

# ECS-9780 GTX1050 Series

Workstation-grade Intel® Xeon®/Core™ i7 Processor (Skylake-H) Embedded System with Intel® CM236 & NVIDIA GeForce® GTX 1050 Ti/GTX 1050, NVIDIA Pascal™ architecture, 10-port GigE LAN w/8 PoE, 2 Front-access SSD Tray, 4 SIM, 6 USB 3.0, 4 COM, 32 Isolated DIO, High Performance, Independent Graphics



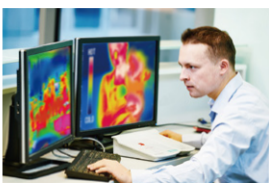
- Workstation-grade Intel® Xeon®/Core™ i7 Processor (Skylake-H) with CM236 chipset
- 10 Independent GigE LAN with 4 IEEE 802.3at PoE+ & 4 IEEE 802.3af PoE
- 2 DDR4 2133MHz Memory, up to 32GB (ECC/Non-ECC)
- 4 SIM Card Socket for WiFi/3G/4G/LTE/GPRS/UMTS
- 10V to 36V DC-in with 80V Surge Protection
- Configurable Ignition Power Control
- NVIDIA GeForce® GTX 10 Series graphics engine supports NVIDIA Pascal™ GPU architecture, up to 8K resolution
- Display : 1 VGA, 2DVI, 1 HDMI & 3 DisplayPort, up to 6 independent HD displays
- 2 Front-access 2.5" SSD Tray, 6 USB 3.0, 4 COM
- 32 Isolated DIO, 2 Mini PCIe/mSATA
- Optional supports full function SUMIT A, B



Machine Vision



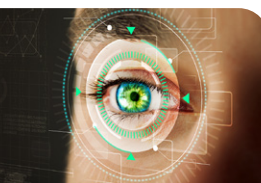
Vehicle Computing



Intelligent Surveillance



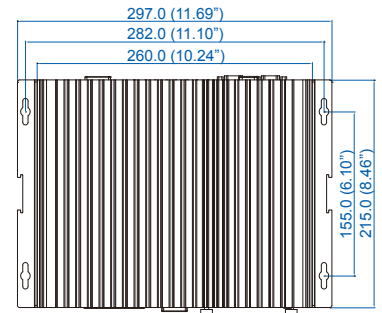
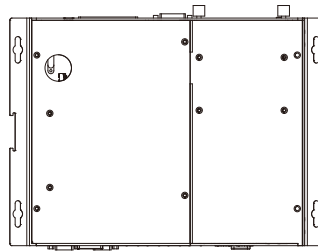
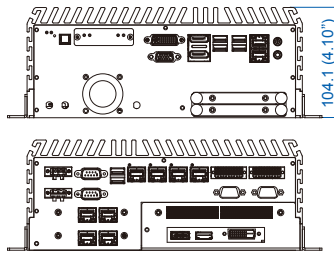
Intelligent Automation



Deep Learning



## Dimensions & Drawing Unit: mm (inch)



## Specifications

### System

<b>Processor</b>	Intel® Xeon® E3-1505M v5/Core™ i7-6820EQ Processor (Skylake-H)
<b>Chipset</b>	Intel® CM236
<b>BIOS</b>	AMI
<b>SIO</b>	IT8786E
<b>Memory</b>	2 DDR4 2133MHz SO-DIMM, up to 32GB
<b>OS</b>	Windows 10, Windows 8.1, Windows 7, Linux

### I/O Interface

<b>Serial</b>	4 COM RS-232/422/485 (ESD 8KV)
<b>USB</b>	• 6 USB 3.0 (External) • 1 USB 2.0 (Internal)
<b>Isolated DIO</b>	32 Isolated DIO : 16 DI, 16 DO
<b>LED</b>	Power, HDD, PoE, Wireless
<b>SIM Card</b>	4 SIM Card Socket (3 External, 1 Internal)

### Expansion

<b>Mini PCIe</b>	2 Mini PCIe Socket : • 1 Full-size for PCIe/USB/External SIM Card/mSATA • 1 Full-size for PCIe/Internal SIM Card/mSATA
<b>SUMIT A, B</b>	2 SUMIT Slot (Optional)

### Graphics

<b>Processor</b>	• Intel® HD Graphics P530/530 • NVIDIA GeForce® GTX 1050 Ti/GTX 1050
<b>Interface</b>	7 Display interfaces : • 2 DVI : Up to 1920 x1200 @ 60 Hz • 1 DisplayPort : Up to 7680 x 3840 @ 60Hz • 2 DisplayPort : Up to 4096 x 2304 @ 60Hz • 1 VGA : Up to 1920 x 1200 @ 60Hz • 1 HDMI : Up to 4096 x 2160 @ 60Hz

