, 3MB Cache, 2.4 GHz		Linux	Linux kernel 4.X
- Intel® Celeron® G3900TE, Dual Core, 2MB Cache, 2.3 GHz		POWER	
System Chipset	Intel® Q170 Express Chipset	Power Mode	AT, ATX
LAN Chipset	GbE1: Intel® I210-AT (Support Wake-on-LAN and PXE) GbE2: Intel® I219LM (Support Wake-on-LAN and PXE)	Power Supply Voltage	9~50VDC
Audio Codec	Realtek ALC888S	Power Connector	3-pin Terminal Block
System Memory	2x DDR4 1866/2133MHz SODIMM. Max. up to 32GB	Power Adaptor	Optional AC/DC 24V/5A, 120W
BIOS	AMI 128Mbit SPI BIOS	Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection
Watchdog	Software Programmable Supports 1~255 sec. System Reset	ENVIRONMENT	
DISPLAY		Operating Temp.	-25°C to 70°C
VGA	Yes (by optional split cable)	Storage Temp.	-40°C to 85°C
DVI	1x DVI-I	Relative Humidity	10% to 95% (non-condensing)
DisplayPort	2x DisplayPort	Vibration	With SSD: 3 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Multiple Display	Triple Display	Shock	With SSD: 50G, half sine, 11ms
STORAGE		Standards / Certification	CE, FCC Class A
SSD/HDD	2x Removable 2.5" SATA HDD Bay Support RAID 0, 1, 5, 10	PHYSICAL	
mSATA	2x mSATA (shared by 2x Mini PCI Express)	Construction	Extruded Aluminum with Heavy Duty Metal
CFast	1x CFast	Dimension	137 (W) x 256 (D) x 240 (H) mm
EXPANSION		Weight	TBD
Mini PCI Express	3x full-size Mini PCIe (shared by 2x mSATA)	Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)
PCI Express	1x PCIe x16		
PCI	1x PCI		

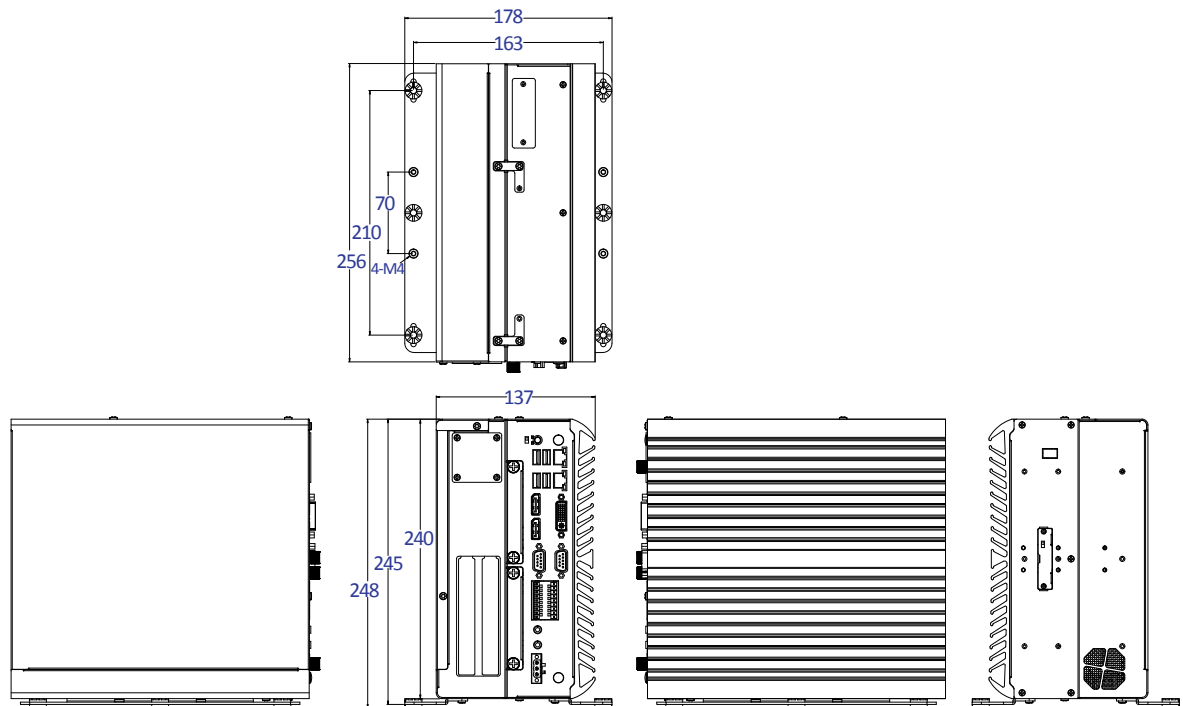
* For detailed performance specification, please refer to the data sheet or consult with the technical team.

† The environmental specification covers the bare bone systems and does not include other components environmental specification.

