

産業用PC/タブレットPC

ECS-APCL

Intel® Celeron® J3455 プロセッサ搭載
Pico-ITX サイズ ファンレスBOXコンピュータ



- > 1 x 204ピン DDR3L 1600/1333MHz SO-DIMM ソケット
4GB 標準搭載、最大8GBまで対応可
- > 2 x USB 3.0、2 x USB 2.0
- > 1 x DP++, 1 x HDMI (デュアルディスプレイ)
- > 1 x M.2 Type B 3042/2242/2260 SSDサポート
64GB 標準搭載
- > 1 x M.2 Type A 2230 WiFi モジュールサポート
- > 2 x Intel i211AT ギガビットイーサネット
- > 2 x SMA コネクタ (オプション)
- > 60W アダプタ (DC入力 12V@5A)

+ Spec	
System	
Processor	Intel® Celeron® J3455 Processor
System Memory	1 x 204-pin DDR3L 1600MHz SO-DIMM, supports up to 8 GB, 4GB installed as default.
Watchdog Timer	H/W Reset, 1sec. ~ 65535min. and 1sec. or 1min./step
H/W Status Monitor	Monitoring CPU & System Temperature and Voltage
Board	EPX-APLP
Expansion	
Expansion	1 x M.2 Type A 2230 supports WiFi module
Storage	
Storage	1 x M.2 Type B 3042/2242/2260 supports SSD, 64GB installed as default.
I/O	
USB	2 x USB 3.0 2 x USB 2.0
COM Port	1 x RS-232
Other	1 x Power on/off Button w/ LED 2 x SMA Connector (Optional)
Display	
Chipset	Intel® Celeron® SoC Integrated Graphics
Resolution	DP++: 4096 x 2160 @ 60Hz HDMI: 3840 x 2160 @ 30Hz, 2560 x 1600 @ 30Hz
Interface	1 x DP++ 1 x HDMI
Audio	
Chipset	Realtek
Audio Interface	Line-Out
Ethernet	
Chipset	2 x Intel i211AT GbE controller
Ethernet Interface	10/100/1000 Base-Tx GbE compatible
LAN Port	2 x RJ45
Mechanical & Environmental	
Operating Temperature	-10°C ~ 50°C (32°F ~ 122°F) (w/SSD), ambient w/0.5 m/s air flow -10°C ~ 40°C (32°F ~ 104°F) (w/SSD), ambient w/0.2 m/s air flow
Storage Temperature	-20°C ~ 75°C (-4°F ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	1Kg
Construction	Aluminum + Metal
Mounting Kit	L-bracket (Optional)
Dimension (L x W x H)	120.6 x 95.2 x 49.8 mm
Software Support	
OS Information	Win 10, Linux
Power Requirement	
Power Connector	DC Jack (lockable)
Power Requirement	+12V
Power Mode	ATX
Adapter	Input: 100 ~ 240Vac/ 50 ~ 60Hz Output: 60W Adapter (12V @ 5A)



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第11世代 Intel® Tiger Lake CPU搭載 産業用PC

EMS-TGL

11世代Intel® Core i7/i5/i3 プロセッサ搭載
ファンレス耐環境BOXコンピュータ

- > 11世代Intel® Core i7/i5/i3 BGAプロセッサ搭載
- > 2 x 260ピン DDR4 3200MHz SO-DIMM ソケット
8GB 標準搭載、最大32GBまで対応可
- > 4 x USB 3.1、1 x DP、1 x HDMI、2 x COM、2 x LAN、
8-bit GPIO
- > 5Gモジュール、M.2 NVMe SSD PCIe GenⅢ x 4、
HDMI 2.0b (4K@60Hz)、LAN 2.5G-Base-Tx GbE サポート
- > ファンレス動作温度：-40℃~70℃ (温度拡張版)
/0℃~70℃(標準版)
- > 広範囲電圧入力：+9~32V
- > ハードウェア TPM 2.0サポート

+ Spec

System	
Processor	On board 11th Gen. Intel® Core™ i7/i5/i3 BGA Processor Intel® Core™ i7- 1185GRE (15W, 12M Cache, up to 2.80 GHz), WT Intel® Core™ i5- 1145GRE (15W, 8M Cache, up to 2.60 GHz), WT Intel® Core™ i3- 1115GRE (15W, 6M Cache, up to 3.00 GHz), WT Intel® Core™ i7- 1185G7E (15W, 12M Cache, up to 2.80 GHz), ST Intel® Core™ i5- 1145G7E (15W, 8M Cache, up to 2.60 GHz), ST Intel® Core™ i3- 1115G4E (15W, 6M Cache, up to 3.00 GHz), ST
System Memory	2 x 260-pin SODIMM socket Max. up to 64GB DDR4 3200 MT/s
I/O Chip	EC ITE IT8528E
BIOS	AMI uEFI BIOS 256 Mbit SPI Flash ROM
Watchdog Timer	HW Reset, 1sec. ~ 65535sec.
H/W Status Monitor	CPU & system temperature monitoring and Voltages monitoring
Battery	Horizontal battery socket, supporting wide operating temperature Supports no RTC battery mode
Expansion	
Expansion	1 x M.2 Key-B 2242/3042/3052 support SATA3/ PCIeⅢ x1/ USB3.1 and SIM slot1 1 x M.2 Key-E 2230 for Wi-Fi & BT Module(CNV1) 1 x IET interface (1 x DDI, 2x PCIe3 x 2, 3 x USB2.0, 1 x Line-Out(R/L), 1 x SMBus, LPC)
Storage	
Storage	1 x M.2 Key-M 2242/2280, support PCIe Gen. Ⅲ x 4 (NVMe SSD) 1 x M.2 Key-B 2242, support SATA (share with expansion slot)
I/O	
USB	2 x USB 3.1 Gen.2 (10Gbp/s) 2 x USB 3.1 Gen.1 (5Gbp/s)
COM Port	2 x COM RS232/422/485 (select via BIOS, auto flow control via HW)
SIM	1 x internal SIM slot
GPIO	1 x 8-bit GPIO (DB9)
Other	8 x Antenna with dust cover (6 x LTE+GPS / 2 x Wifi) 2 x Knockouts for Antenna Mounting
Display	
Chipset	Intel® Iris® Xe Graphics (i7-1185GRE/i5-1145GRE/i7-1185G7E/i5-1145G7E) Intel® UHD Graphics for 11th Gen Intel® Processors (i3-1115GRE/i3-1115G4E)
Resolution	DP++ 1.4: 4096x2304 @ 60Hz HDMI 2.0b : Max. resolution 4096x2304 @ 60Hz
Multiple Display Interface	2 displays 1x DP 1.4 (eDP to DP) (DP to VGA converter is the standard accessory, and optional DP to DVI, DP to HDMI converters) 1x HDMI 2.0b (DDI)
Audio	
Chipset	Realtek ALC892 HD codec
Audio Interface	Mic-In, Line-Out
Ethernet	
Chipset	1 x Intel® I225-LM 1 x Intel® I219-LM
Ethernet Interface	1 x 10/100/1000/2.5G Base-Tx GbE compatible 1 x 10/100/1000Base-Tx GbE compatible.
LAN Port	2 x RJ-45
Mechanical & Environmental	
Operating Temperature	-40℃ ~ 70℃ (w/SSD) ambient w/ air flow, WT sku 0℃ ~ 70℃ (w/SSD) ambient w/ air flow, ST sku

