



Intelligent Transportation Solutions

2021-2022 Edition

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About IBASE



Core Activities

Design and Manufacturing
of Robust Industrial
Computing Platforms



HEADQUARTERS
Taipei, Taiwan



FOUNDED
February 2000



CHAIRMAN
C. S. Lin



CAPITAL
US\$58M



EMPLOYEE
770
(Worldwide)



Stock Quote
TPEX 8050
(Since 2003)

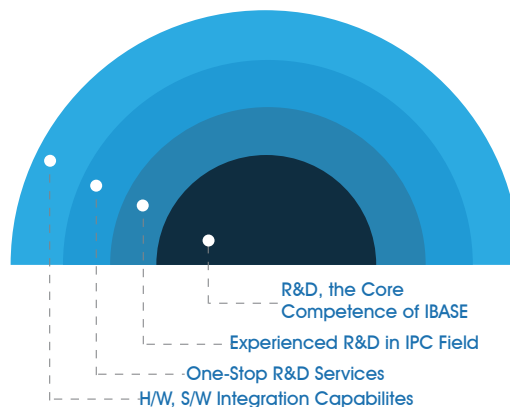
Company Profile

IBASE Technology specializes in the design and manufacture of robust industrial PC products, delivering high quality products and excellent service since its establishment in 2000. IBASE carries out manufacturing and quality control at its own facilities in Taiwan that are certified with ISO 9001, ISO 13485 and ISO 14001 standards. Current offerings comprise x86 and RISC-based industrial motherboards, embedded systems, panel PCs, network appliances and digital signage players. The company is publicly listed in the Taipei Exchange (TPEX: 8050) and is now a leading global provider of innovative industrial and embedded computing solutions.



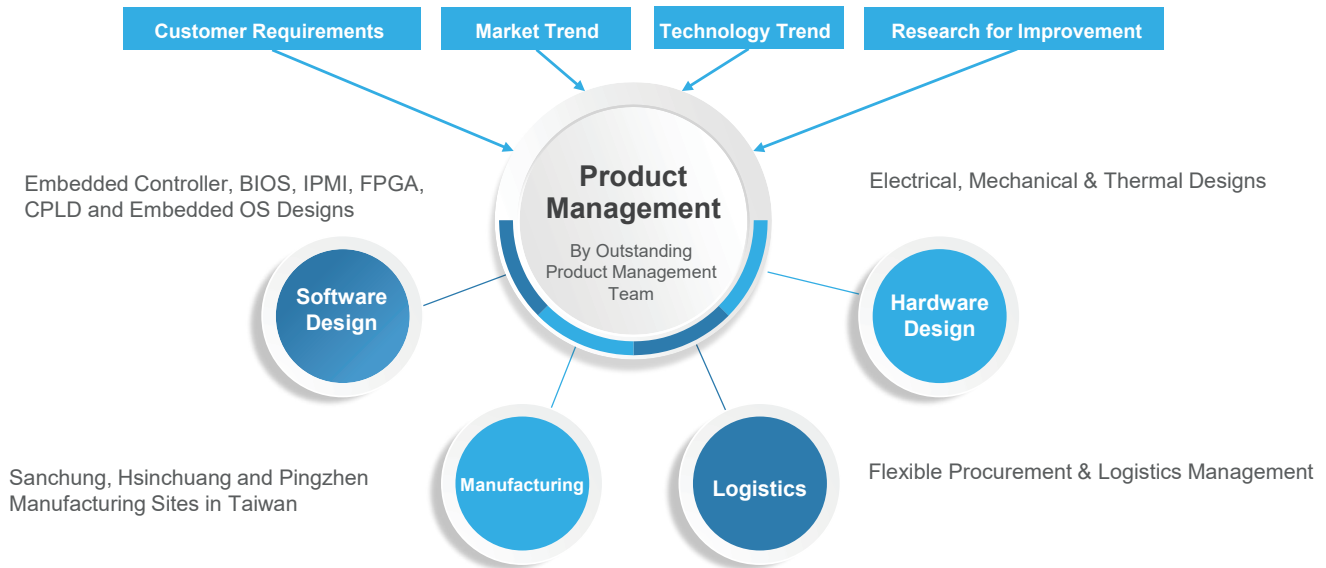
R&D Capabilities

IBASE's R&D team boasts of talented electronics, layout, system, mechanical hardware, BIOS, firmware as well as software engineers. Half of the team members are seasoned with more than 15 years of experience in their respective fields, while 45 percent carry more than five years of experience. Because of their accumulated expertise, the R&D team is able to design and create new products for the demanding and dynamic market.



Design⁺, Manufacture⁺, Service⁺

Set up to become a global leading provider of embedded board and system solutions, IBASE manufactures and supplies cutting-edge products based on the latest technologies to match market demands. Our R&D and product management teams have the expertise to design and develop products that are innovative and meet customers' requirements and design specifications. We attach great importance to research and development, investing heavily in manpower and resources to remain competitive by staying ahead in the technology curve. IBASE is also committed to compliance with environmental policies by working to prevent pollution with non-use of banned or restricted substances in our production process and products, helping our customers respond to their environmental challenges.



IBASE Manufacturing Sites



3,140 m² / 950 Ping

SANCHUNG

- Board Production
- Validation



6,070 m² / 1,840 Ping

HSINCHUANG

- System Assembly
- Validation



15,700 m² / 4,750 Ping

PINGZHEN

- Board Production
- System Assembly
- Validation

Total Size

268,350 Square-feet
(24,910 m² / 7,540 Ping)

Design & Manufacturing
in Taiwan

Capacity

- SMT Line x 3
- DIP Assembly Line x 2
- System Assembly Line x 10
- Cleanroom x 1
- Burn-in Room x 13
(4 hours per cycle)

PCBA

40K/month (In-house Production) + Outsourcing

System Assembly

10K/month (In-house Production) + Outsourcing

Certifications

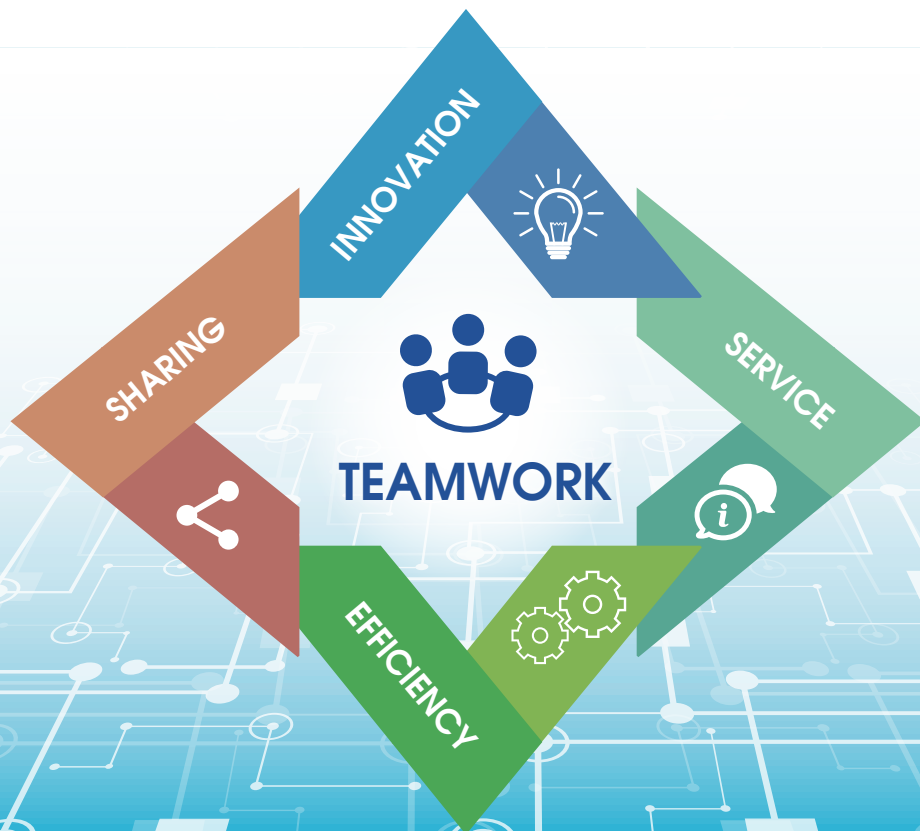


Your Best Partner

IBASE is a worldwide leader in the manufacture of reliable and multi-functional computer system and industrial panel PC products. We offer a comprehensive range of intelligent transportation PC solutions, including EN50155/EN45545 and E-mark certified computers and panel PCs design for railway and in-vehicle applications. Featuring innovative technology, such as self-debug and self-protection control systems and high-definition passenger information systems, the products meet all transportation market demands. Deployed worldwide, IBASE's secure and energy-saving intelligent transportation solutions enable safe, comfortable and efficient travel for commuters.

Aside from developing standard products, IBASE provides ODM (Original Design Manufacturer) and JDM (Joint Design Manufacturer) services and customized product solutions. With our highly-qualified expert engineers, IBASE can tailor products that meet customers' application-specific needs, ensuring high quality, reliability and longevity and provide one-stop shopping services to our valued clients.

IBASE has partnered with Intel in product development to create embedded computing solutions with unprecedented levels of performance. We have built our reputation through dedication and commitment to deliver well-designed products and an outstanding level of customer service. To this day, IBASE continue to foster an unbreakable relationship with both customers and technology vendors, working hand-in-hand to form a lasting win-win partnership.