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6022C	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 1x PCIe x16, 1x PCI

OPTIONAL ACCESSORIES

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



VCO-6033E



Superior Machine Vision System with LGA 1151 for
Intel® 6th/7th Gen Processor and Q170 PCH, 2x PCIe x1, 1x PCIe x16

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
- 2x PCIe x1 and 1x PCIe x16 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
 - 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)
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

DISPLAY

VGA	Yes (by optional split cable)
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 (1-lane), 1x PCIe x16

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)
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

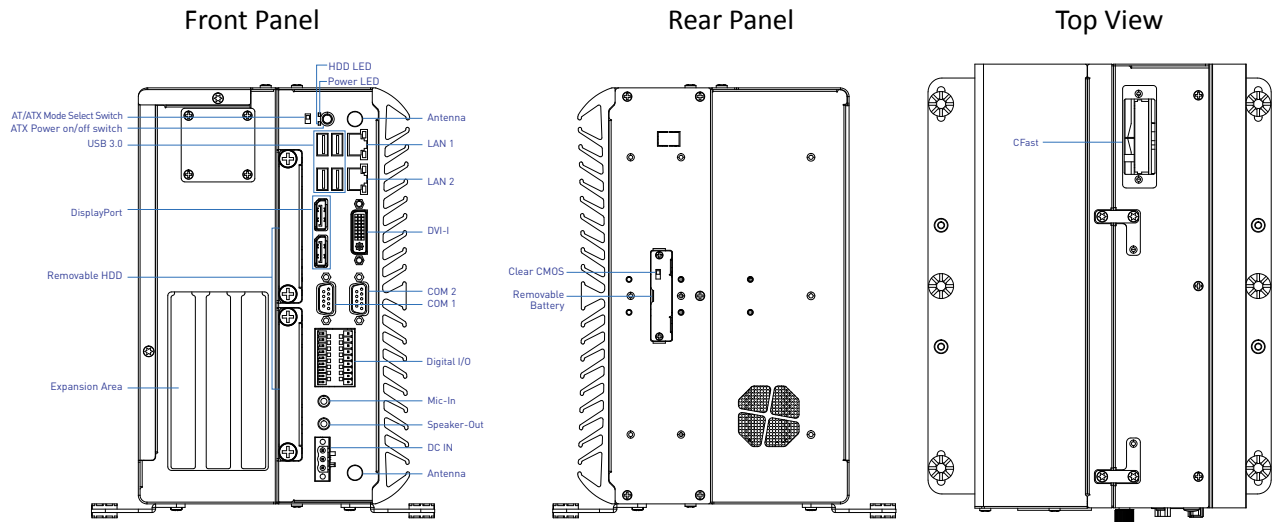
PHYSICAL

Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	157 (W) x 256 (D) x 240 (H) mm
Weight	TBD
Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

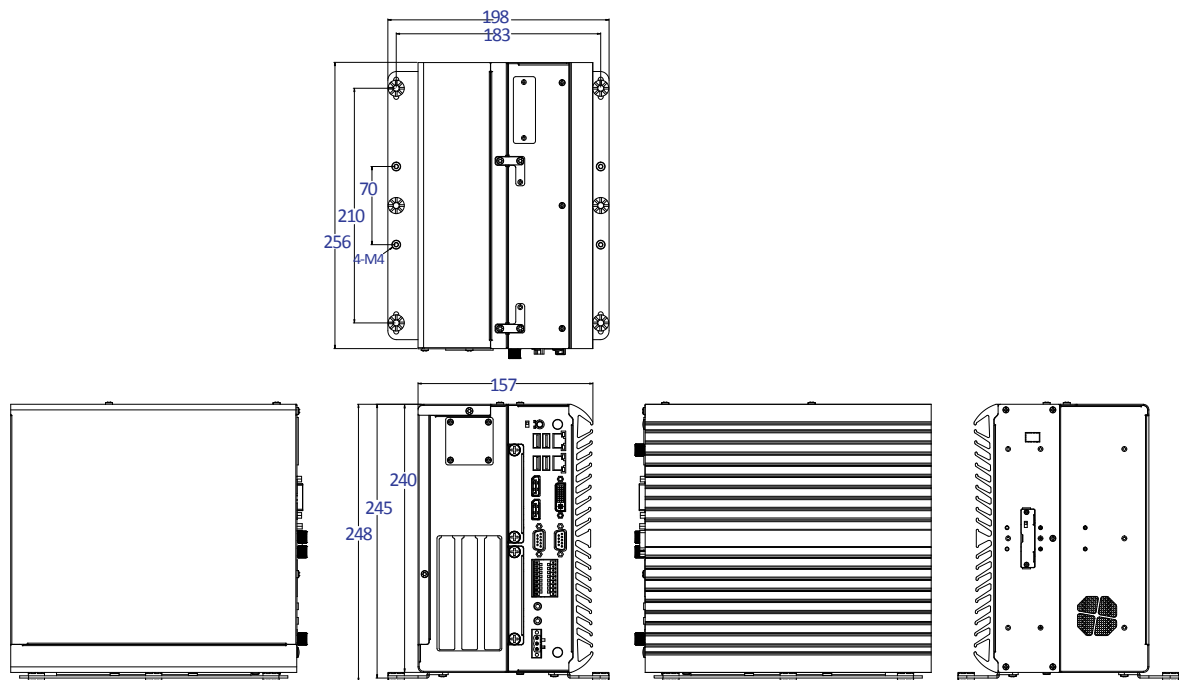
† The environmental specification covers the bare bone systems and does not include other components environmental specification.

