Intelligent Transportation Solutions

2019-2020 Edition







Industry Leader In Embedded Computing

iBASE

www.ibase.com.tw

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About IBASE



Core Activities

Design and Manufacture of Robust Industrial Computing Platforms

HEADQUARTERS
Taipei, Taiwan

FOUNDED
February 2000

CHAIRMAN
C. S. Lin

CAPITAL
US$57.8M

EMPLOYEE
670
(Worldwide)

Stock Quote
TPEx 8050
(Since 2003)

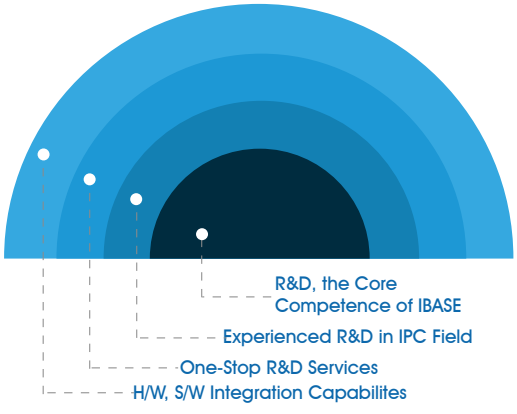
Company Profile

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.



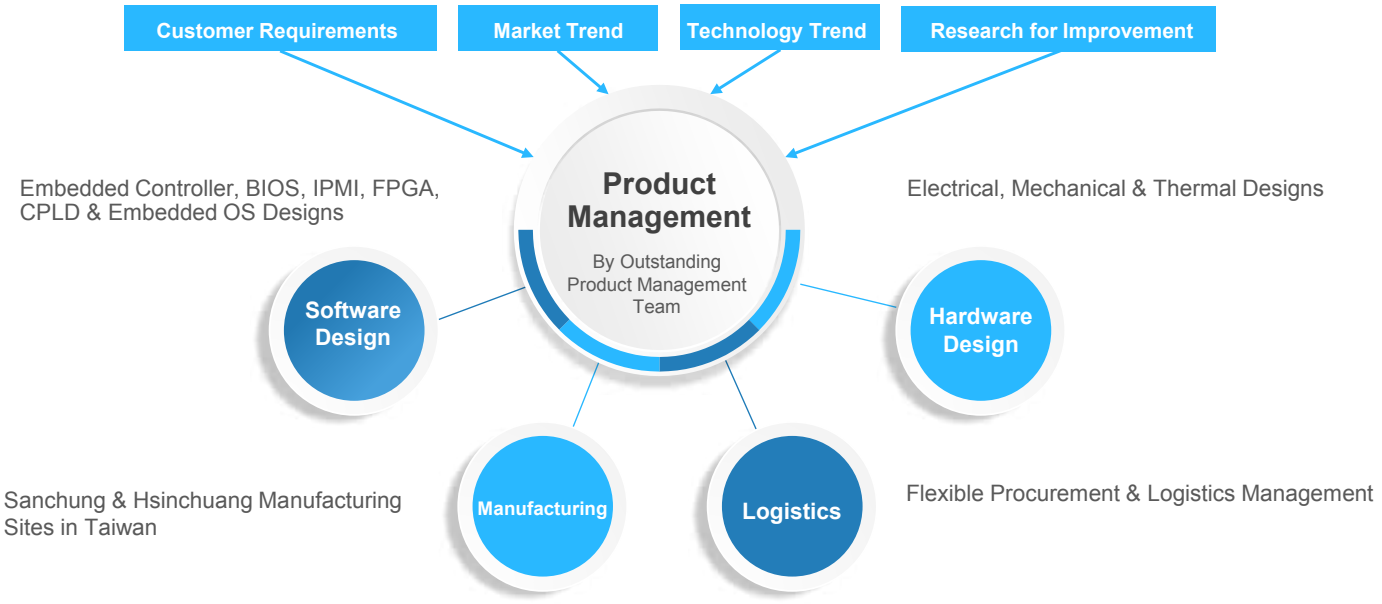
R&D Capabilities

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 20 years of experience in their respective fields, while the rest of the engineers 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