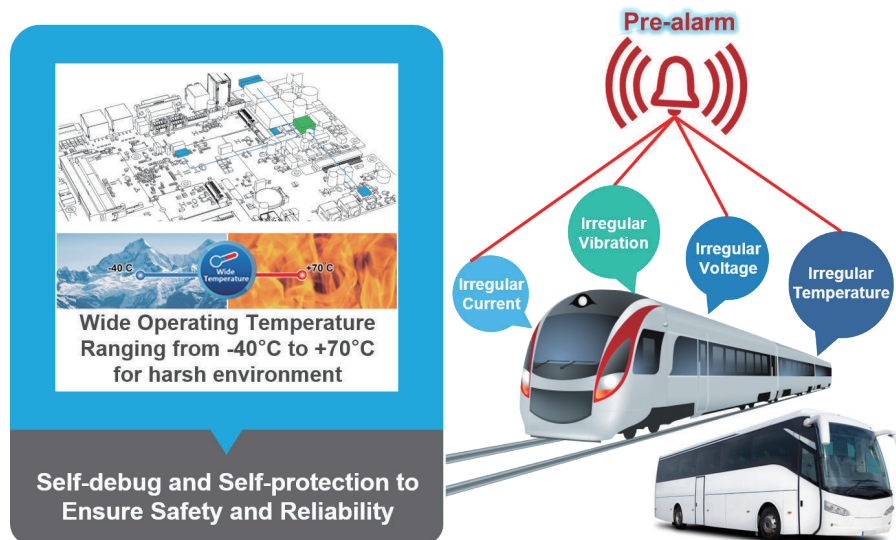
IBASE Intelligent Transportation Solutions



Intelligent transportation solutions ensure efficient traffic management and mobility management by constant monitoring of traffic conditions, control of traffic flow and timely delivery of accurate information on road and traffic-related information to drivers and commuters. It helps solve various road safety problems by enabling users to be better informed and make safer and smarter use of transport networks. IBASE's intelligent transportation solutions are designed with robust industrial-grade electronics to ensure road safety and are suitable for harsh operating environments to provide uninterrupted operation with high reliability. Our product offerings include EN50155 Class II certified railway systems, E-mark certified in-vehicle systems, railway panel PCs as well as all-in-one bar-type panel PCs.

Features of Systems

Our railway/in-vehicle systems support a wide-range operating temperature range from -40°C to $+70^{\circ}\text{C}$ and wide-range voltage GPIO interfaces, functioning as compartment data processor, message display controller, communication relay station and traffic or fleet management systems. The integration of information and communications technologies in these intelligent transportation systems and their application in the field of road transport can save lives, time and money, as they address traffic congestion problems and improve transportation safety and security.





Features

- EN50155/EN45545 certified
- Fanless and ruggedized design
- Robust M12 connection for one 2.5G LAN, dual GbE LAN with PoE, dual USB
- Isolated USB, RS485 ports
- SIM socket with dual WWAN support

Specifications

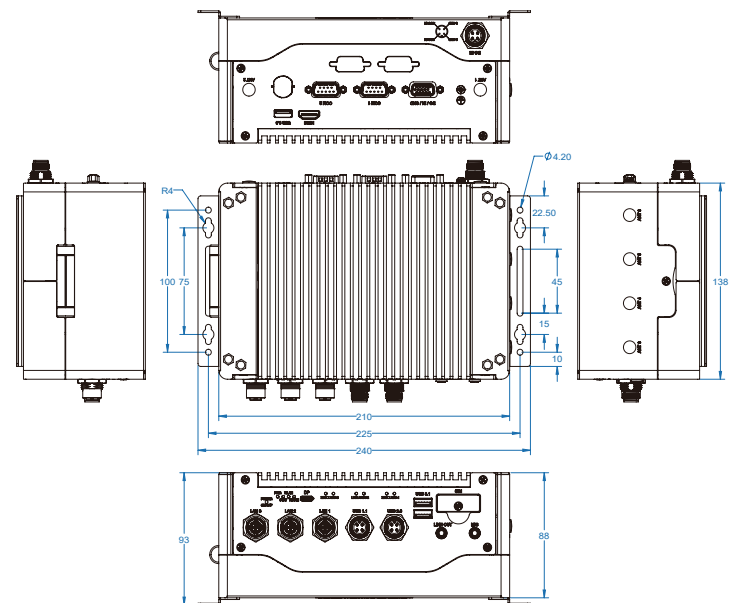
System Mainboard	MPT-500R
CPU Type	Intel® Atom® x6212RE/ x6425RE Processor
Processor Speed	Intel® Atom® x6212RE: 1.2GHz Intel® Atom® x6425RE: 1.90GHz
Memory	4GB/8GB LPDDR4 3200 on board
Front panel I/O	1x Recessed access tact-switch for system power 4x light-pipe for four status LED 1x USB type-C with DP 6x LED with each port for network status 2x USB3.1 stack type-A 2x external accessible SIM socket 3x M12 8-pin X-code for LAN (Two GbE LAN come with PoE and one 2.5G LAN) 1x M12 4-pin A-code for USB 1.1 1x M12 4-pin A-code for USB 2.0 1x 3.5mm audio connector for line output 1x 3.5mm audio connector for MIC input
Rear Panel External I/O	1x HDMI type-A 1x USB 3.0 type-A 2x SMA antenna holes with cap 1x M3 screw hole for grounding connection 1x DSUB15 for 4x DO/4x DI and ground 1x DSUB9 for RS-232/485 1x DSUB9 for 2x RS485 isolated 1x M12 4-pin A-code for power input
Storage	1x M.2 2242/80 M-key (PCI-E M.2 SSD) 1x 2.5" device bay for SSD or HDD. Default 2.5" 64G SSD
Expansion slots	1x mPCI-E full/half socket (PCI-E, USB 2.0) 1x M.2 3042/52 B-key (4G/5G) (Supports SIM1 & SIM2)
Power Supply	24V DC or 72V DC/110V DC
Construction	Aluminum
Chassis Color	Black
Mounting	Side mounting
Dimensions	240 (W) x 138 (D) x 93 (H) mm 9.4" (W) x 5.4" (D) x 3.7" (H)
Operating Temperature	SSD w/o PCI-E Card: -40°C ~70°C, up to 85°C for 10 minutes SSD w/ PCI-E Card: -40°C ~55°C, up to 70°C for 10 minutes HDD: -25°C ~55°C, up to 70°C for 10 minutes
Storage Temperature	-40°C ~ 85°C (-40°F~185°F)
Relative Humidity	10 ~ 95% @ 45°C, (non-condensing)
Vibration	Function: 1m/S2, 5Hz~150Hz (EN 61373) Lifetime: 7.9m/S2, 5Hz~150Hz (EN 61373)
Shock	50 m/S2, 30 msec (EN61373)

Certified	EN50155: 2017 CE (EN62368/ EN55032/ EN55035)/ FCC Class-A EN45545-2
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Ordering Information

MPT-500R	MPT-500R with MBT-501RX25, Intel® Atom® x6425RE processor, w/ 4GB RAM, 64G MLC SSD, 24V DC input
MPT-500RH	MPT-500RH with MBT-501RX25, Intel® Atom® x6425RE processor, w/ 4GB RAM, 64G MLC SSD, 72/110V DC input
MPT-500RHA	MPT-500RHA with MBT-501RX25A, Intel® Atom® x6425RE processor, w/ 8GB RAM, 64G MLC SSD, 72/110V DC input
MPT-500RE	MPT-500RE with MBT-501RX12, Intel® Atom® X6212RE processor, w/ 4GB RAM, 64G MLC SSD, 24V DC input

Dimensions





MPT-1000R VIDEO



Specifications

System Mainboard	MBT-1001R
CPU Type	Intel® Atom® x7-E3950 Processor
Processor Speed	1.6GHz , up to 2.0GHz
Memory	1x DDR3L SO-DIMM socket (horizontal type) with ECC support, default 4GB ECC
Front panel I/O	1x power reset button 1x DVI-I 2x M12 X-code GbE LAN, isolated 1x USB 2.0 type-A, isolated 1x M12 A-code USB 2.0 isolated 2x audio jack for Line-in/out 5x LED indications, one is programmable 1x SIM card slot for dual micro SIM card 1x expansion slots reset button
Rear Panel External I/O	1x 10-pin terminal block connector for - 2x insulated DO • Output type: Darlington transistor • Sink current: 500 mA for one channel @100% duty - Source current: 500 mA for one channel @100% duty cycle - Supply voltage: 5V~35V DC - Isolation voltage: 2500 VRMS - 6x insulated DI • Maximum input range: 24V, non-polarity • Digital logic levels: 0V~24V, non-polarity • Input high voltage: 5V~24V • Input low voltage: 0V~1.5V • Input resistance: 1.2k @ 0.5W Isolation voltage: 2500 VRMS - 1x DSUB9 for RS232/485, isolated - 1x DSUB9 for RS485, isolated 1x M12 4-pin D-code for 2 master CANbus, isolated 2x USB 2.0 type-A, isolated 1x M12 3-pin A-code for power input 1x blade fuse
Storage	2x 2.5" device bay for SSD/HDD 1x mSATA via miniPCI-E slot (shared with one 2.5" device)
Expansion slots	1x miniPCI-E full/Half-size, supports mSATA 1x miniPCI-E full/Half-size, supports second SIM card shared with M.2 slot 1x M.2 B-key 30x42 with USB 2.0 and USB 3.0 signal only, supports 2x SIM cards
Power Supply	9V~32VDC, 1.5KV galvanic isolation protection
Construction	Matel
Chassis Color	Black
Mounting	Side mounting, rack mounting with optional bracket
Dimensions	340 (W) x 183.4 (D) x 67.6 (H) mm 13.3" (W) x 7.22" (D) x 2.66" (H)

Features

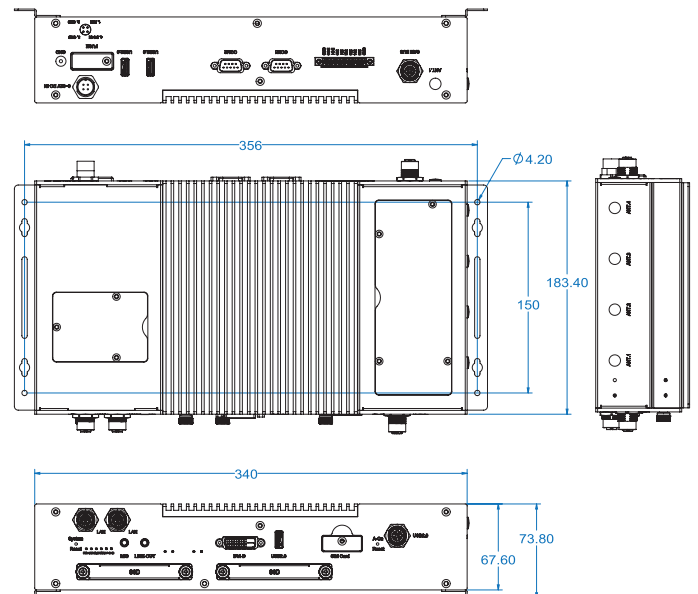
- EN50155 certified
- Fanless and ruggedized design
- Robust M12 connection for dual GbE, USB
- Onboard isolated CANbus
- SIM socket supports Dual WWAN
- Add on card slots reset function
- Quick accessible RTC battery