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6033E	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 2x PCIe x1, 1x PCIe x16

OPTIONAL ACCESSORIES

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



VCO-6033P



Superior Machine Vision System with LGA 1151 for
Intel® 6th/7th Gen Processor and Q170 PCH, 3x 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
- 3x 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
 - 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)
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

DISPLAY

VGA	Yes (by optional split cable)
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	3x PCI

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)
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

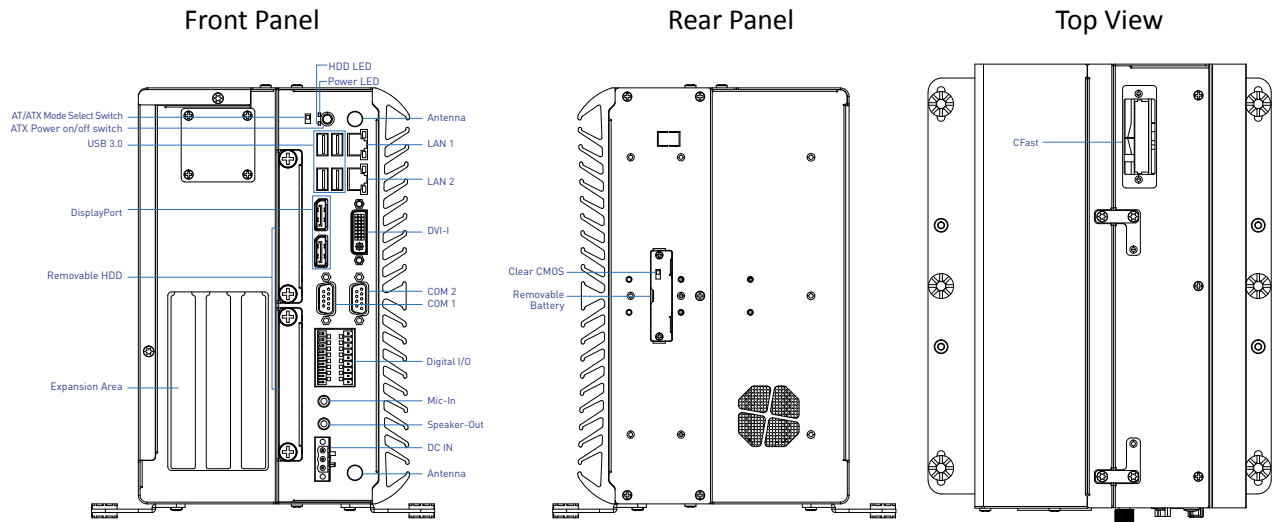
PHYSICAL

Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	157 (W) x 256 (D) x 240 (H) mm
Weight	TBD
Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

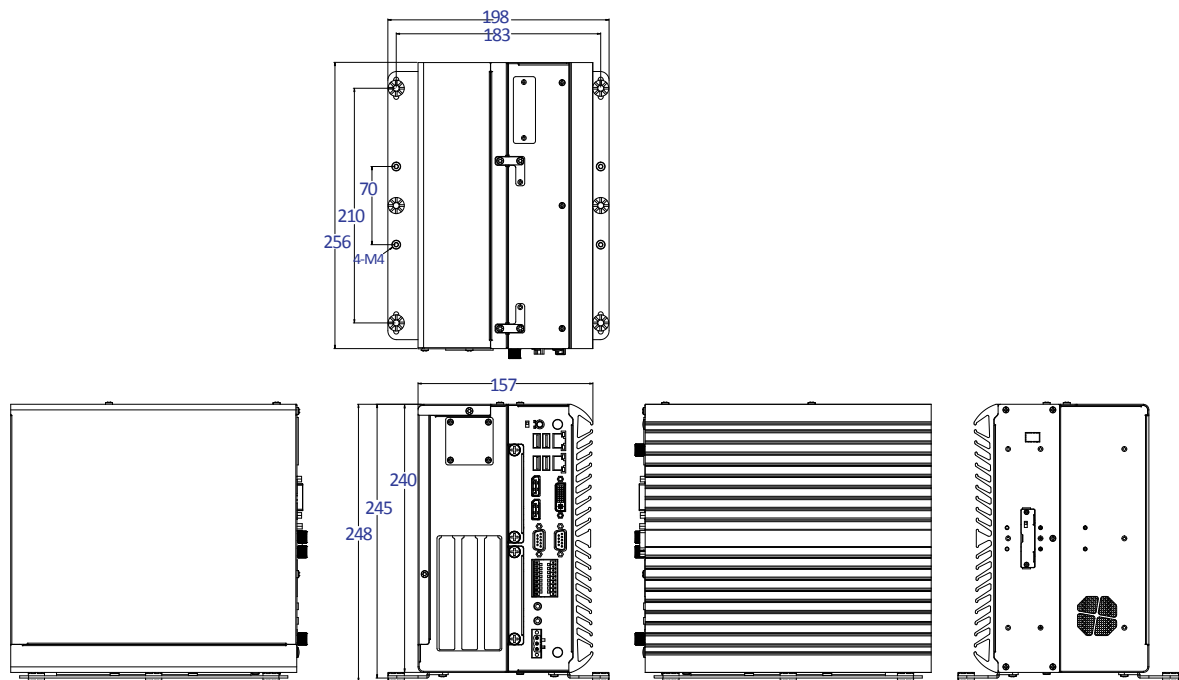
† The environmental specification covers the bare bone systems and does not include other components environmental specification.