Storage Temperature	-40°C ~ 75°C (-40°F ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	2.1 kg (System) 2.9 kg (w. Package)
Mounting Kit	Wall mount kit (standard) DIN RAIL (optional)
Dimension (L x W x H)	240mm x 150mm x 48 mm (Standard) 240mm x 150mm x 69 mm (w/ IET module)
IP Rating	IP 50
Vibration Test	With SSD : 5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 1hr/axis
Shock Test	With SSD : 55Grms, IEC 60068-2-27, Half Sine, 11ms
Color	Avalue Box PC family design
Certifications	
Certification Information	CE FCC Class B
Software Support	
OS Information	Win 10 64bit Linux
Power Requirement	
Power Connector	3-Pin Terminal Block (V+, V-, GND)
Power Requirement	DC in 12/24V (+9V ~ +32V), wide voltage single power input TVS component for surge protection Reverse current/voltage protection (Max. Current: 13A)
ACPI	Single power ATX Support S0, S3, S4, S5 ACPI 5.0 Compliant
Power Mode	AT/ATX (ATX is default setting)

※ 拡張モジュールとの組合わせにより、I/Oを増設することが可能

Modularization via IET Module



- Time-Saving Development for New Functions
- Flexible Design to Meet Versatile Requirements
- IET Expansion Module Supporting Multi-COM Isolation, Multi-LAN Bypass and Multi-LAN PoE Module

IET Module Pin Definition

EMS series is an expandable rugged system that can quickly build innovative platform to meet customer's needs.

Via AUX-M01 to get 4 x COM, 2 x USB	Via EBM-CDVS DB-A to get DVI-D + 2 x USB
Via AUX-M02 to get 4 x LAN, 2 x USB	Via EBM-BYTS DB-A to get HDMI, 2 x USB, 2 x COM, 2 x LAN
Via AUX-M03 to get 8 x COM, 2 x USB	Via EBM-BYTS DB-E to get 4 x USB 3.0, 3 x USB 2.0
Via AUX-M04 to get 4 x PoE, 2 x USB	Via EBM-BYTV DB-B to get 2 x Mini PCIe w/ 2 SIM + DVI-D
Via AUX-M08 to get 4 x PoE, 32 x GPIO	Via EBM-CFSV DB-B to get 4 x PoE (M12)



EMS-TGL-USB
4 x USB3.0、3 x USB2.0を増設



EMS-TGL-HDMI
1 x HDMI、2 x USB2.0、2 x LAN、2 x COMを増設

GPU搭載 産業用PC



EGS-MX1

MXMグラフィックスカード搭載
組込み向けGPUシステム

- > 8/9世代Intel® Core i7/i5/i3 プロセッサ搭載
- > COM Express Type 6 キャリアボード内蔵
- > 4 x USB 3.2、2 x COM、2 x LAN、8/16-bit GPIO
拡張スロット : M.2 Key-B、M.2 Key-E、Mini-PCIe
- > マルチディスプレイ : 最大 7 x HDMI
- > 外形寸法 : 240mm x 240mm x 85mm
- > 動作温度 : 0°C ~ 50°C