Operating Temperature	-40°C ~70°C, with SSD, not including add-on cards
Storage Temperature	-40°C ~ 85°C (-40°F~185°F)
Relative Humidity	10 ~ 95% @ 45°C, (non-condensing)
Vibration	Function: 1m/S2, 5Hz~150Hz (EN 61373) Lifetime: 7.9m/S2, 5Hz~150Hz (EN 61373)
Shock	50 m/S2, 30 msec (EN61373)
Certified	EN50155: 2017 CE (EN62368/ EN55032/ EN55025)/ FCC Class-A EN45545-2

Ordering Information

MPT-1000RM	Intel® Atom® x7-E3950 Processor, 4G DDR3L ECC RAM, 2x M12 GbE LAN, 24VDC(-25%~+30%), No OS, adaptor and storage
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Dimensions





Features

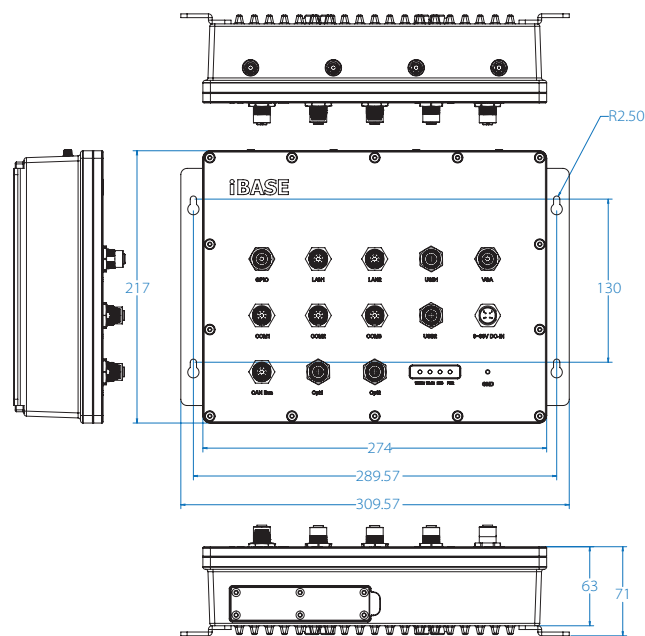
- EN50155 certified and IP67 rated
- Fanless and ruggedized design
- Robust M12 connectors for dual GbE, USB and power input
- Dual SIM sockets support WWAN redundancy
- Rich I/O interfaces for wireless, SSD, GPS, WWAN
- Ignition power control
- Wide-range voltage GPIO interface



Ordering Information

MPT-3000RP	Intel® Atom® Processor E3845, 128G M.2 SSD, 4G DDR3L RAM, 9V~36VDC, totally IP67, No adaptor
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Dimensions



Specifications

System Mainboard	MBT-3001R
CPU Type	Intel® Atom® Processor E3845
Processor Speed	1.91GHz
Memory	2x 2GB DDR3L-1333 SO-DIMM (Dual Channel)
Front panel I/O	CFast, 2.5" device bay, 2x SIM sockets 2x M12 USB 2.0 4x antenna connectors 1x M12 VGA, 3x M12 COMs, 2x M12 GbE, 1x M12 power connection 1x M12 GPIO, 1x M12 CAN Bus Status LEDs
Rear Panel External I/O	N/A
Storage	2.5" device bay for SSD & HDD M.2 SSD Storage
Expansion slots	1x Half-size Mini PCI-E socket (USB 2.0) 1x Full-size Mini PCI-E socket (USB 2.0 + PCI-E) 1x 2230 Socket 1 M.2 socket (USB 2.0 + PCI-E) 1x 3042 Socket 2 WWAN M.2 socket (USB 2.0) 1x 2280 Socket 3 SSD M.2 socket (SATA)
Power Supply	DC 9V~36V / 72V / 110V
Construction	Aluminum
Chassis Color	Black
Mounting	Wall Mount
Dimensions	270.0 (W) x 63.0 (D) x 210.0 (H) mm 10.62" (W) x 2.48" (D) x 8.26" (H)
Operating Temperature	SSD: -40°C ~ 70°C (-40°F~158°F)
Storage Temperature	-40°C ~ 85°C (-40°F~185°F)
Relative Humidity	10 ~ 95% RH @ 45°C (non-condensing)
Vibration	Function: 1 m/s ² , 5Hz ~ 150 Hz (EN 61373) Lifetime: 5.72 m/s ² , 5Hz ~ 150 Hz (EN 61373)
Shock	50 m/s ² , 30 msec (EN 61373)
Certified	EN50155: 2007, EN50153:2014 EN50121-3-2:2015, CE Class-A, FCC Class-A, EN45545



Features

- EN50155 certified
- Fanless and ruggedized design
- Robust M12 connection for dual GbE, USB and power input
- Dual SIM sockets support WWAN redundancy
- Removable 2.5" device bay and CFAST socket
- Rich I/O interfaces for wireless, SSD, GPS, WWAN and add-on card expansion
- Ignition power control
- Wide-range voltage GPIO interface

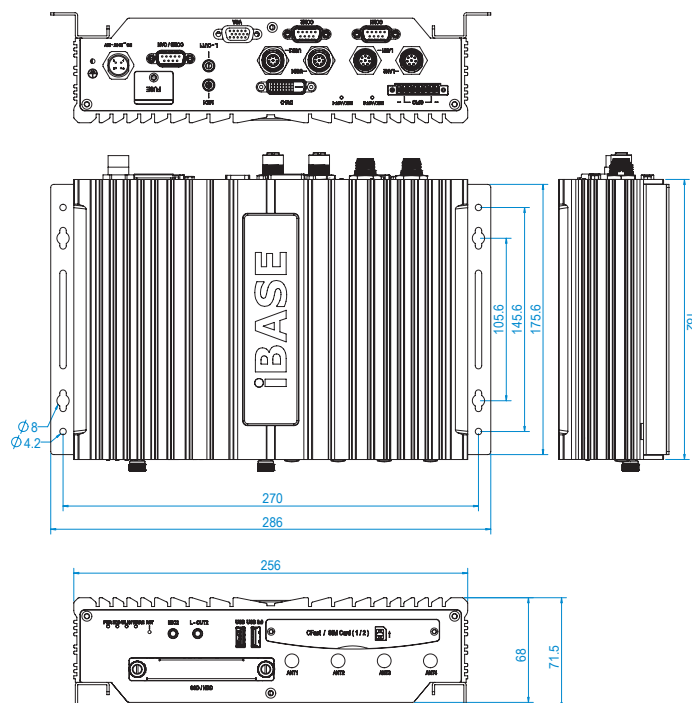
Specifications

System Mainboard	MBT-3001R
CPU Type	Intel® Atom® Processor E3845
Processor Speed	1.91GHz
Memory	2x 2GB DDR3L-1333 SO-DIMM (Dual Channel)
Front Panel External I/O	CFAST, 2.5" device bay, 2nd Mic-In & Line-Out 2x SIM sockets, 1x USB 3.0, 1x USB 2.0, Reset button Status LEDs, 4x antenna connectors
Rear Panel External I/O	DVI-D, VGA, 3x COMs (one with RS422/485 options) 2x M12 GbE, 2x M12 USB 2.0, M12 power connection 1st Mic-In & Line-Out, GPIO, GbE status LEDs
Storage	2.5" device bay for SSD & HDD
Expansion slots	1x Half-size Mini PCI-E socket (USB 2.0) 1x Full-size Mini PCI-E socket (USB 2.0 + PCI-E) 1x 2230 Socket 1 M.2 socket (USB 2.0 + PCI-E) 1x 3042 Socket 2 WWAN M.2 socket (USB 2.0) 1x 2280 Socket 3 SSD M.2 socket (SATA)
Power Supply	DC 9V~36V / 72V / 110V
Construction	Aluminum
Chassis Color	Black
Mounting	Custom mounting rail
Dimensions	256.0 (W) x 182.0 (D) x 68.0 (H) mm 10.08" (W) x 7.17" (D) x 2.68" (H)
Operating Temperature	SSD: -40°C ~ 70°C (-40°F ~ 158°F) HDD: -20°C ~ 50°C (-4°F ~ 122°F)
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)
Relative Humidity	10 ~ 95% RH @ 45°C (non-condensing)
Vibration	Function: 1 m/s ² , 5Hz~150 Hz (EN 61373) Lifetime: 5.72 m/s ² , 5Hz~150 Hz (EN 61373)
Shock	50 m/s ² , 30 msec (EN 61373)
Certified	EN50155: 2007, EN50153:2014 EN50121-3-2:2015, CE Class-A, FCC Class-A, EN45545

Ordering Information

MPT-3000RSM	MPT-3000R with MBT-3001R, Intel® Atom® Processor E3845 w/ 2x 2GB DDR3L-1333, SSD bay, No PSU, No storage (RoHS)
MPT-3000RHVSM	MPT-3000R with MBT-3001R, Intel® Atom® Processor E3845 w/ 2x 2GB DDR3L-1333, SSD bay, No PSU, No storage (RoHS) 72V/110V DC
M12-PWR-Cable-1	120cm M12 power cable for MPT series / Lead Only
M12-USB-Cable-1	300cm M12 to one USB receptacle cable for MPT series
M12-RJ45-Cable-1	300cm M12 to one RJ45 jack cable
Fuse-HV	Fuse for HV version