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6033P	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 3x PCI

OPTIONAL ACCESSORIES

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



VCO-6033C



Superior Machine Vision System with LGA 1151 for
Intel® 6th/7th Gen Processor and Q170 PCH, 1x PCIe x16, 2x 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
- 1x PCIe x16 and 2x 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



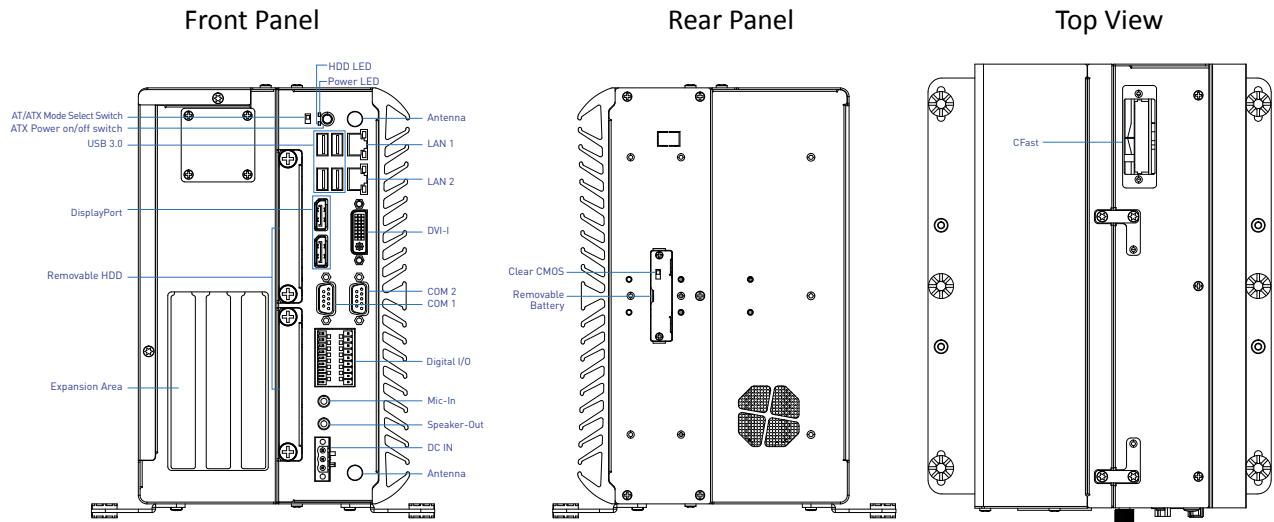
SPECIFICATIONS

SYSTEM		I/O	
Processor		COM	2x RS-232/422/485 2x RS-232/422/485 (internal)
Support 6 th & 7 th Gen Intel® Core™ i7 / i5 / i3 / Pentium® / Celeron® Desktop Processor (LGA 1151)		USB	4x USB 3.0
- 7 th Gen Intel® Core™ i7-7700T, Quad Core, 8MB cache, up to 3.8 GHz		LAN	2x RJ45
- 7 th Gen Intel® Core™ i5-7500T, Quad Core, 6MB cache, up to 3.3 GHz		Audio	1x Mic-in, 1x Speaker-out
- 7 th Gen Intel® Core™ i3-7101TE, Dual Core, 3MB Cache, 3.4 GHz		DIO	8 in / 8 out (Isolated)
- 6 th Gen Intel® Core™ i7-6700TE, Quad Core, 8MB cache, up to 3.4 GHz		Others	2x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch
- 6 th Gen Intel® Core™ i5-6500TE, Quad Core, 6MB Cache, up to 3.3 GHz		OPERATING SYSTEM	
- 6 th Gen Intel® Core™ i3-6100TE, Dual Core, 4MB Cache, 2.7 GHz		Windows	6 th Gen CPU: Windows 10, Windows 7, WES7 7 th Gen CPU: Windows 10
- Intel® Pentium® G4400TE, Dual Core, 3MB Cache, 2.4 GHz		Linux	Linux kernel 4.X
- Intel® Celeron® G3900TE, Dual Core, 2MB Cache, 2.3 GHz		POWER	
System Chipset	Intel® Q170 Express Chipset	Power Mode	AT, ATX
LAN Chipset	GbE1: Intel® I210-AT (Support Wake-on-LAN and PXE) GbE2: Intel® I219LM (Support Wake-on-LAN and PXE)	Power Supply Voltage	9~50VDC
Audio Codec	Realtek ALC888S	Power Connector	3-pin Terminal Block
System Memory	2x DDR4 1866/2133MHz SODIMM. Max. up to 32GB	Power Adaptor	Optional AC/DC 24V/5A, 120W
BIOS	AMI 128Mbit SPI BIOS	Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection
Watchdog	Software Programmable Supports 1~255 sec. System Reset	ENVIRONMENT	
DISPLAY		Operating Temp.	-25°C to 70°C
VGA	Yes (by optional split cable)	Storage Temp.	-40°C to 85°C
DVI	1x DVI-I	Relative Humidity	10% to 95% (non-condensing)
DisplayPort	2x DisplayPort	Vibration	With SSD: 3 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Multiple Display	Triple Display	Shock	With SSD: 50G, half sine, 11ms
STORAGE		Standards / Certification	CE, FCC Class A
SSD/HDD	2x Removable 2.5" SATA HDD Bay Support RAID 0, 1, 5, 10	PHYSICAL	
mSATA	2x mSATA (shared by 2x Mini PCI Express)	Construction	Extruded Aluminum with Heavy Duty Metal
CFast	1x CFast	Dimension	157 (W) x 256 (D) x 240 (H) mm
EXPANSION		Weight	TBD
Mini PCI Express	3x full-size Mini PCIe (shared by 2x mSATA)	Mounting	Wall / Book Mounting DIN-Rail Mounting (Optional)
PCI Express	1x PCIe x16		
PCI	2x PCI		