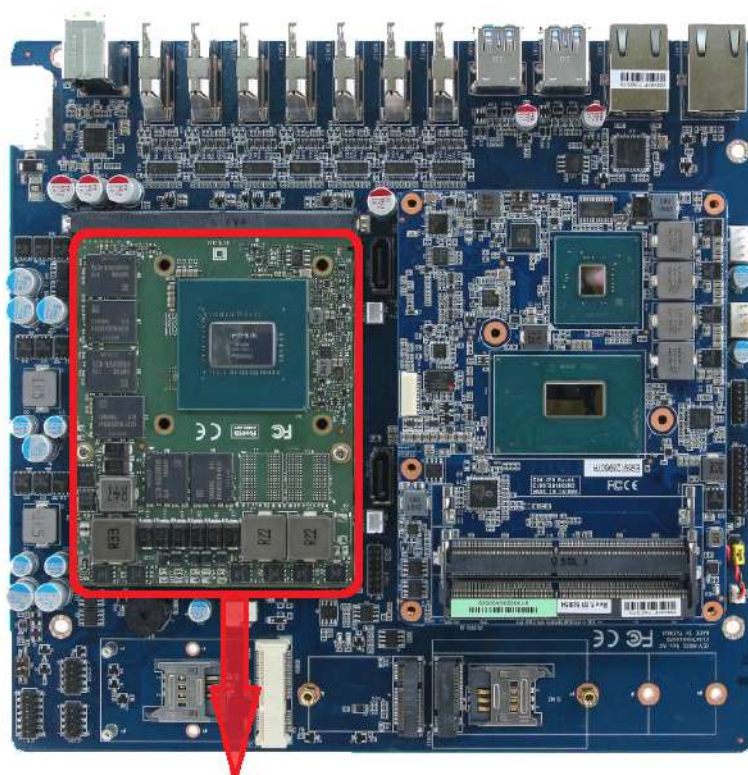
+ Spec

System	
Processor	Core™ i7-9850HE 45W (35W cTDP), 6C/GT2 (non-ECC) Core™ i5-8400H 45W (35W cTDP), 4C/GT2 (non-ECC) Core™ i3-9100HL 25W, 4C/GT2 (non-ECC)
System Chipset	QM370 (supports Intel® AMT and PEG configuration)
System Memory	Up to 3x 260-pin DDR4-2400/2133 SO-DIMM with up to 96 GB, depends on CPU sku.
BIOS	AMI uEFI BIOS, 128 Mbit SPI Flash ROM iAMT 12.0 supported (only on specific models with i7/i5 SKU)
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec. and 1sec./step
H/W Status Monitor	Monitoring System Temperature, Voltage and FAN Status with Auto Throttling Control
Board	EEV-MX01+ESM-CFH
Expansion	
Expansion	1 x M.2 Key-B 2242/3042/2260/2280 (SATA/PCIe/USB2.0) 1 x M.2 Key-E 2230 for Wi-Fi & BT Module (PCIe/USB2.0) 1 x Full/Half Size mini PCIe (PCIe/USB2.0) 1 x Type A/B MXM Slot
Storage	
Storage	1 x 2.5" internal Drive Bay 1 x M.2 Key-B 2242/2280
I/O	
USB	4 x USB 3.2 Gen.1 Type-A (Gen. depends on COMe module, contain 4 x USB2.0 signal)
COM Port	2 x RS-232 (via cable)
SIM	2 x internal SIM slot
GPIO	1 x 8/16-Bit GPIO (via cable)
HDMI	7 x HDMI
Display	
Chipset	- Intel® Coffee Lake Processor integrated Graphics - MXM GPU
Resolution	3 x HDMI 1.4: 4096x2160 @30Hz (from COMe) 4 x HDMI 2.0: 4096x2160 @60Hz (from MXM)
Multiple Display	7 x HDMI
Audio	
Chipset	Realtek ALC892 HD codec
Audio Interface	1 x Mic-In, 1 x Line-Out
Ethernet	
LAN Port	2 x RJ45
Mechanical	
Power Type	ATX/AT mode, default set as ATX.
Power Connector Type	ATX 10pin connector
Weight	3.2kg (system)
Color	black + blue
Mechanical & Environmental	
Dimensions(W x L x D)	240mm x 240mm x 85mm
Operating Temperature	0°C ~ 50°C (w/SSD) ambient w/ 0.2 air flow
Storage Temperature	-40°C ~ 75°C (-40°F ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Mounting Kit	w/ wall mount kit (standard)
Vibration Test	With SSD: 1.5 Grms, IEC 60068-2-64
Shock Test	With SSD: 10G, IEC 60068-2-27
Certifications	
Certification Information	CE/FCC
Software Support	
OS Information	Win, Linux
Power Requirement	
Power Connector	ATX 10pin
Power Requirement	+12Vdc (±5%)
ACPI	Single power ATX Support S0, S3, S4, S5 ACPI 5.0 Compliant
Power Type	ATX/AT mode, default set as ATX.

EGS-MX1 COM Express Type 6 キャリアボード + MXMグラフィックスカード

MXMグラフィックスカードとは

MXMは、PCI Expressを採用したビデオ専用の拡張インターフェイス。
組込機器向けとして、小型化（70mm x 82mm / 105mm x 82mm）、
長期供給という課題に対応することが可能。



MXMグラフィックスカード例



Model Name	M3N1030-JN	M3N1050TI-LN	M3N1060-MN
MXM Type	3.1 Type A	3.1 Type A	3.1 Type B
Display Support	2	4	4
Display interface	DP1.2, HDMI2.0b, DVI	DP1.4, HDMI2.0	DP1.4, HDMI2.0
GPU	NVIDIA GT1030	NVIDIA GTX1050Ti	NVIDIA GTX 1060
GPU CLK (MHz)	1227	1493	1404
MEM Size (G)	2	4	6
MEM CLK (Gbps)	6	7	8
MEM Width (bit)	64	128	192
MEM BW (GB/sec)	48	112	192
Bus Support	PCI-E 3.0 (X16)	PCI-E 3.0 (X16)	PCI-E 3.0 (X16)
Consumption	30W	60W	78W
Operating temperature	STD 0~55	STD 0~55	STD 0~55
Length*Height (mm)	70*82	70*82	105*82

RCO-6100 series

Superior Fanless Embedded System w/ LGA 1151 for Intel 8/9 th Gen CPU & Q370 PCH



SPECIFICATIONS

System

Processor

Support 8th/9th Gen Intel® CFL-R S Processor (LGA 1151, 65W/35W TDP)