Hsinchuang
New Taipei City

- Board Production
- System Assembly
- Validation





Sanchung
New Taipei City

- System Assembly
- Validation





Certifications

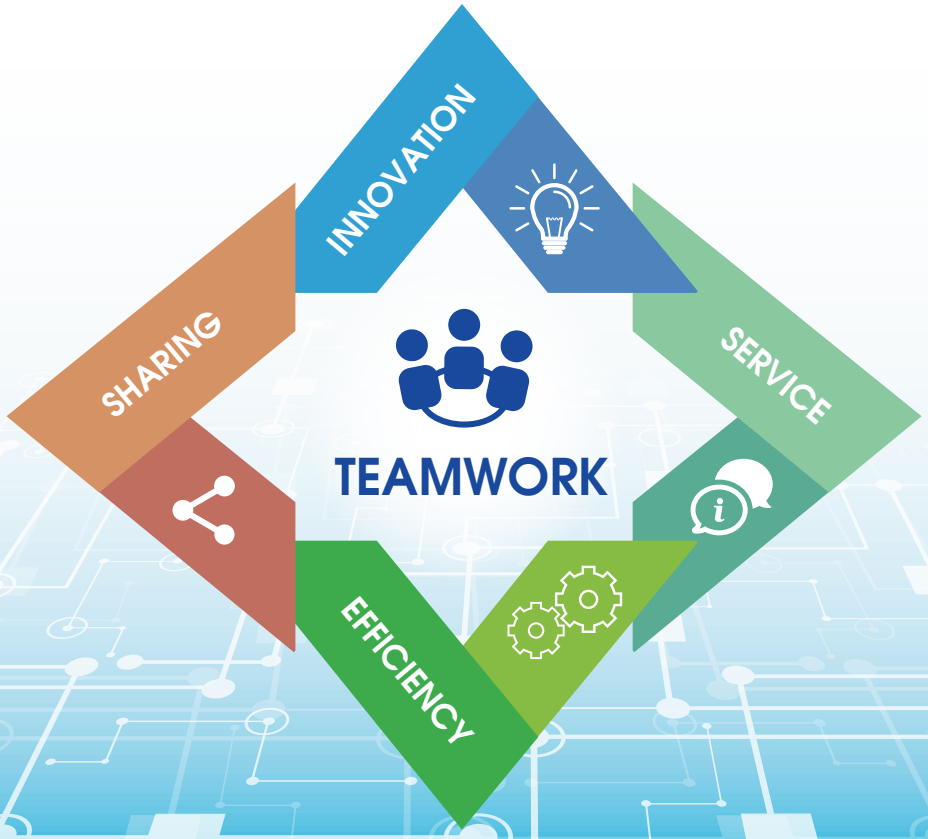
ISO 9001 ISO 14001 ISO 13485 ISO/TS 16949

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.

Transportation Panel PC Solutions



EN50155

BYTEM-123-PC

12.1" Touch
Panel PC



EN50155

BYTEM-103-PC

10.4" Touch
Panel PC



EN50155

MRD286

28.6" Bar-Type
Panel PC



EN50155

MRD238

24" Bar-Type
Panel PC

IBASE Intelligent Transportation Solutions

MPT Series Transportation Solutions

R Series Railway Computer Systems



MPT-3000R

EN50155 EN45545-2



MPT-7000R

EN50155 EN45545-2



MPT-3000RP

EN50155 EN45545-2 IP67

V Series In-Vehicle Computer Systems

E-Mark



MPT-3000V

E-Mark



MPT-7000V

Features of MPT Series Systems

Featuring dual SIM sockets and dual WWAN communication modules with WWAN redundancy, the railway/in-vehicle systems supports wide-range operating temperature from -40°C to 70°C and wide-range voltage GPIO interfaces working 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.