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

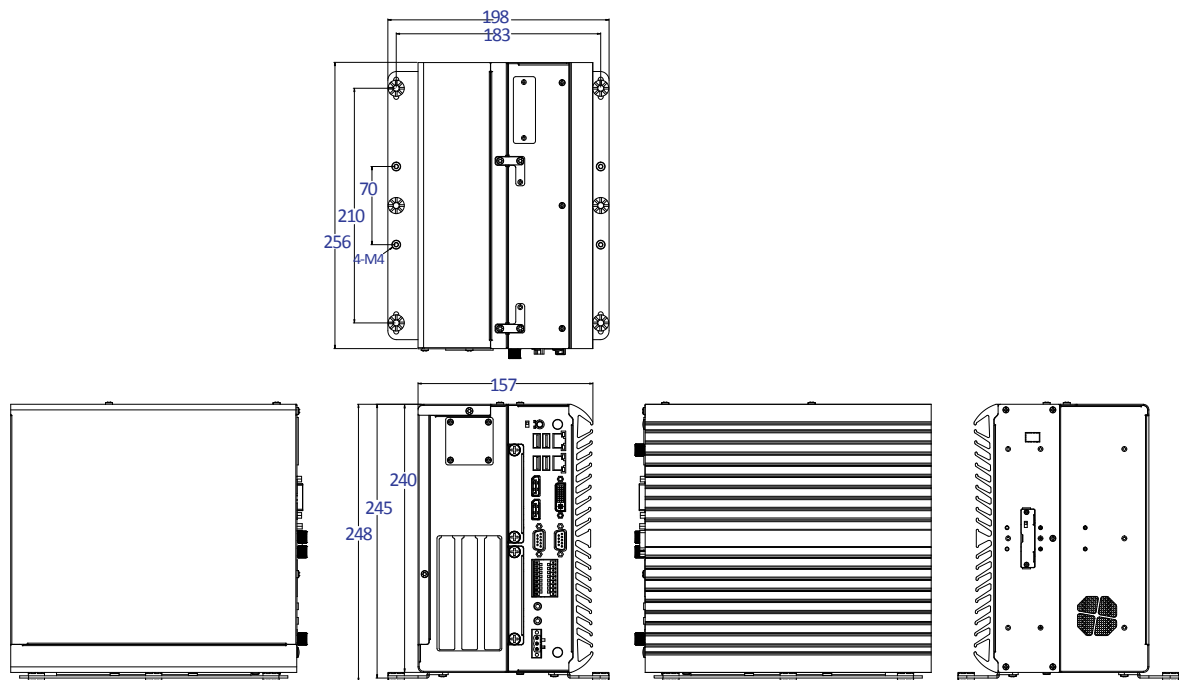
† The environmental specification covers the bare bone systems and does not include other components environmental specification.

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6033C	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 1x PCIe x16, 2x PCI

OPTIONAL ACCESSORIES

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



VCO-6044P



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
- 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 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)
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

DISPLAY

VGA	Yes (by optional split cable)
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

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)
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