- Intel® Core™ i7-9700E, 8 Cores, 12MB cache, up to 4.4 GHz
- Intel® Core™ i5-9500E, 6 Cores, 9MB Cache, up to 4.2 GHz
- Intel® Core™ i3-9100E, 4 Core, 6MB Cache, 3.7 GHz
- Intel® Core™ i7-9700TE, 8 Cores, 12MB cache, up to 3.8 GHz
- Intel® Core™ i5-9500TE, 6 Cores, 9MB Cache, up to 3.6 GHz
- Intel® Core™ i3-9100TE, 4 Core, 6MB Cache, 3.2 GHz
- Intel® Core™ i7-8700T, 6 Cores, 12MB cache, up to 4.0 GHz
- Intel® Core™ i5-8500T, 6 Cores, 9MB Cache, up to 3.5 GHz
- Intel® Core™ i3-8100T, 4 Cores, 6MB Cache, 3.1 GHz
- Intel® Pentium® G5400T, 2 Cores, 4MB Cache, up to 3.1 GHz
- Intel® Celeron® G4900T, 2 Cores, 2MB Cache, up to 2.9 GHz

System Chipset Intel® Q370 Express Chipset

LAN Chipset GbE1: Intel I219LM (Support Wake-on-LAN and PXE)
GbE2: Intel I210-AT (Support Wake-on-LAN and PXE)
GbE3-GbE6: Intel I350-AM4 (Optional)
10 GbE1-GbE2: Intel X710-AT2 (Optional)

Audio Codec Realtek ALC888S

System Memory 2x 260-Pin DDR4 2400/2666MHz SODIMM.
Max. up to 64GB (Un-buffered and Non-ECC)

BIOS AMI 256Mbit SPI BIOS

Watchdog Software Programmable Supports 1-255 sec. System Reset

TPM TPM 2.0

Display

Graphics Intel® UHD Graphics 610/630

VGA Yes (by optional split cable)

DVI 1x DVI-I, support resolution 1920 x 1200

DisplayPort 2x DisplayPort, support resolution 4096 x 2304

Multiple Display Triple Display

Storage

SSD/HDD 2x Internal 2.5" SATA HDD Bay (support H=9mm)
2x Removable 2.5" SATA HDD Bay
(support H=7mm, hot-swappable), Support RAID 0, 1, 5, 10

mSATA 1x mSATA (Shared by 1x Mini PCI Express)

M.2 1x M.2 (M Key, NVMe PCIe x4, 2280)
1x M.2 (E Key, PCIe x2, USB 2.0, 2230)

SIM Socket 2x External SIM socket

Expansion

Mini PCI Express 2x Full-size Mini PCIe (1x shared by 1x mSATA)

4-Port GbE (Optional) 4-port GbE module with Intel® I350-AT4 Chipset,
RJ-45 or M12 connector (PoE optional)
Occupied one Universal I/O Slot

2-Port GbE (Optional) 2-Port RJ45 10GbE with Intel X710-AT2 Chipset
Occupied one Universal I/O Slot

FEATURES

- LGA 1151 socket for 8th/9th Gen. Intel® CFL-R S Processor (65W/35W TDP)
- Intel® Q370 chipset
- 2x DDR4 2400/2666Hz SODIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x Full-size mini PCIe for communication or expansion modules, 2x SIM socket
- 4x 2.5" SATA HDD Bay and 1x mSATA with RAID 0, 1, 5, 10 support
- 1x M.2 (M Key, NVMe PCIe x4, 2280); 1x M.2 (E Key, PCIe x2, USB 2.0, 2230)
- 6x RS-232/422/485 (w/ 2x internal), 4x USB 3.2 Gen 2, 5x USB 3.2 Gen 1
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 70°C (35W CPU);
-25°C to 60°C (65W CPU)
- TPM 2.0 Supported

Operating System

Windows Windows 10

Linux Linux kernel 5.X

I/O

COM 4x RS-232/422/485 ; 2x RS-232/422/485 (internal)

USB 4x USB 3.2 Gen 2 (10 Gbps)
5x USB 3.2 Gen 1 (5 Gbps)
2x USB2.0 header (internal)

LAN 2x RJ45

Audio 1x Mic-in, 1x Line-out

DIO 8 in / 8 out (Isolated)

Universal I/O Bracket 1x Universal I/O Bracket (By mini PCIe interface)

Others 5x WiFi Antenna Holes
1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off
1x PC/Car Mode Switch, 1x Delay Time Switch
1x Removable CMOS Battery

Power

Power Mode AT, ATX

Power Supply Voltage 9-48VDC

Power Ignition Sensing Power Ignition Management

Power Connector 3-pin Terminal Block
4-pin 12V DC input as optional

Power Adaptor Optional AC/DC 24V/9.2A, 220W
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 (35W CPU) ; -25°C to 60°C (65W CPU)

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
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 240 (W) x 261 (D) x 79.2 (H) mm

Weight TBD

Mounting Wall Mounting

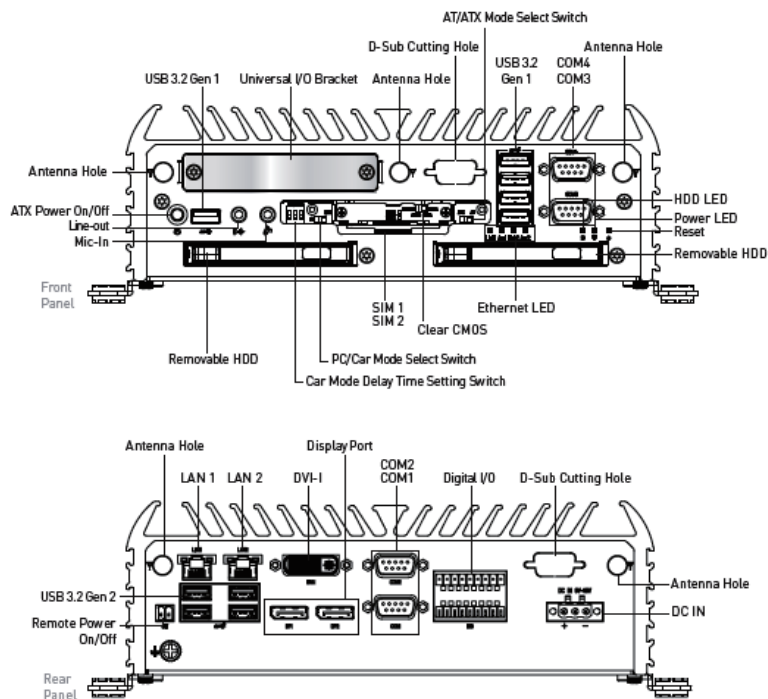
* For 8th/9th CPUs configured to run at 65W, operating temperatures will be limited to 60°C.