### Storage

<b>SATA</b>	4 SATA III support S/W RAID 0, 1, 5, 10 : • 3 SATA III (6Gbps) • 1 SATA III co-lay with Mini PCIe (6Gbps)
<b>mSATA</b>	4 mSATA connections : • 3 SATA III (Mini PCIe Type, 6Gbps) • 1 SATA III co-lay with SATA (Mini PCIe Type, 6Gbps)
<b>Storage Device</b>	• 1 CFast Socket, Push-in/Push-out Ejector • 2 Front-access 2.5" SSD/HDD Tray

### Audio

<b>Audio Codec</b>	Realtek ALC892, 5.1 Channel HD Audio
<b>Audio Interface</b>	1 Mic-in, 1 Line-out

### Ethernet

<b>LAN 1</b>	Intel® I219LM GigE LAN supports iAMT 11.0
<b>LAN 2</b>	Intel® I210 GigE LAN

### PoE+

<b>LAN 3 to LAN 6</b>	GigE IEEE 802.3at (25.5W/48V) PoE* by Intel® I210
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### PoE

<b>LAN 7 to LAN 10</b>	GigE IEEE 802.3af (15.4W/48V) PoE by Intel® I350
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### Power

<b>Power Input</b>	10V to 36V, DC-in
<b>Power Interface</b>	3-pin Terminal Block : V+, V-, Frame Ground
<b>Ignition Control</b>	16 Mode (Internal)
<b>Remote Switch</b>	3-pin Terminal Block
<b>Surge Protection</b>	Up to 80V/1ms Transient Power

### Others

<b>TPM</b>	Optional Infineon SLB9665 supports TPM 2.0, LPC Interface
<b>Watchdog Timer</b>	Reset : 1 to 255 sec./min. per step
<b>Smart Management</b>	Wake on LAN, PXE supported
<b>HW Monitor</b>	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

### Mechanical

<b>Dimensions (WxLxH)</b>	260mm x 215mm x 104mm (10.2" x 8.5" x 4.1")
<b>Weight</b>	4.7 kg (10.36 lb)
<b>Mounting</b>	• Wallmount by mounting bracket • DIN Rail Mount (Optional)

### Environment

<b>Operating Temp.</b>	-20°C to 60°C (-4°F to 140°F)
<b>Storage Temp.</b>	-40°C to 85°C (-40°F to 185°F)
<b>Humidity</b>	5% to 95% Humidity, non-condensing
<b>Relative Humidity</b>	95% at 60°C
<b>Shock</b>	• IEC 60068-2-27 • SSD : 50G @ wallmount, Half-sine, 11ms • IEC 60068-2-64
<b>Vibration</b>	• SSD : 5Grms, 5Hz to 500Hz, 3 Axis
<b>EMC</b>	CE, FCC, EN50155, EN50121-3-2

## Order Information

<b>ECS-9780-505M-GTX1050T</b>	• ECS-9700, Quad Core Intel® Xeon® E3-1505M v5, NVIDIA GeForce® GTX 1050 Ti, 10-port GigE LAN w/8 PoE, 2 SSD, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO (ECC supported)
<b>ECS-9780-505M-GTX1050</b>	• ECS-9700, Quad Core Intel® Xeon® E3-1505M v5, NVIDIA GeForce® GTX 1050, 10-port GigE LAN w/8 PoE, 2 SSD, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO (ECC supported)
<b>ECS-9780-820Q-GTX1050T</b>	• ECS-9700, Quad Core Intel® Core™ i7-6820EQ, NVIDIA GeForce® GTX 1050 Ti, 10-port GigE LAN w/8 PoE, 2 SSD, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO
<b>ECS-9780-820Q-GTX1050</b>	• ECS-9700, Quad Core Intel® Core™ i7-6820EQ, NVIDIA GeForce® GTX 1050, 10-port GigE LAN w/8 PoE, 2 SSD, 6 USB 3.0, 4 COM, 4 SIM, 32 Isolated DIO
<b>DDR4 16GB</b>	• Certified DDR4 16GB 2133MHz RAM
<b>DDR4 8GB</b>	• Certified DDR4 8GB 2133MHz RAM
<b>DDR4 4GB</b>	• Certified DDR4 4GB 2133MHz RAM
<b>PWA-280W-WT</b>	• 280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>VESA Mount</b>	• VESA Mounting Kit
<b>DIN-RAIL</b>	• DIN Rail Kit
<b>TMK2-20P-100</b>	• Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
<b>TMK2-20P-500</b>	• Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
<b>TMB-TMBK-20P</b>	• Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
<b>3G Module</b>	• Mini PCIe 3G/GPS Module with Antenna
<b>4G Module</b>	• Mini PCIe 4G/GPS Module with Antenna
<b>WiFi &amp; Bluetooth Module</b>	• Mini PCIe WiFi & Bluetooth Module with Antenna

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