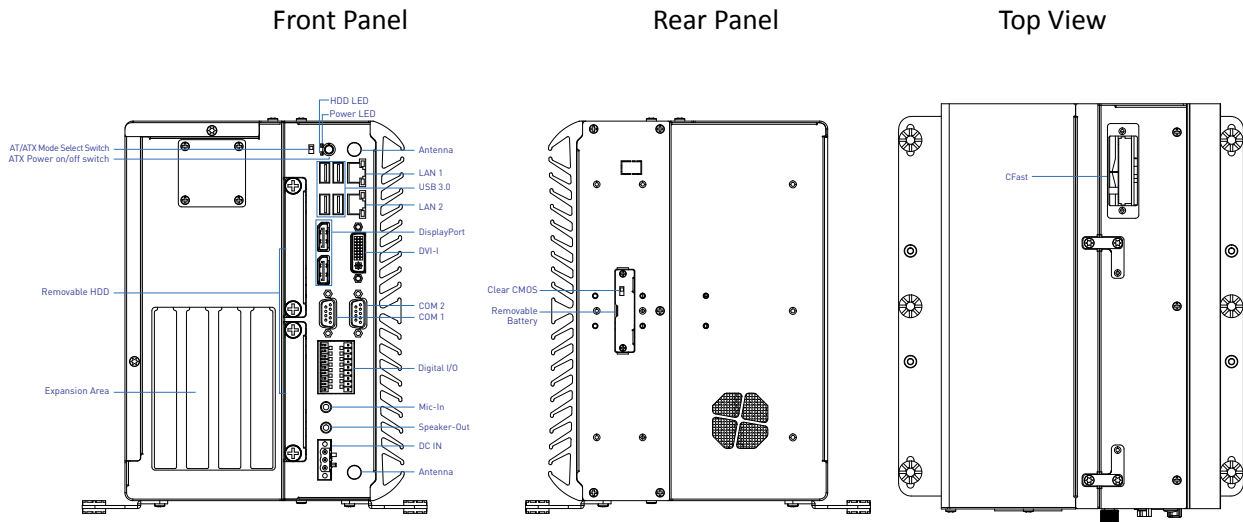
PHYSICAL

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

* For detailed performance specification, please refer to the data sheet or consult with the technical team.

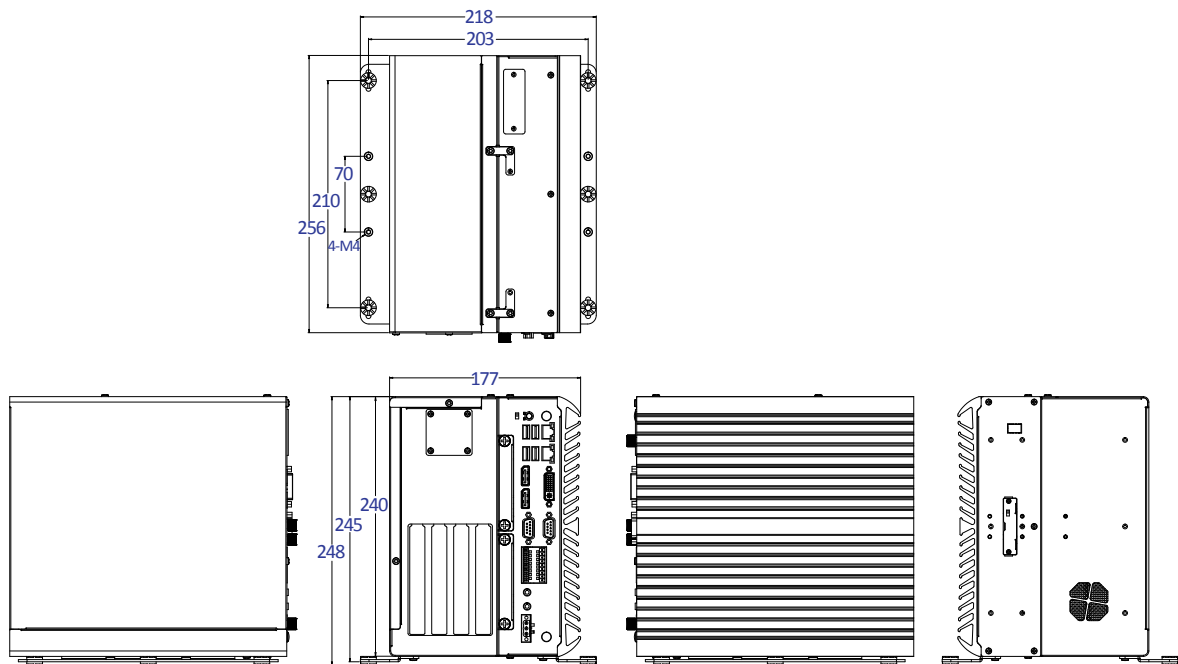
† The environmental specification covers the bare bone systems and does not include other components environmental specification.