** 65W CPUs may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 8 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded engineers for the best configuration to match your application requirements.

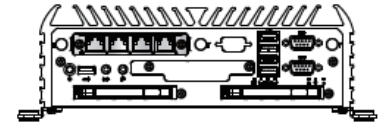
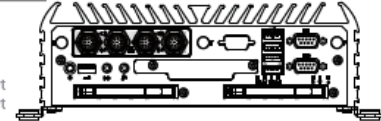
*** All specifications and photos are subject to change without notice.

RCO-6100 series

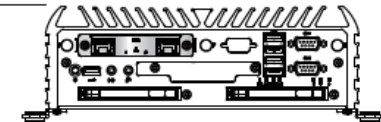
EXTERNAL I/O MECHANICAL LAYOUT



LAN Port PoE Port

RCO-6100-4L
RCO-6100-4PM12 LAN Port
M12 PoE PortRCO-6100-4L-M12
RCO-6100-4P-M12

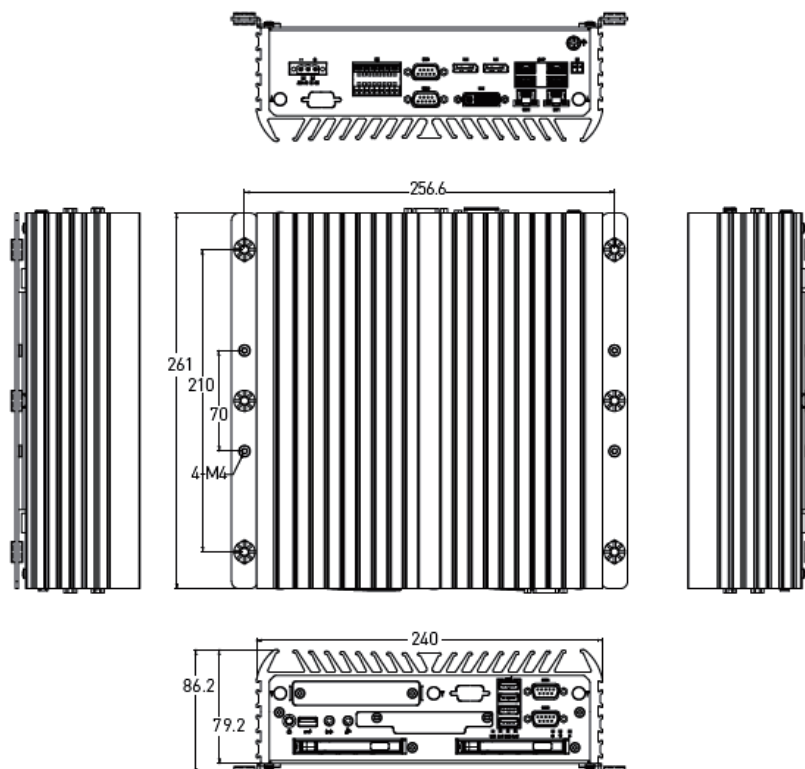
D10G Port



RCO-6100-D10G

DIMENSION

Unit: mm



VCO-6122-2PWR

GPU Computing System w/ LGA 1151 for Intel 8/9 th Gen CPU & Q370 PCH, 1x PCIe x16, 24V Power for GPU



SPECIFICATIONS

System

Processor

Support 8th/9th Gen Intel® CFL-R S Processor (LGA 1151, 65W/35W TDP)

- Intel® Core™ i7-9700E, 8 Cores, 12MB cache, up to 4.4 GHz (24V)
- Intel® Core™ i5-9500E, 6 Cores, 9MB Cache, up to 4.2 GHz (24V)
- Intel® Core™ i3-9100E, 4 Core, 6MB Cache, 3.7 GHz (24V)
- Intel® Core™ i7-9700TE, 8 Cores, 12MB cache, up to 3.8 GHz
- Intel® Core™ i5-9500TE, 6 Cores, 9MB Cache, up to 3.6 GHz
- Intel® Core™ i3-9100TE, 4 Core, 6MB Cache, 3.2 GHz
- Intel® Core™ i7-8700T, 6 Cores, 12MB cache, up to 4.0 GHz
- Intel® Core™ i5-8500T, 6 Cores, 9MB Cache, up to 3.5 GHz
- Intel® Core™ i3-8100T, 4 Cores, 6MB Cache, 3.1 GHz
- Intel® Pentium® G5400T, 2 Cores, 4MB Cache, up to 3.1 GHz
- Intel® Celeron® G4900T, 2 Cores, 2MB Cache, up to 2.9 GHz

System Chipset	Intel® Q370 Express Chipset
LAN Chipset	GbE1: Intel I219LM (Support Wake-on-LAN and PXE) GbE2: Intel I210-AT (Support Wake-on-LAN and PXE)
Audio Codec	Realtek ALC888S
System Memory	2x 260-Pin DDR4 2400/2666MHz SODIMM. Max. up to 64GB (Un-buffered and Non-ECC)
BIOS	AMI 256Mbit SPI BIOS
Watchdog	Software Programmable Supports 1-255 sec. System Reset
TPM	TPM 2.0