MPT-1000R

Railway Computer System

EN50155/EN45545 Certified Intel® Atom™ x7-E3950 Processor Railway Computer System with M12 Connection and Dual WWAN





Features

- EN50155 certification
- 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

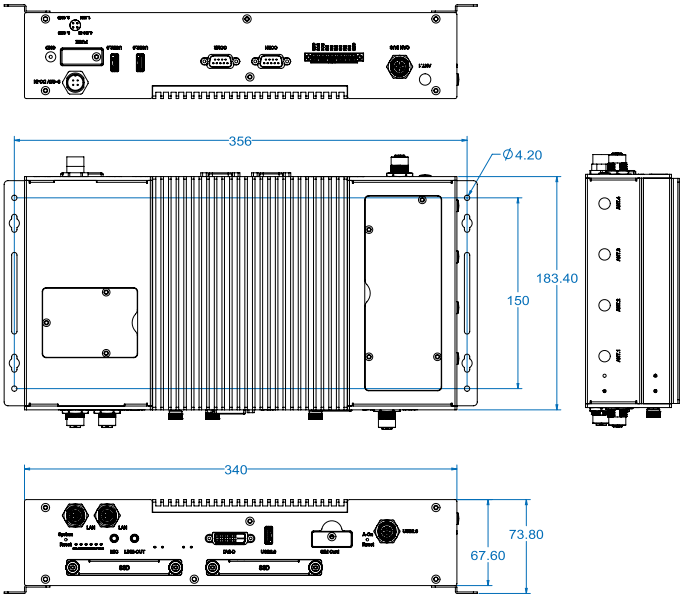
Specifications

System Mainboard	MBT-1001R
CPU Type	Intel® Atom™ x7-E3950 Processor
System Speed	1.6GHz , up to 2.0GHz
Memory	1x DDR3L SO-DIMM socket (horizontal type) w ECC support, default 4GB non ECC
Construction	Matel
Chassis Color	Black
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 programable 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
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)
Operating Temperature	-40°C ~70°C, with SSD, not included 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)
Certification	EN50155: 2017 CE (EN62368/ EN55032/ EN55025)/ FCC Class B EN45545-2

Ordering Information

MPT-1000RM	MPT-1000R with MBT-1001R, Intel® x7-E3950 processor, w/ 4GB non ECC RAM, no storage

Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

MPT-3000RP

Railway Computer System

EN50155/EN45545 Certified Intel® Atom™ Processor E3845 Outdoor IP67 Waterproof Railway Computer System with M12 Connection and WWAN Redundancy