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



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

OPTIONAL ACCESSORIES

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



VCO-6044C



Superior Machine Vision System with LGA 1151 for

Intel® 6th/7th Gen Processor and Q170 PCH, 2x PCIe x4, 1x PCIe x8, 1x 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
- 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
 - 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)
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

DISPLAY

VGA	Yes (by optional split cable)
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

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)
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

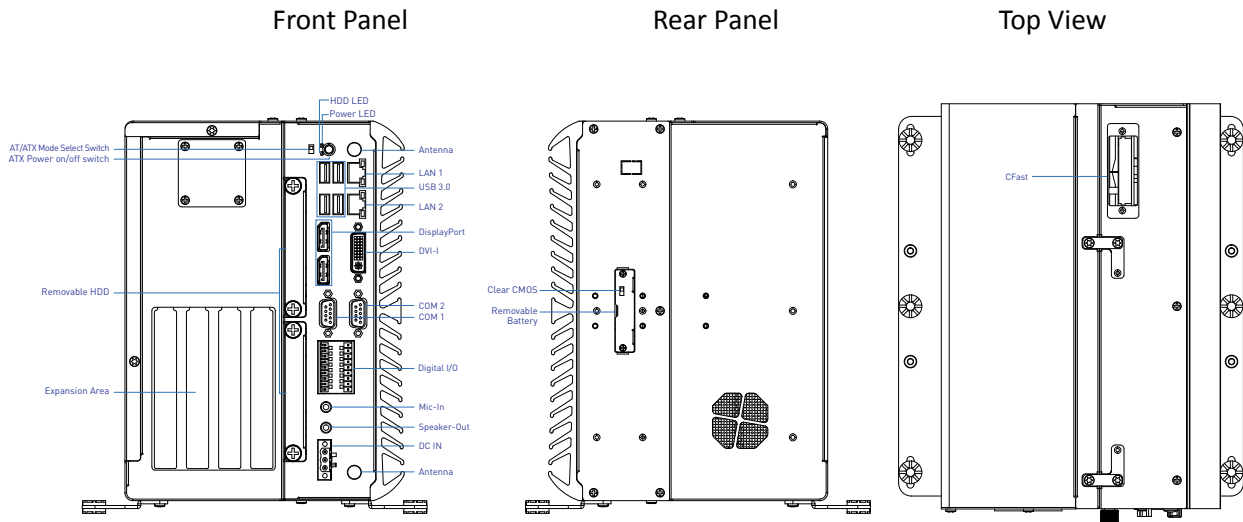
PHYSICAL

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

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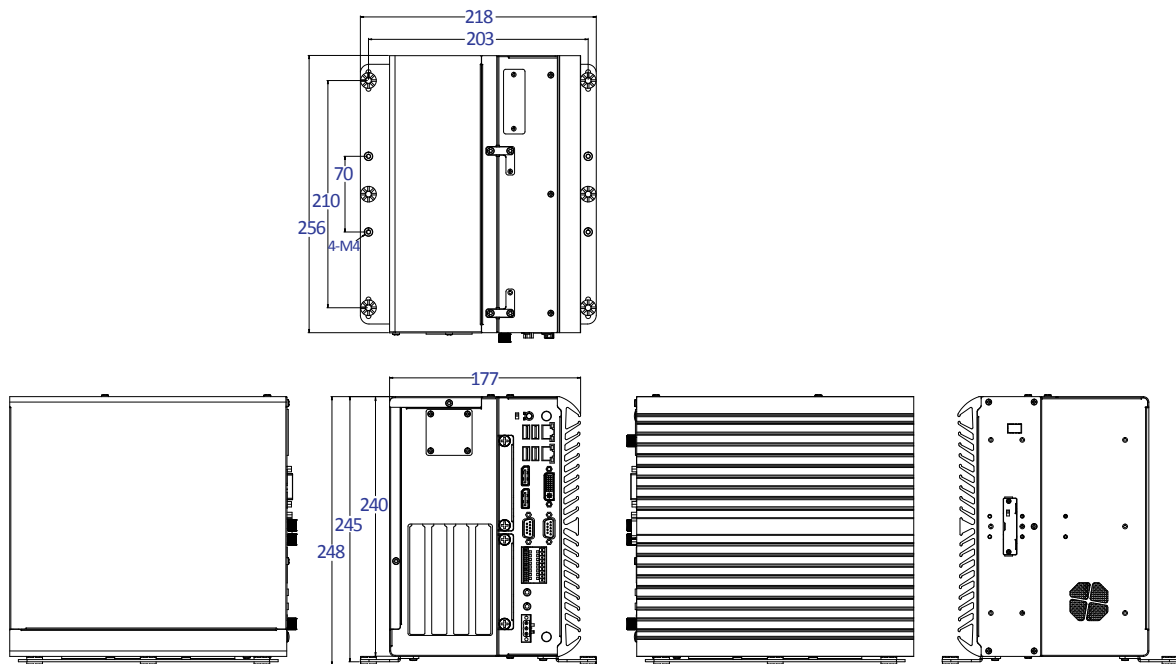
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EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AVAILABLE MODELS

MODEL NO.	DESCRIPTION
VCO-6044C	Superior Machine Vision System with LGA 1151 for Intel® 6 th /7 th Gen Processor and Q170 PCH, 2x PCIe x4, 1x PCIe x8, 1x PCI

OPTIONAL ACCESSORIES

MODEL NO.	DESCRIPTION
1-E09A12002	Adapter AC/DC 24V 5A 120W with 3pin Terminal Block Plug 5.0mm Pitch
SFICBL022	Power Cord, 3-pin US Type, 180cm
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PACKING LIST

- 1x VCO-6000 Series Embedded System
- 1x Utility DVD Driver
- 1x Wall Mount Kit
- 1x Accessory Kit
- 1x DVI to VGA Adapter