Display

Graphics	Intel® UHD Graphics 610/630
VGA	Yes (by optional split cable)
DVI	1x DVI-I, support resolution 1920 x 1200
DisplayPort	2x DisplayPort, support resolution 4096 x 2304
Multiple Display	Triple Display

Storage

SSD/HDD	2x Internal 2.5" SATA HDD Bay (support H=9mm) 2x Removable 2.5" SATA HDD Bay (support H=7mm, hot-swappable) , Support RAID 0, 1, 5, 10
mSATA	1x mSATA (Shared by 1x Mini PCI Express)
M.2	1x M.2 (M Key, NVMe PCIe x4, 2280) 1x M.2 (E Key, PCIe x2, USB 2.0, 2230)
SIM Socket	2x Internal SIM socket

Expansion

Mini PCI Express	2x Full-size Mini PCIe (1x shared by 1x mSATA)
PCI Express	1x PCIe x16
PCI	1x PCI
Card Dimension	310 (L) x 112 (H) mm

FEATURES

- Support 8th/9th Gen Intel® CFL-R S Processor (LGA 1151, 65W/35W TDP)
- Intel® Q370 Chipset
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x Full-size mini PCIe (shared by 1x mSATA), and 2x SIM socket
- 4x 2.5" SATA HDD Bay with RAID 0, 1, 5, 10 support,
1x mSATA (Shared by 1x Mini PCIe)
- 1x M.2 (M Key, NVMe PCIe x4, 2280), 1x M.2 (E Key, PCIe x2, USB 2.0, 2230)
- 6x RS-232/422/485 (4x internal)
- 4x USB 3.2 Gen 2 (10 Gbps), 4x USB 3.2 Gen 1 (5 Gbps, internal)
- 8x DI + 8x DO with isolation
- 9 to 48V DC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature [-25°C to 70°C]
- TPM 2.0 Supported

Operating System

Windows	Windows 10
Linux	Linux kernel 5.X

I/O

COM	2x RS-232/422/485 4x RS-232/422/485 (internal)
USB	4x USB 3.2 Gen 2 (10 Gbps) 4x USB 3.2 Gen 1 (5 Gbps, internal)
LAN	2x RJ45
DIO	8 in / 8 out (Isolated)
Universal I/O Bracket	2x Universal I/O Bracket (By mini PCIe interface)
Others	4x WiFi Antenna Holes 1x Power Switch 1x Remote Power On/Off

Power

Power Mode	AT, ATX
Power Supply Voltage	9-48V DC
Power Ignition Sensing	Power Ignition Management
Power Connector	3-pin Terminal Block 4-pin Terminal Block
Power Adaptor	Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/11.67A, 280W
Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection) Reverse Protection

Environment

Operating Temp.	-25°C to 70°C (35W CPU) -25°C to 60°C (65W CPU)
Storage Temp.	-30°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: 20G, half sine, 11ms
Standards / Certification	CE, FCC Class A

Physical

Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	137 (W) x 340 (D) x 240 (H) mm
Weight	7.83kg
Mounting	Wall Mounting / Book mounting (Optional)

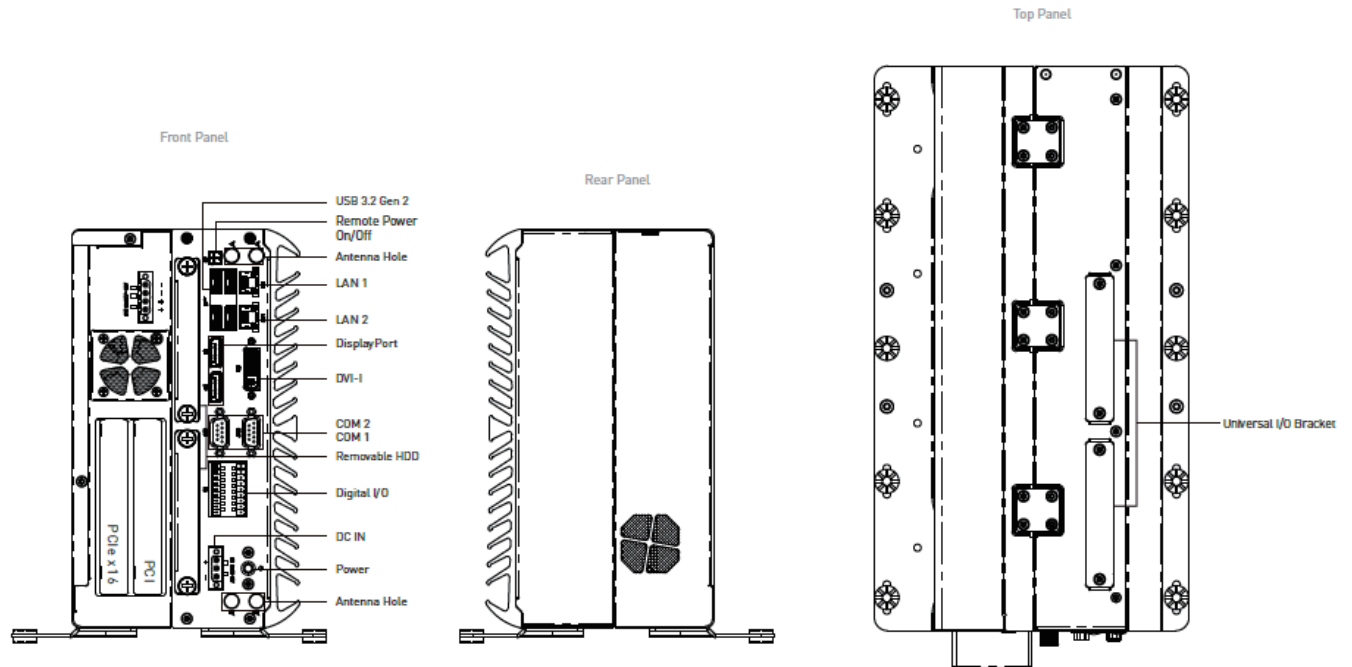
* For 8th/9th CPUs configured to run at 65W, operating temperatures will be limited to 60°C.