Dimensions





Specifications

System Mainboard	MBT-7001R
CPU Type	7th/6th Generation Intel® Core Processor
Processor Speed	2.6GHz
Memory	2x 4GB DDR4-2133 SO-DIMM (Dual Channel)
Front Panel External I/O	CFast, 2.5" device bay, 2nd Mic-In & Line-Out 2x SIM sockets, 2x USB 3.0, Reset button Status LEDs, 4x antenna connectors
Rear Panel External I/O	DVI-D, VGA, 3x COMs (2x COMs for HV model, one with RS422/485 options), 2x M12 GbE, 2x M12 USB 2.0, M12 power connection, 1st Mic-In & Line-Out, GPIO, GbE status LEDs, 1x PCI-E (x4) slot
Storage	2x 2.5" device bay for SSD & HDD
Expansion slots	1x Half-size Mini PCI-E socket (USB 2.0) 1x Full-size Mini PCI-E socket (USB 2.0 + PCI-E) 1x 2230 Socket 1 M.2 socket (USB 2.0 + PCI-E) 1x 3042 Socket 2 WWAN M.2 socket (USB 2.0) 1x 2280 Socket 3 SSD M.2 socket (SATA)
Power Supply	DC 9V~36V / 72V / 110V
Construction	Aluminum
Chassis Color	Black
Mounting	Custom mounting rail
Dimensions	256.0 (W) x 182.0 (D) x 83.0 (H) mm 10.08" (W) x 7.17" (D) x 3.27" (H)
Operating Temperature	SSD: -30°C ~ 55°C (-22°F~131°F) HDD: -20°C ~ 45°C (-4°F~113°F) SSD: -40°C ~ 70°C (-40°F ~ 158°F) system only
Storage Temperature	-35°C ~ 85°C (-31°F~185°F)
Relative Humidity	10 ~ 95% RH @45°C (non-condensing)
Vibration	Function: 1 m/s ² , 5Hz~150 Hz (EN 61373) Lifetime: 5.72 m/s ² , 5Hz~150 Hz (EN 61373)
Shock	50 m/s ² , 30 msec (EN 61373)
Certified	EN50155:2007, EN50153:2014 EN50121-3-2:2015, CE Class-A, FCC Class-A, EN45545

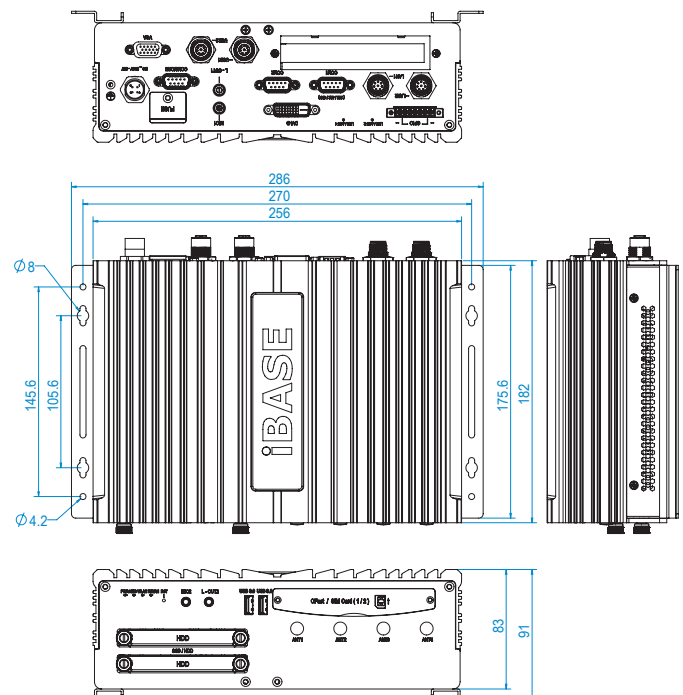
Features

- EN50155 certified
- Fanless and ruggedized design
- Robust M12 connectors for dual GbE, USB and power input
- Dual SIM sockets support WWAN redundancy
- Two removable 2.5" device bay and CFast socket
- Rich I/O interfaces for wireless, SSD, GPS, WWAN and add-on card expansion
- Ignition power control
- Wide-range voltage GPIO interface
- One PCI-E (x4) expansion

Ordering Information

MPT-7000RSM	MPT-7000R with MBT-7001R, 6th Gen Intel® Core™ i7-6600U Processor w/ 2x 4GB DDR4-2133, 2x SSD bay, No PSU, No storage (RoHS) 24V DC
MPT-7000RHVSM	MPT-7000R with MBT-7001R, 6th Gen Intel® Core™ i7-6600U Processor w/ 2x 4GB DDR4-2133, 2x SSD bay, No PSU, No storage (RoHS) 72V/110V DC
M12-PWR-Cable-1	120cm M12 power cable For MPT Series / Lead Only
M12-USB-Cable-1	300cm M12 to one USB receptacle cable for MPT series
M12-RJ45-Cable-1	300cm M12 to one RJ45 jack cable
Fuse-HV	Fuse for HV version

Dimensions





Specifications

CPU Type	New 10th Gen Intel® Core™ processors
Processor Speed	4.5GHz
Memory	2x DDR4-2666 SO-DIMM, 2x 8GB (default) Maximum size supported: 128GB
Front Panel External I/O	2x Accessible 2.5" device bay (SSD/HDD) 2x M12 X-code 8-pin for GbE LAN, isolated 1x M12 4-pin A-code for USB 2.0, isolated 1x M12 4-pin A-code for USB 1.1, isolated 1x 3.5mm pink audio connector for MIC-Input 1x 3.5mm blue audio connector for Line in 4x SMA Antenna holes with cap 2x PCI-Ex4 card slots for IDT8102/IDT 7204 (With cove when empty) - IDT8102: 2x 10G LAN card - IDT7204: 4x 1G PoE card 2x External accessible SIM socket 1x Micro SD card socket 1x Recessed Access Tach-switch for System Reset 1x USB type-C with graphics (No PD function) 1x USB 3.2 stack type Indicators: Four light-pipe for four status LED - 1x 0402 SMT green LED for power status - 1x 0402 SMT white LED for storage activity status - 1x 0402 SMT blue LED for WLAN activity status - 1x 0402 SMT amber LED for WWAN activity - 2x 0402 SMT green LED, programmable
Rear Panel External I/O	1x Main power input, Staubli connector 2x Removable with screw lock FUSE holder 1x Backup power source, 24VDC only 1x DVI-D output 1x HDMI output 1x USB 3.2 stack type-A 1x 3.5mm green audio connector for Line-out 1x Male DSUB9 for RS-485, isolated 1x Male DSUB9 connector for RS-232/485, isolated 1x Female DSUB9 for 8x DO and ground by cable, isolated 1x Female DSUB9 for 8x DI and ground by cable, isolated 1x M4 with washer screw hole for grounding connection 4x SMA Antenna holes with cap
Storage	2x 2.5" Removable device bay for SSD or HDD 2x M.2 SSD devices RAID 0/1/5 supported, Max. 4x SATA devices
Expansion slots	1x mPCI-E full/half-size socket 1x M.2 Type 3042 (B-Key) socket for WWAN (supports SIM1) - This M.2 socket comes with USB2.0/3.0 interface only 1x M.2 Type 3042/52 (B-Key) socket for WWAN (supports SIM2) - This M.2 socket comes with USB2.0/PCI-Ex1 interface 1x M.2 Type 2230/80 (M-key) socket for SSD/VPU/WLAN card 1x M.2 Type 2230/80 (M-key) socket for SSD/VPU/WLAN card (NVMe support) 1x M.2 Type 2230 (E-Key) socket for WLAN (CNVi support)
Power Supply	Main: 24V or 72V/110VDC (By SKU) Second: 24V DC only, once the main power loses, switch to second power automatically

Features

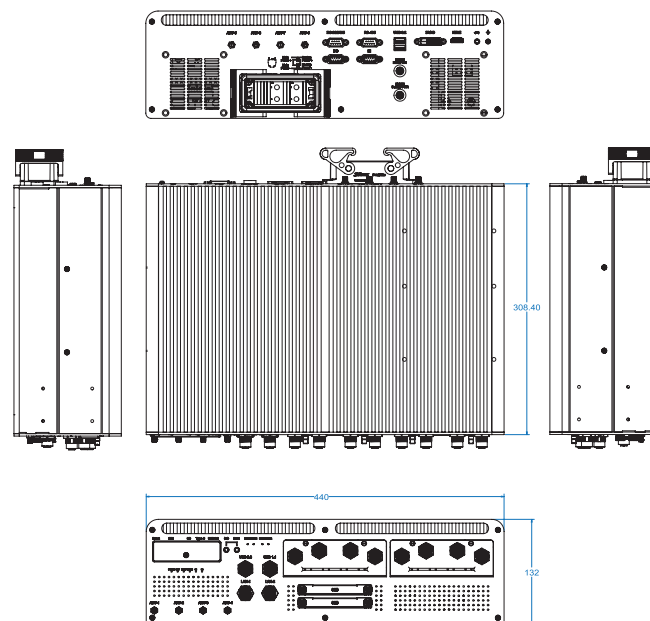
- AI solution for Transportation
- Supports 10th Gen Intel® Core™ processors
- Up to 10x GbE ports (8x with PoE capability)
- Optional 10G LAN
- Supports Intel® Movidius Vision Acceleration M.2 modules
- Supports Wi-Fi 6 CNVi, dual WWAN channels, RAID 0/1/5
- 1x USB Type-C with graphics output for quick setting and diagnostics
- Additional MXM graphics card expansion slot (Future feature)

Construction	Metal
Chassis Color	Black
Mounting	19" Rack mount
Dimensions	482 (W) x 308 (D) x 132 (H) mm 18.97" (W) x 12.13" (D) x 5.2" (H)
Operating Temperature	-10°C~60°C (14°F~140°F)
Storage Temperature	-40°C ~ 85°C (-40°F~185°F)
Relative Humidity	10 ~ 95% @ 45°C, (non-condensing)
Vibration	EN61373
Shock	EN61373
Certified	EN50155: 2017, EN45545-1-2/EN45545-5 CE/FCC class-A

Ordering Information

MPT-8000AR	19" Computing Server with Intel® Core™ i9 10900TE processor, 16GB memory, 72V/110V DC power input
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Dimensions