VCO-6055C



Superior Machine Vision System with LGA 1151 for Intel® 6th/7th Gen Processor and Q170 PCH, 2x PCIe x4, 1x PCIe x8, 2x 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), 4 x USB 3.0
- 2x PCIe x4, 1x PCIe x8, and 2x PCI expansion
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EXPANSION

Mini PCI Express	3x full-size Mini PCIe (shared by 2x mSATA)
PCI Express	2x PCIe x4, 1x PCIe x16 (8-lane)
PCI	2x PCI

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)
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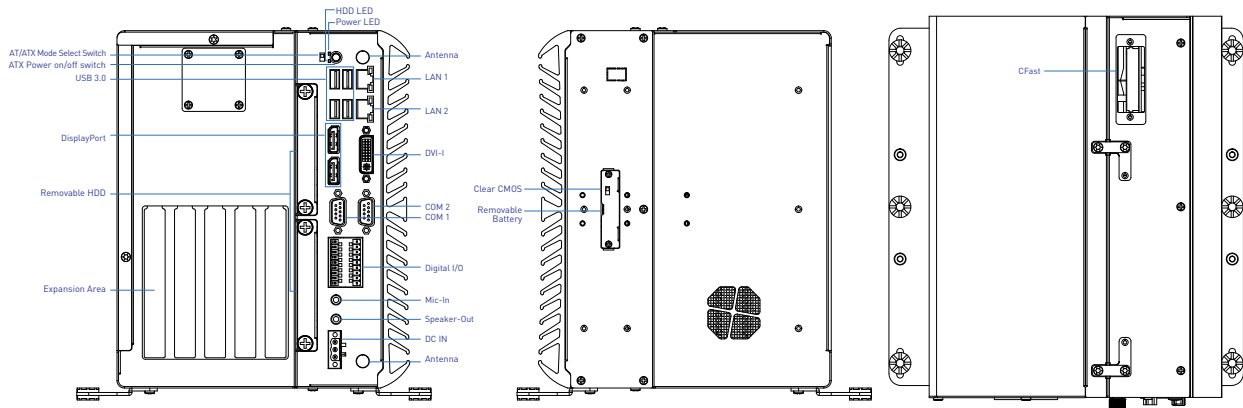
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EXTERNAL I/O MECHANICAL LAYOUT

Front Panel

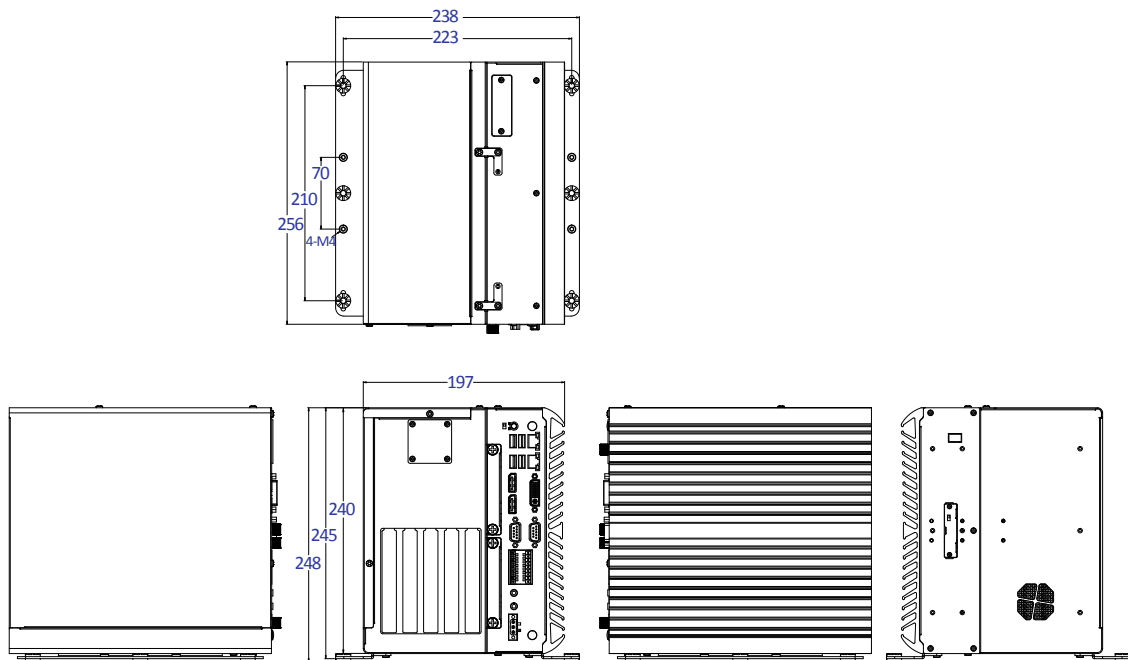
Rear Panel

Top View



DIMENSION

Unit: mm



AVAILABLE MODELS

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PACKING LIST

- 1x VCO-6000 Series Embedded System
- 1x Utility DVD Driver
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- 1x Accessory Kit
- 1x DVI to VGA Adapter