** 65W CPUS may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 8 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded engineers for the best configuration to match your application requirements.

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

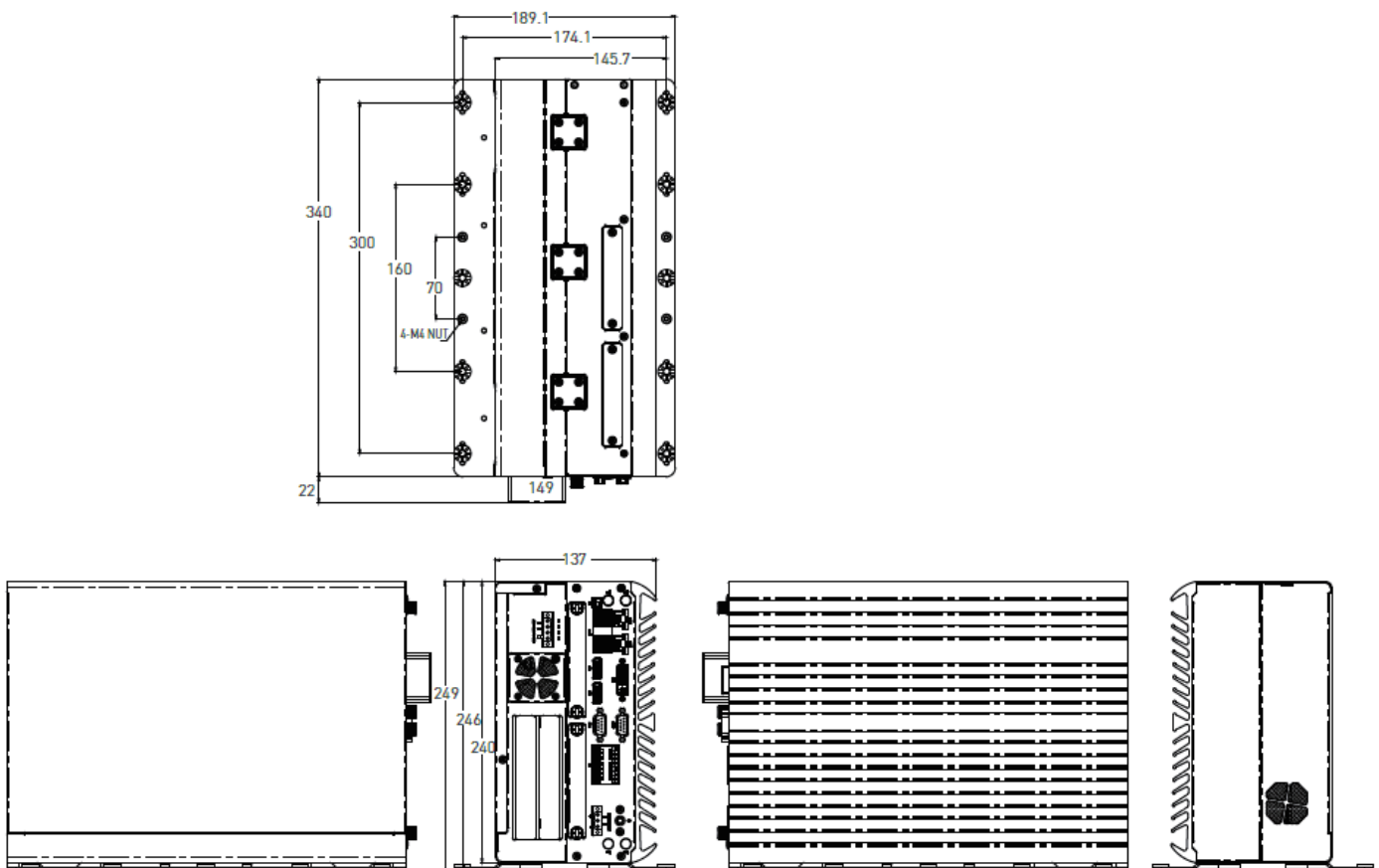
VCO-6122-2PWR

EXTERNAL I/O MECHANICAL LAYOUT



DIMENSION

Unit: mm



AMD Ryzenシリーズ APU搭載 産業用PC



SKY3-3A100DW

AMD Ryzen APU搭載
DINレールマウント式ファンレスBOXコンピュータ



■ Specifications :

■ CPU

AMD® Ryzen™ Embedded V1000 Series SoC

V1807B 3.35 GHz up to 3.8 GHz (Quad Core), TDP 35-54 Watt

V1605B 2.0 GHz up to 3.6 GHz (Quad Core), TDP 12-25 Watt

■ MB Chipset

AMD® Ryzen™ Embedded V1000 Series SoC

■ Graphics

AMD Raden™ Vega 8 integrated

■ System Memory

2 x DDR4 3200 / 2400 MHz SODIMM, Max. 32GB

■ Storage

1 x M.2 M Key, Type 2280 (PCIe x 4), Support NVMe

1 x M.2 B Key, Type 3042 (PCIe / mSATA / USB)

1 x mini card socket (PCIe / mSATA / USB)

2 x SATA ports 3.0 Data transfer rates up to 6.0 Gb/s (600 MB/s), optional to 2 x mSATA

■ BIOS

AMI UEFI BIOS

■ Display

2 x HDMI, 2 x DP

■ TPM

TPM 2.0 (Option)

■ LAN

3 x Intel GbE I210IT (external)

■ Audio

High Definition Audio Specification, Support Line-out / Mic-in / Line-in

■ Expansion Interface

1 x Full size Mini PCIe (PCIe / mSATA / USB) + 1 x Nano SIM (optional)