Features

- SIM socket supports Dual WWAN
- Removable 2.5" device bay
- Ignition power-on signal control
- Onboard CANbus
- Rich I/O interfaces for wireless, SSD, GPS, WWAN and add-on card expansion
- Add on card slots reset function
- Quick accessible RTC battery

Specifications

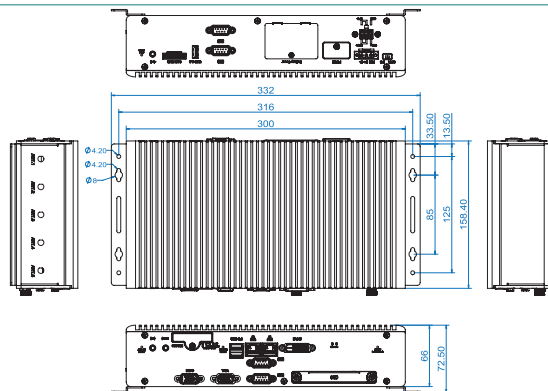
System Mainboard	MBT-1002V
CPU Type	Intel® Atom® x7-E3950 Processor
Processor Speed	1.6GHz , up to 2.0GHz
Memory	Onboard 4GB LPDDR4 memory (Intel® N3350 SKU) Onboard 8GB LPDDR4 memory (Intel® E3950 SKU)
Front panel I/O	1x DVI-D connector for display connection 1x VGA DSUB15 2x RJ45 for GbE LAN 1x 3.5mm blue color audio connector for line input 1x 3.5mm pink color audio connector for MIC-Input 2x external accessible SIM socket (Coved) 1x external micro SD card slot (Coved together with SIM card holder) 1x Stack USB connector for 2x USB3.1 (#1/#2) 1x DUSB 9 for COM1 RS-232/485 1x DUB9 for COM2 RS-485 isolated 1x DSUB15 for DIDO 6in/6out isolated 6x insulated DO: - Output type: Darlington transistor - Sink current •500 mA for one channel @100% duty - Source current •500 mA for one channel @100% duty cycle - Supply voltage: 5V-35V DC - Isolation voltage: 2500V RMS 6x insulated DI: - Maximum input range •24V, non-polarity - Digital logic levels •0~24 V, non-polarity - Input high voltage: 5V~24V - Input low voltage: 0~1.5V - Input resistance: 1.2 k @ 0.5W - Isolation voltage •2500V RMS 1x tack switch for system reset 1x tack switch for Add-on cards reset 1x tack switch for power firmware load default Indicators: - 1x Green color LED for power status - 1x White color LED for storage activity status - 1x Blue color LED for WLAN activity status (option) - 1x Orange color LED for WWAN activity status (option) - 1x Green color LED, programmable - 1x Red color LED for warning of wrong power voltage connected - 1x Blue color LED for external battery connected
Rear Panel External I/O	2x DSUB9 for COM3/4 RS232 1x 4 pins terminal block for 2 masters CANbus 1x USB3.0 flag type-A 1x audio jack for line out 1x tack switch for clear CMOS 1x open window for accessing RTC battery 1x 6-pins ATX connector for external battery, and 19V DC(Max:1A) output 1x blade fuse socket with cover 1x dip switch for selecting power mode: CAR/DC 1x 3-pin thermalin1 block connector for power input and IGN
Storage	1x 2.5" device bay for SSD/HDD 1x mSATA via miniPCI-E slot

Expansion slots	1x miniPCI-E full/Half-size, supports mSATA 1x miniPCI-E full/Half-size, supports second SIM card 1x M.2 B-key 30x42 with USB 2.0 and USB 3.0 signal only, supports first SIM card
Power Supply	9V~32V DC input(10%) without backup battery power 12V~32V DC input with backup battery Ignition detection: enable (Car mode)/ disable (DC mode) Reverse protection
Construction	Matel
Chassis Color	Black
Mounting	Side mounting, rack mounting with optional bracket
Dimensions	300 (W) x 158.4 (D) x 66 (H) mm 11.8" (W) x 6.23" (D) x 2.6" (H)
Operating Temperature	-40°C~70°C, with SSD, not including add-on cards (Intel® E3950 SKU) -5°C~50°C, with SSD, not including add-on cards (Intel® N3350 SKU)
Storage Temperature	-40°C~85°C (-40°F~185°F)
Relative Humidity	10 ~ 95% @ 45°C, (non-condensing)
Vibration	Operating/Non-operating: 2,26 Grms (5~500 Hz) / MIL-STD-810G composite wheeled condition (Z-axis only)
Shock	Non-operating: Sawtooth: 40G, 11 msec (Z-axis) Operating: Sawtooth: 20G, 11 msec (Z-axis)
Certified	E-Mark, CE (EN 62368 / EN55032 / EN55025)/ FCC Class-A

Ordering Information

MPT-1000V8GM	Intel® E3950 processor, 8G LPDDR4 RAM onboard, 9V~32V DC input (12V~32VDC if connected with backup power), ignition detection, no OS, adaptor and storage
MPT-1000VNM	Intel® N3350 processor, 4G LPDDR4 RAM onboard, 9V~32V DC input (12V~32VDC if connected with backup power), ignition detection, no OS, adaptor and storage

Dimensions





Specifications

System Mainboard	MBT-3001V
CPU Type	Intel® Atom® Processor E3845
Processor Speed	1.91GHz
Memory	2x 2GB DDR3L-1333 SO-DIMM (Dual Channel)
Front Panel External I/O	CFAST, 2.5" device bay, 2nd Mic-In & Line-Out 2x SIM sockets, 1x USB 3.0, 1x USB 2.0, Reset button, Status LEDs, 4x antenna connectors
Rear Panel External I/O	DVI-D, VGA, 3x COMs (one with RS422/485 options) 2x GbE, 2x USB 2.0, power connection 1st Mic-In & Line-Out, GPIO, GbE status LEDs
Storage	2.5" device bay for SSD & HDD
Expansion slots	1x Half-size Mini PCI-E socket (USB 2.0) 1x Full-size Mini PCI-E socket (USB 2.0 + PCI-E) 1x 2230 Socket 1 M.2 socket (USB 2.0 + PCI-E) 1x 3042 Socket 2 WWAN M.2 socket (USB 2.0) 1x 2280 Socket 3 SSD M.2 socket (SATA)
Power Supply	DC 9V~36V
Construction	Aluminum
Chassis Color	Black
Mounting	Custom mounting rail
Dimensions	256.0 (W) x 182.0 (D) x 55.0 (H) mm 10.08" (W) x 7.17" (D) x 2.16" (H)
Operating Temperature	SSD: -40°C ~ 70°C (-40°F~158°F) HDD: -20°C ~ 50°C (-4°F~122°F)
Storage Temperature	-40°C ~ 85°C (-40°F~185°F)
Relative Humidity	-40°C ~ 85°C (-40°F~185°F)
Vibration	Operating/Non-operating (SSD): 2.26 Grms (5~500 Hz) / MIL-STD-810G composite wheeled condition (Z-axis only) Operating/Non-operating (HDD): 1.04 Grms (5~500 Hz) / MIL-STD-810G highway truck condition (Z-axis only)
Shock	Non-operating: Sawtooth: 40G, 11 msec (Z-axis) Operating: Sawtooth: 20G, 11msec (Z-axis)
Certified	E-mark, CE class B, FCC class B

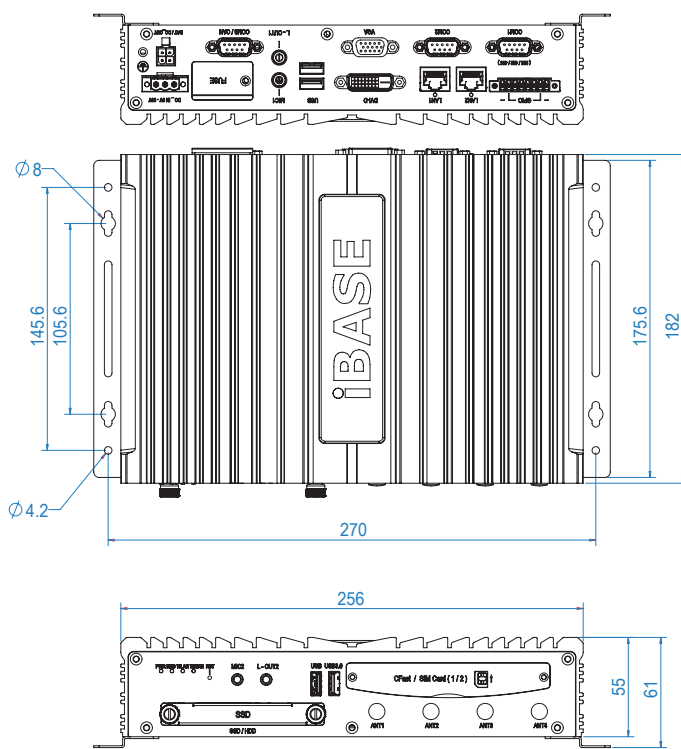
Features

- Fanless and ruggedized design
- Dual SIM sockets support WWAN redundancy
- Removable 2.5" device bay and CFAST socket
- Rich I/O interfaces for wireless, SSD, GPS, WWAN and add-on card expansion
- Fully car battery power control
- Wide-range voltage GPIO interface
- Optional CAN 2.0B/ OBD-II function (SAE J1939)

Ordering Information

MPT-3000VSM	MPT-3000V with MBT-3001V, Intel® Atom® Processor E3845 w/ 2x 2GB DDR3L-1333, SSD bay, No PSU, No storage (RoHS)
LTE-ANT-INT-1	20cm 4G/3G WWAN antenna cable from M.2 to SMA Jack
LTE-ANT-INT-2	20cm 4G/3G WWAN antenna cable from mPCI-E to SMA Jack
WLAN-ANT-INT-1	20cm WLAN antenna cable from M.2 to SMA Jack