1 x PCIe x 16 Golden finger (support PCIe x 4 signal only)

1 x M.2 M Key, Type 2280 (PCIe x 4), Support NVMe

1 x M.2 B Key, Type 3042 (PCIe / mSATA / USB) + 1 x SIM

■ USB

2 x USB 3.1 (external) ; 2 x USB 2.0 (external), 3 x USB 2.0 (internal)

■ Serial IO

2 x RS232 / 422 / 485 (internal)

■ GPIO

Hardware digital Input & Output, 8 x DI / 8 x DO

■ WDT

Hardware Watch Dog Timer, 0~255 sec programmable

■ Power Input

Wide Range +12V~24V

■ Dimension

155 x 130 mm

■ Operation Temperature

-20°C~70°C (100% CPU Usage)

■ Operation Humidity

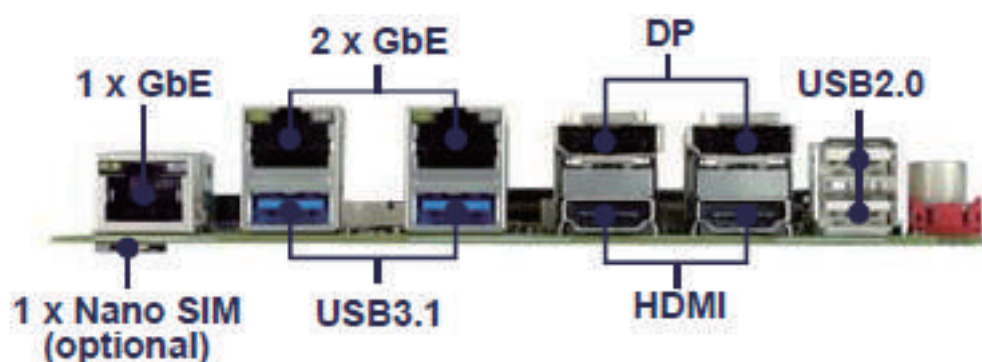
5~95%, non-condensing

■ Chassis (OEM I/O Expansion by request)

Box PC: SKY3, Apollo

■ OS Support

Windows® 10 IOT (64bit), Ubuntu 18.04.2 above, Fedora 29 above



産業用タブレットPC



CAXA0

Intel® Celeron® J3455 プロセッサ搭載
10.1"サイズ 産業用タブレットPC

- > 長期供給可能
- > 耐衝撃・耐振動設計
MIL-STD-810Gの耐衝撃、耐振動に関する規格認証済み
約1.2mの高さからの落下抵抗
- > 軽量設計 : バッテリー搭載でわずか1kg
- > 防水・防塵設計 : フルIP65規格認証済み
- > タッチパネル : コーニング社のゴリラガラスを使用した、
5点マルチタッチ静電容量方式
- > 無線LAN、Bluetooth 5.0、NFC
- > ジャイロセンサー、光センサー、2M/8Mピクセルカメラ搭載
- > 対応OS : Windows 10 IoT 64-bit、Android 8.1
- > 物流、倉庫、各種工場内での操作端末や、病院内での情報管理端末、
患者様とのコミュニケーション端末など、様々な現場で使用に最適

Spec	
System	
Processor	Intel® Celeron® Processor N3350 (2M Cache, up to 2.4 GHz)
System Memory	Onboard LPDDR4 4GB
Storage	
Solid State Drive	M.2 64GB Solid State Drive
Panel	
LCD Size	10.1"
Display Type	WXGA
Resolution	1280x800
Luminance	300 cd/m²
Touch Type	5 Points Projective Capacitive
I/O	
USB	2 x USB 3.0 Type A
HDMI	1 x HDMI Output
Other	1 x Audio Jack 1 x Micro SD 1 x DC Jack
System Control	
Control Buttons	1 x Power Button 1 x Barcode Scanner Trigger
LED Indicator	1 x Power
Mechanical & Environmental	
Operating Temperature	0°C to 30°C (32°F to 86°F) without dock or wall mount 0°C to 40°C (32°F to 104°F) with dock or wall mount
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Operating Humidity	15%~95% Relative Humidity, Non-Condensing
Weight	1Kg
Construction	Rubber + Plastic
IP Rating	IP65
Vibration Test	MIL-STD-810G Method 514.6 Procedure 1
Shock Test	MIL-STD-810G Method 516.6 Procedure 1
Dimension	281 x 193.3 x 19.95mm
Storage Humidity	5%~90% Relative Humidity, Non-Condensing
Drop	4-Foot Drop on Concrete Floor, MIL-STD-810G 516.5 Procedure VI
Certifications	
Certification Information	CE, FCC, VCCI, CCC, BSMI EN60601-1, EN60601-1-2
Software Support	
OS Information	Windows 10 IoT 64bit Android 8.1
Power Requirement	
Power Connector	DC Jack
Power Requirement	+19V
Battery	28.44W Li-ion Battery
Battery Operating Time	6 Hours
Adapter	Input: 100~240Vac/50~60 Hz Output: 65W Adaptor (19V@3.15A Adaptor)
In-Box Accessory	
Accessory	+19V 65W Power Adaptor
Data Collection	
Camera	2MP Front Camera 8MP Rear Camera With Auto Focus
NFC	ISO/IEC 14443 A/B, 15693/18092, NFCIP-1, NFCIP-2, Support MIFARE and Felica
Barcode Scanner	1D/2D Barcode Scanner (Optional)
Smart Card Reader	Half-Slot, Reads ISO 7816-1, 2, 3 & 4, T=0 & T=1; 5V Smart Card Reader (Optional)
Wireless Communication	
WLAN	802.11 a/b/g/n/ac
Bluetooth	Bluetooth 5.0
Component	
Microphone	Front Microphone