Dimensions





Specifications

System Mainboard	MPT-7001V
CPU Type	7th/6th Generation Intel® Core Processor
Processor Speed	2.6GHz
Memory	2x 4GB DDR4-2133 SO-DIMM (Dual Channel)
Front Panel External I/O	CFAST, 2.5" device bay, 2nd Mic-In & Line-Out 2x SIM sockets, 2x USB 3.0, Reset button Status LEDs, 4x antenna connectors
Rear Panel External I/O	DVI-D, VGA, 3x COMs (one with RS422/485 options) 2x GbE, 2x USB 2.0, power connection, 1st Mic-In & Line-Out, GPIO, GbE status LEDs, 1x PCI-E (x4) slot
Storage	2x 2.5" device bay for SSD & HDD
Expansion slots	1x Half-size Mini PCI-E socket (USB 2.0) 1x Full-size Mini PCI-E socket (USB 2.0 + PCI-E) 1x 2230 Socket 1 M.2 socket (USB 2.0 + PCI-E) 1x 3042 Socket 2 WWAN M.2 socket (USB 2.0) 1x 2280 Socket 3 SSD M.2 socket (SATA)
Power Supply	DC 9V~36V
Construction	Aluminum
Chassis Color	Black
Mounting	Custom mounting rail
Dimensions	256.0 (W) x 182.0 (D) x 83.0 (H) mm 10.08" (W) x 7.17" (D) x 3.27" (H)
Operating Temperature	SSD: -30°C ~ 55°C (-22°F~131°F) HDD: -20°C ~ 45°C (-4°F~113°F) SSD: -40°C ~ 70°C (-40°F ~ 158°F) system only
Storage Temperature	-35°C ~ 85°C (-31°F~185°F)
Relative Humidity	10 ~ 95% RH @ 45°C (non-condensing)
Vibration	Operating/Non-operating (SSD): 2.26 Grms (5~500 Hz) / MIL-STD-810G composite wheeled condition (Z-axis only) Operating/Non-operating (HDD): 1.04 Grms (5~500 Hz) / MIL-STD-810G highway truck condition (Z-axis only)
Shock	Non-operating: Sawtooth: 40G, 11 msec (Z-axis) Operating: Sawtooth: 20G, 11msec (Z-axis)
Certified	E-mark, CE class B, FCC class B

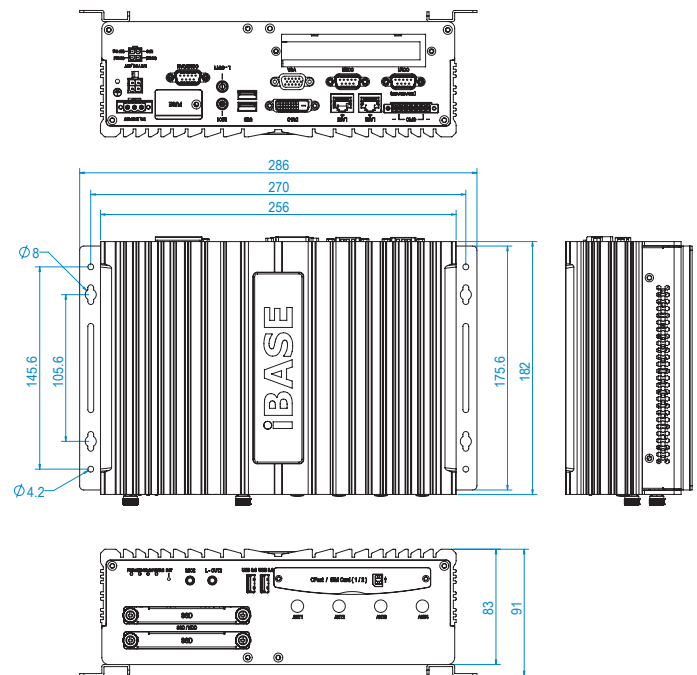
Features

- Fanless and ruggedized design
- Dual SIM sockets support WWAN redundancy
- Two removable 2.5" device bay and CFAST socket
- Rich I/O interfaces for wireless, SSD, GPS, WWAN and add-on card expansion
- Full car battery power control
- Wide-range voltage GPIO interface
- One PCI-E (x4) expansion

Ordering Information

MPT-7000VSM	MPT-7000V with MBT-7001V, 6th Gen Intel® Core™ i7-6600U Processor w/ 2x 4GB DDR4-2133, 2xSSD bay, No PSU, No storage (RoHS)
LTE-ANT-INT-1	20cm 4G/3G WWAN antenna cable from M.2 to SMA Jack
LTE-ANT-INT-2	20cm 4G/3G WWAN antenna cable from mPCI-E to SMA Jack
WLAN-ANT-INT-1	20cm WLAN antenna cable from M.2 to SMA Jack

Dimensions





Specifications

CPU Type	MRD286-N42: Intel® Pentium® Processor N4200 (1.1GHz~2.5GHz) MRD286-I50: Intel® Atom™ x7-E3950 Processor (1.6GHz~2.0GHz)
Memory	2x DDR3L SO-DIMM, Max. 8GB, 1x Default 4GB
Display Size	28.6"
Max. Resolution	1920 x 540
Luminance (cd/m²)	1,000
Contrast	1000:1
Max. Color	16.7M
View Angle (H°/V°)	178/178
Backlight Lifetime(hrs)	50,000
Touch Type	None, enhanced glass, anti-scattering, IK07 rating
Touch Interface	None
Light Transmission (%)	90
Point of touch	None
USB 3.0	None
USB 2.0	1x 8-pin M12 A-code for 2x USB 2.0
Serial Port	1x 8-pin M12 A-code for RS-232/422/485
LAN	1x 8-pin M12 X-code GbE LAN
Additional Display Port	None
Power Connector	1x 3-pin M12 A-code
Power Button	IP65 membrane key
Power Input Range	24V DC or 110V DC
Thermal Design	None
Membrane Control	Dimming control, power on/off
Built-in Speaker/MIC	2x IP65 2W speaker
Internal Expansion	None
Wireless	Optional
Storage	1x 2.5" HDD space, default 64GB SSD, easy accessible
IP Rating	IP65 for other sides IP43
Construction	Metal
Chassis Color (Front/Back)	Black/Black
Mounting	Side mount, VESA 100x100
Dimensions	780 (W) x 278 (D) x 77 (H) mm 30.7"(W) x 10.9"(D) x 3.03"(H)
Net Weight	15 kgs
Operating Temperature	-25°C ~ 55°C (-13°F ~ 131°F)
Storage Temperature	-25°C~70°C (-13°F ~ 158°F)
Storage Humidity	0~90% @40°C

Features

- Intel® Atom® x7-E3950 / Pentium® N4200 Processor
- Sunlight readable 1000nits bar type panel
- Auto-dimming function
- IP65 front-panel waterproof protection
- Anti-scattering front side glass

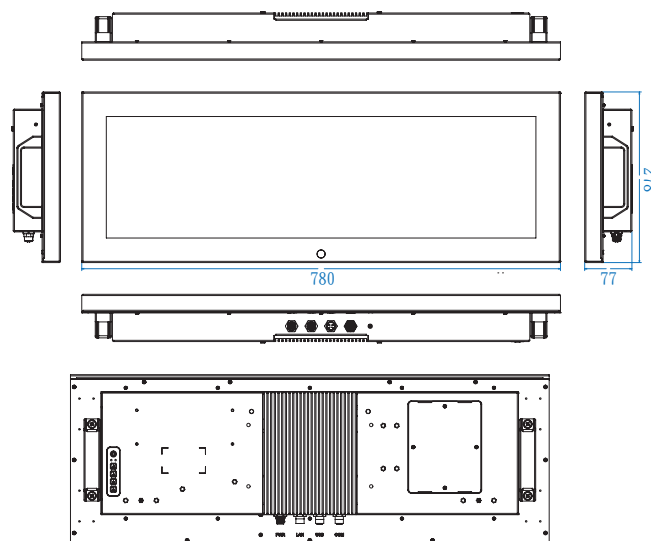


Certified	CE/FCC Class-A +LVD EN50155, EN45545-2 Compliance
Operating Systems	Windows 10, Linux Kernel 4.X

Ordering Information

MRD286-N42	28.6" 1920 x 540 Bar Type-AIO, Intel® Pentium® Processor N4200, 4GB memory, 64GB SSD, 24VDC power input, without adaptor
MRD286-N42H	28.6" 1920 x 540 Bar Type-AIO, Intel® Pentium® Processor N4200, 4GB memory, 64GB SSD, 110VDC power input, without adaptor
MRD286-I50	28.6" 1920 x 540 Bar Type-AIO, Intel® Atom® x7-E3950 Processor, 4GB memory, 64GB SSD, 24VDC power input, without adaptor
MRD286-I50H	28.6" 1920 x 540 Bar Type-AIO, Intel® Atom® x7-E3950 Processor, 4GB memory, 64GB SSD, 110VDC power input, without adaptor

Dimensions





Features

- Intel® Atom® x7-E3950 / Pentium® N4200 Processor
- Brightness control key
- IP65 front-panel waterproof protection
- Anti-scattering front side glass

Specifications

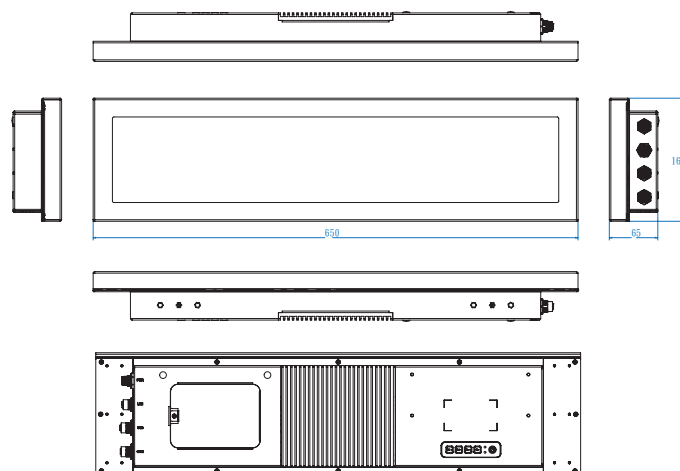
CPU Type	MRD238-N42: Intel® Pentium® Processor N4200 (1.1GHz~2.5GHz) MRD238-I50: Intel® Atom® x7-E3950 Processor (1.6GHz~2.0GHz)
Memory	1x DDR3L SO-DIMM, Max. 8GB, 1x 4GB Default
Display Size	24"
Max. Resolution	1920 x 360
Luminance (cd/m²)	300
Contrast	1000:1
Max. Color	16.7M
View Angle (H°/V°)	178/178
Backlight Lifetime(hrs)	30,000
Touch Type	None, enhanced glass, anti-scattering, IK07 rating
Touch Interface	None
Light Transmission (%)	90
Point of touch	None
USB 3.0	None
USB 2.0	1x 8-pin M12 A-code for 2x USB 2.0
Serial Port	1x 8-pin M12 A-code for RS-232/422/485
LAN	1x 8-pin M12 X-code GbE LAN
Additional Disply Port	None
Power Connector	1x 3-pin M12 A-code
Power Button	IP65 membrane key
Power Input Range	24V DC or 110V DC
Thermal Design	None
Membrane Control	Dimming control, power on/off
Built-in Speaker/MIC	2x IP65 2W speaker
Internal Expansion	None
Wireless	Optional
Storage	1x 2.5" HDD space, default 64GB SSD, easily accessible
IP Rating	IP65 front/others IP40
Construction	Metal
Chassis Color (Front/Back)	Black/Black
Mounting	Side mount, VESA 100x100
Dimensions	650 (W) x 165 (D) x 65 (H) mm 25.5"(W) x 6.49"(D) x 2.55"(H)
Net Weight	TBD
Operating Temperature	-25°C ~ 45°C (-13°F ~ 113°F)
Storage Temperature	-25°C~70°C (-13°F ~ 158°F)
Storage Humidity	0~90% @40°C

Certified	CE/FCC Class-A +LVD, EN50155 compliance
Operating Systems	Windows 10, Linux Kernel 4.X

Ordering Information

MRD238-N42	24" 1920 x 360 Bar Type-AIO, Intel® Pentium® Processor N4200, 4GB memory, 64GB SSD, 24V DC power input, without adaptor
MRD238-N42H	24" 1920 x 360 Bar Type-AIO, Intel® Pentium® Processor N4200, 4GB memory, 64GB SSD, 110V DC power input, without adaptor
MRD238-I50	24" 1920 x 360 Bar Type-AIO, Intel® Atom® x7-E3950 Processor, 4GB memory, 64GB SSD, 24V DC power input, without adaptor
MRD238-I50H	24" 1920 x 360 Bar Type-AIO, Intel® Atom® x7-E3950 Processor, 4GB memory, 64GB SSD, 110V DC power input, without adaptor

Dimensions





Features

- Intel® Atom® x7-E3900 Series platform
- EN50155 certified
- IP65 front-panel waterproof protection
- Supports ultra-long-life LCD panel, M12 connectors
- Flat bezel design, projected capacitive 15" touch screen
- Optional wireless communication
- Supports 24V DC or 72/110V DC power input



Specifications

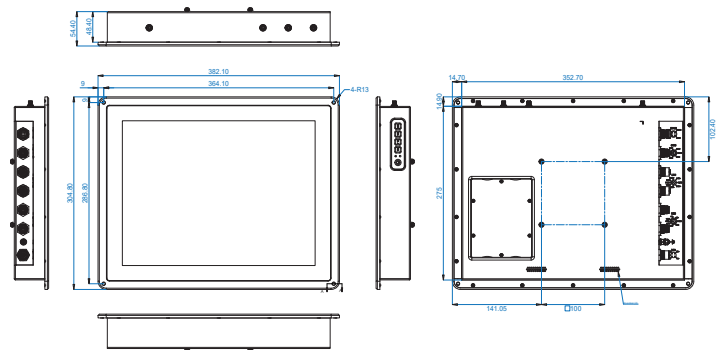
CPU Type	Intel® Atom® x7-E3950 1.6GHz, up to 2.0GHz
Memory	Max DDR3L 8GB, Default 4GB
Display Size	15"
Max. Resolution	1024x768
Luminance (cd/m²)	500
Contrast	1800:1
Max. Color	16.7M
View Angle (H°/V°)	178/178
Backlight Lifetime(hrs)	70,000
Touch Type	Projected capacitive
Touch Interface	USB
Light Transmission (%)	89
Point of touch	10
USB 3.0	2x M12 A-code
USB 2.0	1x M12 A-code
Serial Port	1x M12 A-code for RS-232/422/485 1x M12 A-code for RS-232
LAN	2x M12 A-code
Additional Disply Port	None
Power Connector	1x M12 A-code
Power Button	Membrane key
Power Input Range	DC24V or DC 72V/110V
Thermal Design	Fanless
Membrane Control	Brightness up/down, volume up/down, power on/off
Built-in Speaker/MIC	2x speaker, optional
Internal Expansion	1x miniPCI-E Full sized 1x miniPCI-E Half sized
Wireless	Optional, Via miniPCI-E device
Storage	1x 2.5" HDD space, default 128G SSD
Construction	Aluminums
Chassis Color (Front/Back)	Black/Black
IP Rating	IP65
Mounting	VESA 100x100/Rack mount
Dimensions	382.1(W) x 304.8(D) x 54.4(H)mm 15.04"(W) x 12"(D) x 2.14"(H)
Net Weight	6.36 kgs
Operating Temperature	-30°C ~ 70°C (-22°F ~ 158°F) with SSD, not including add-on cards
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)

Storage Humidity	10%~90% @40°C (non-condensing)
Certified	EN50155:2017, EN45545-2 CE/FCC class-A
Operating Systems	Windows 10 64bit/ Linux Kernel 4.X

Ordering Information

MPPC1501PC	15" EN50155 Certified Panel PC, Intel® E3950 processor, 4GB DDR3L memory, 128G SSD Storage, M12 connectors, DC 24V power input, no adaptor
MPPC1501PCH	15" EN50155 Certified Panel PC, Intel® E3950 processor, 4GB DDR3L memory, 128G SSD Storage, M12 connectors, DC 72/110V power input, no adaptor

Dimensions





Features

- Intel® Atom® x7-E3900 Series platform
- EN50155 certified
- IP65 front-panel waterproof protection
- Supports ultra-long-life LCD panel, M12 connectors
- Flat bezel design, projected capacitive 10.4" touch screen
- Optional wireless communication
- Supports 24V DC or 72/110V DC power input



Specifications

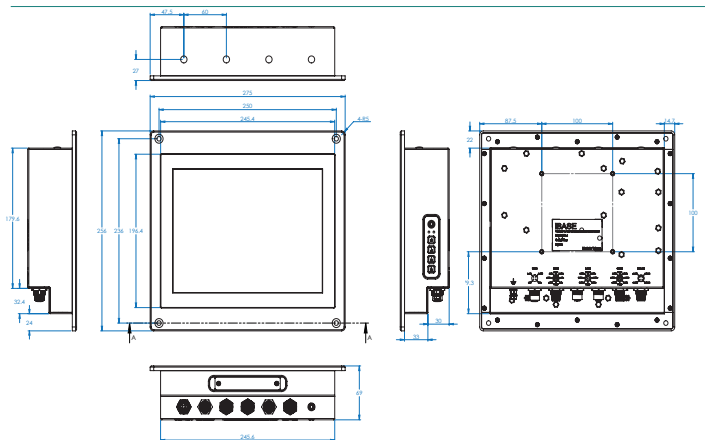
CPU Type	Intel® Atom® x7-E3950 1.6GHz, up to 2.0GHz
Memory	Max DDR3L 8GB, Default 4GB
Display Size	10.4"
Max. Resolution	1024x768
Luminance (cd/m ²)	500
Contrast	1000:1
Max. Color	16.2M
View Angle (H°/V°)	176/176
Backlight Lifetime(hrs)	50,000
Touch Type	Projected capacitive
Touch Interface	USB
Light Transmission (%)	89
Point of touch	10
USB 3.0	1x M12 A-code
USB 2.0	1x M12 A-code
Serial Port	1x M12 A-code for RS-232/422/485
LAN	2x M12 A-code
Additional Display Port	None
Power Connector	1x M12 A-code
Power Button	Membrane key
Power Input Range	DC24V or DC 72V/ 110V
Thermal Design	Fanless
Membrane Control	Brightness up/down, volume up/down, power on/off
Built-in Speaker/MIC	2x speaker, optional
Internal Expansion	1x miniPCI-E Full sized 1x miniPCI-E Half sized
Wireless	Optional, Via miniPCI-E device
Storage	1x 2.5" HDD space, default 64GB SSD
Construction	Aluminums
Chassis Color (Front/Back)	Black/Black
IP Rating	IP65
Mounting	VESA 100x100/Rack mount
Dimensions	275mm(W) x 256mm(D) x 63mm(H) 10.8"(W) x 6.14"(D) x 2.48"(H)
Net Weight	4.3 kgs
Operating Temperature	-30°C ~ 70°C (-22°F ~ 158°F) with SSD, not including add-on cards
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)

Storage Humidity	10%~90% @40°C (non-condensing)
Certified	EN50155:2017, EN45545-2 CE/FCC class-A
Operating Systems	Windows 10 64bit/ Linux Kernel 4.X

Ordering Information

MPPC1001PC	10.4" EN50155 Certified Panel PC, Intel® E3950 processor, 4GB DDR3L memory, 64G SSD Storage, M12 connectors, DC 24V power input, no adaptor
MPPC1001PCH	10.4" EN50155 Certified Panel PC, Intel® E3950 processor, 4GB DDR3L memory, 64G SSD Storage, M12 connectors, DC 72/110V power input, no adaptor

Dimensions





Specifications

CPU Type	Intel® Atom® Processor E3845 (Quad-Core 1.91GHz)
Memory	2x DDR3L SO-DIMM, up to 8GB, default DDR3L 4GB (4GBx1)
Display Size	12.1" TFT-LCD
Max. Resolution	1024 x 768
Luminance (cd/m²)	500
Contrast	1000:1
Max. Color	16.7M
View Angle (H°/V°)	178/178
Backlight Lifetime(hrs)	30000
Touch Type	Projected capacitive
Touch Interface	USB
Light Transmission (%)	86
Point of touch	10
USB 3.0	1
USB 2.0	1x Type A and 1x M12 connector
Serial Port	1x COM Port for RS-232/422/485
LAN	2x GbE, 2x 10/100 LAN with M12 connector
Additional Display Port	DP
Power Connector	4-pin M12 connector
Power Button	Reset button
Power Input Range	24V DC (default) power input, Optional 72V DC & 110V DC
Thermal Design	Fanless
Membrane Control	Brightness up/down and Volume up/down/power button
Built-in Speaker/MIC	2x Speaker
Internal Expansion	1x mPCI-E(x1) w/ USB signal [half-size] 1x mSATA/mPCI-E(x1) w/ USB signal and mSATA supports [full-size]
Wireless	Optional Wi-Fi/BT
Storage	1x 2.5" SATA
Construction	Aluminum front bezel and back cover
Chassis Color (Front/Back)	Silver/Silver
IP Rating	IP65 front bezel/ IP54 for whole unit with I/O cover
Mounting	Wall mount and VESA 75x75 mm

Features

- EN50155 certified
- Optical bonding
- Front bezel IP65 and full IP54 protection
- Movable and programmable membrane keypad
- 24V DC power input with M12 connector, 48V DC, 72V DC or 110V DC as options
- Two M12 LAN ports and one M12 USB port
- Additional rack mount kit

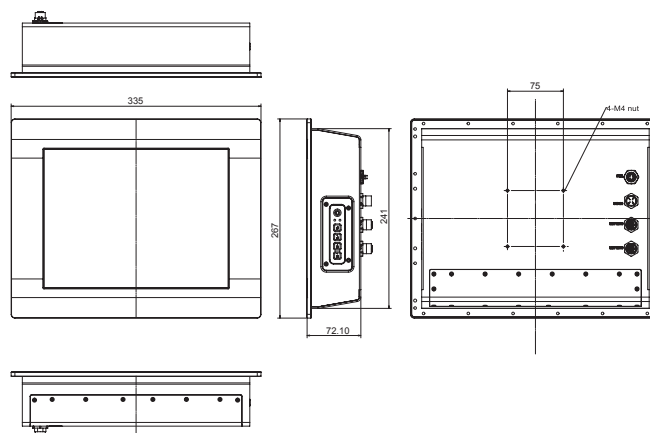


Dimensions	335 (W) x 267 (D) x 72.1 (H) mm 13.18" (W) x 10.5" (D) x 2.83" (H)
Net Weight	3.6 kgs
Operating Temperature	-40°C ~ 70°C (-40 ~ 158 °F) (EN50155-TX)
Storage Temperature	-40°C ~ 85°C (-40 ~ 185 °F)
Storage Humidity	10%~90% (non-condensing)
Certified	EN50155: 2017, EN45545-2 CE/FCC Class-B
Operating Systems	Windows 10 32/64-bit, Windows 7 32/64-bit, Linux 3.x/4.x

Ordering Information

BYTEM-123-PC	12.1" (1024 x 768) Panel PC with IB897, Intel® Atom® Processor E3845 1.91GHz, 4GB DDR3L SO-DIMM, 64G SSD, projected capacitive touch, w/o power adaptor
Power adaptor (optional)	AC 100V~240V input, 24V DC output 90W power adaptor, IBASE P/N: A005PS090W0100600P

Dimensions





Features

- EN50155 certified
- Front bezel IP65 and full IP54 protection
- Full flat bezel design
- One M12 LAN port
- 24V DC power input with M12 connector, 48V DC, 72V DC or 110V DC as options
- Programmable membrane keypad
- Additional rack mount kit



Specifications

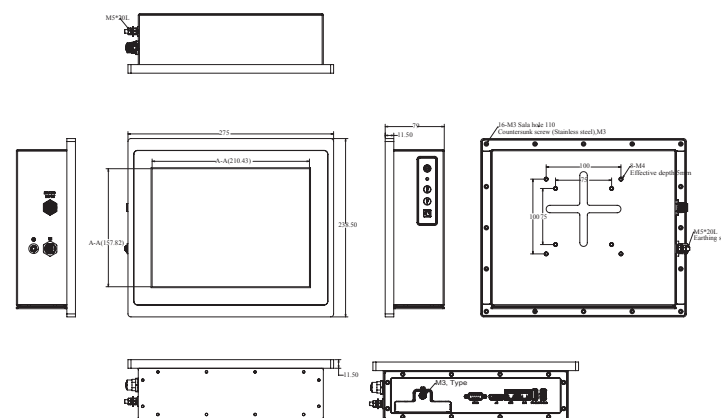
CPU Type	Intel® Atom® E3845 (Quad-Core @ 1.91GHz)
Memory	2x DDR3L SO-DIMM, up to 8GB, default DDR3L 4GB (4GBx1)
Display Size	10.4" TFT-LCD
Max. Resolution	1024 x 768
Luminance (cd/m ²)	500
Contrast	1000:1
Max. Color	16.2M
View Angle (H°/V°)	176/176
Backlight Lifetime(hrs)	50000
Touch Type	Projected capacitive
Touch Interface	USB
Light Transmission (%)	85
Point of touch	2
USB 3.0	1
USB 2.0	1
Serial Port	1x COM Port for RS-232/422/485
LAN	2x GbE, 1x 10/100 LAN with M12 connector
Additional Disply Port	DP
Power Connector	4-pin M12 connector
Power Button	None
Power Input Range	Default 24V DC input (EN50155 S2/C2), Optional 72V DC & 110V DC
Thermal Design	Fanless
Membrane Control	Brightness up/down and screen on/off/power button
Built-in Speaker/MIC	None
Internal Expansion	1x mPCI-E(x1) w/ USB signal [half-size] 1x mSATA/mPCI-E(x1) w/ USB signal and mSATA supports [full-size]
Wireless	None
HDD	1x 2.5" SATA
Construction	Aluminum front bezel and back cover
Chassis Color (Front/Back)	Silver/Silver
IP Rating	IP65 front bezel/ Others IP40 not including I/O cover/ IP54 for all with I/O cover
Mounting	Wall mount and VESA 75x75, 100x100 mm
Dimensions	275 (W) x 238.5 (D) x 78.5 (H) mm 10.82" (W) x 9.38" (D) x 3.09" (H)

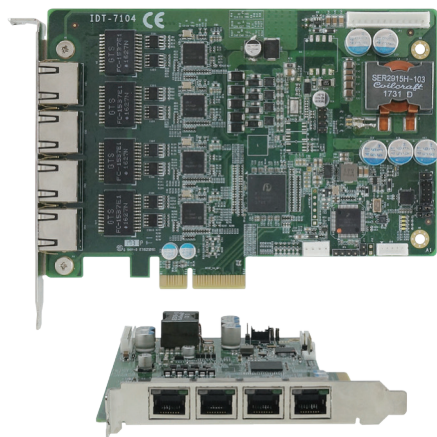
Net Weight	4.3 kgs
Operating Temperature	-40°C ~ 70°C (-40 ~ 158 °F) (EN50155-TX)
Storage Temperature	-40°C ~ 85°C (-40 ~ 185 °F)
Storage Humidity	10%~90% (non-condensing)
Certified	EN50155, EN45545-2 CE/FCC Class-B
Operating Systems	Windows 10 32/64-bit, Windows 7 32/64-bit, Linux 3.x/4.x

Ordering Information

BYTEM-103-PC	10.4" (1024 x 768) Flat Panel Design Panel PC with IB897, Intel® Atom® Processor E3845 1.91GHz, 4GB DDR3L SO-DIMM, 64G SSD, projected capacitive touch, w/o power adaptor
Power adaptor (optional)	AC 100V~240V input, 24V DC output 90W power adaptor, IBASE P/N: A005PS090W0100600P

Dimensions





Features

- 4x PCI Express® compliant
- 4 independent Gigabit Ethernet ports supported
- IEEE 802.3af/at for Power over Ethernet supported
- IEEE 1588, PTP technology supported
- Link aggregation/jumbo frames (9 K-Byte) supported
- Operating temperature: -40°C ~ 70°C (-40°F ~ 158°F)

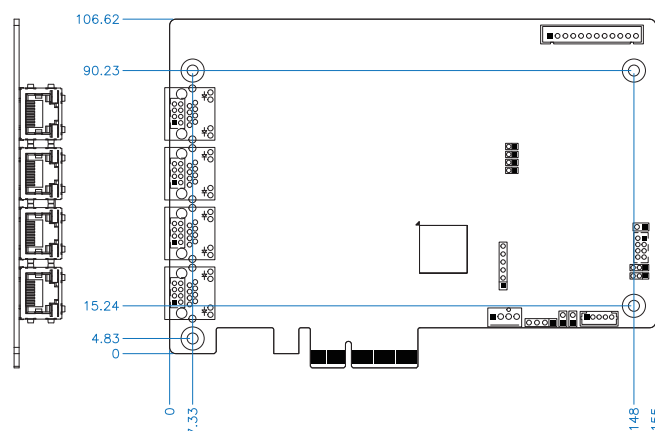
Specifications

Power Input	Maximal 10A @12VDC, directly from onboard power connector
Form Factor	4x PCI Express® compliant
LAN Chipset	Four Intel® i210IT Ethernet controllers
Cable Requirement	CAT-5e or CAT-6 cable, maximum 100 meters
Hipot	1.5 KV
Surge	±2KV surge protection
Power Consumption	Max. 120W w/ 4x PoE power load
PoE Power Output	802.3af/at compliant (802.3AT type 1,2) Powered Device (PD) auto detection Power Level Classification: Class 1, 2 ,3, 4 25.5W@48VDC power output (per powered-device)
Conformity	CE, FCC Class-A, RoHS
Operating Temperature	-40°C ~ 70°C (-40°F ~ 158°F)
Storage Temperature	-35°C ~ 85°C (-31°F ~ 185°F)
Operating Humidity	10%~95% @ 45°C (non-condensing)
Dimensions	155 x 111 mm (6.10" x 4.37")
Construction	Aluminum
Operating System	XPe / W7 Pro/ WE8 STD / Ubuntu 11.10 above / Linux distributions with kernel 3.0 above

Ordering Information

IDT-7104	4-channel PoE card with power cable
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Dimensions



MEMO

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