TAIWAN EXCELLENCE 2019

Features

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



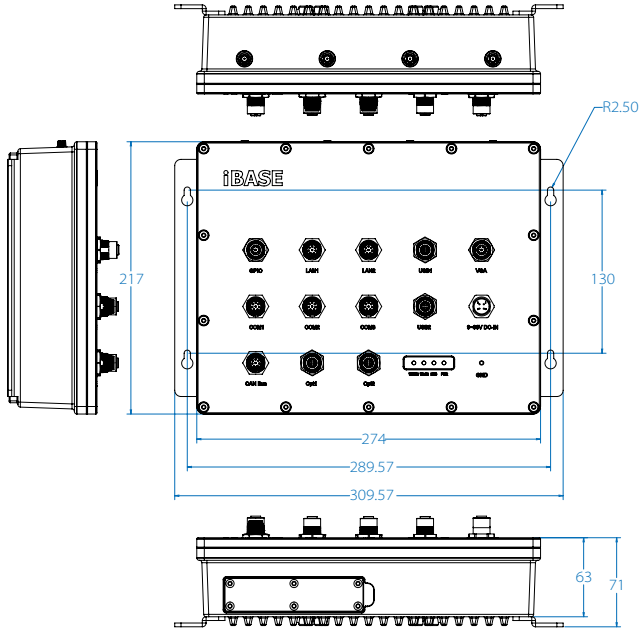
Specifications

System Mainboard	MBT-3001R
CPU Type	Intel® Atom™ Processor E3845
System Speed	1.91GHz
Memory	2x 2GB DDR3L-1333 SO-DIMM (Dual Channel)
Construction	Aluminum
Chassis Color	Black
Front panel I/O	CFast, 2.5" device bay, 2x SIM sockets, 2x M12 USB 2.0, Status LEDs, 4x antenna connectors 1x M12 VGA, 3x M12 COMs, 2x M12 GbE, 1x M12 power connection 1x M12 GPIO, 1x M12 CAN Bus
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
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)
Certification	EN50155: 2007, EN50153:2014 EN50121-3-2:2015, CE class A, FCC class A, EN45545

Ordering Information

MPT-3000RPSM	MPT-3000RPSM with MBT-3001R (Intel® E3845) w/ 2x 2GB DDR3L-1333, SSD bay, No PSU, No storage (RoHS)

Dimensions



MPT-3000R

Railway Computer System

EN50155/EN45545 Certified Intel® Atom™ Processor E3845
Railway Computer System with M12 Connection and WWAN Redundancy







Features

- EN50155 certification
- Fanless and ruggedized design
- Robust M12 connection for dual GbE, USB and power input
- Dual SIM sockets supports 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

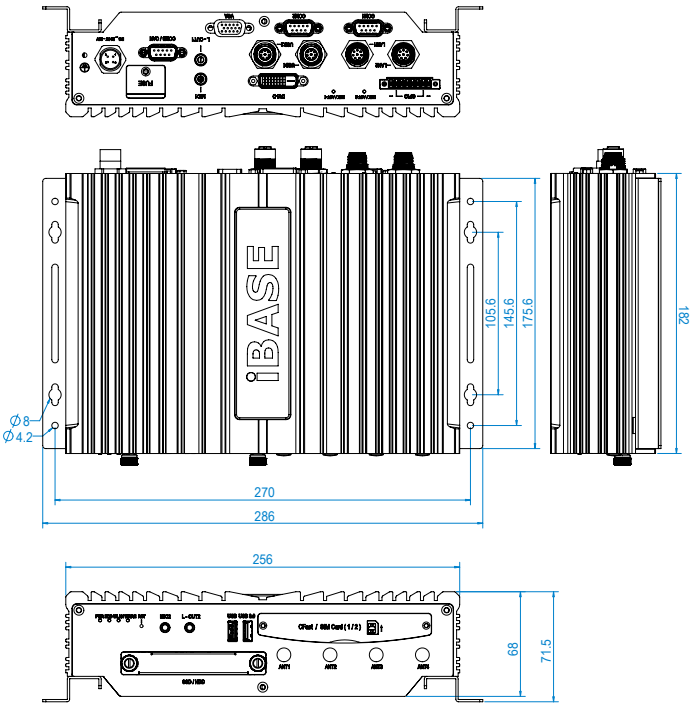
Specifications

System Mainboard	MBT-3001R
CPU Type	Intel® Atom™ Processor E3845
System Speed	1.91GHz
Memory	2x 2GB DDR3L-1333 SO-DIMM (Dual Channel)
Construction	Aluminum
Chassis Color	Black
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
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 6 1373)
Certification	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



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user’s manual & datasheet download, visit www.ibase.com.tw.

MPT-7000R

Railway Computer System

EN50155/EN45545 Certified 7th/6th Gen Intel® Core™ Processor
Railway Computer System with M12 Connection and WWAN Redundancy







Features

- EN50155 certification
- Fanless and ruggedized design
- Robust M12 connectors for dual GbE, USB and power input
- Dual SIM sockets supports 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

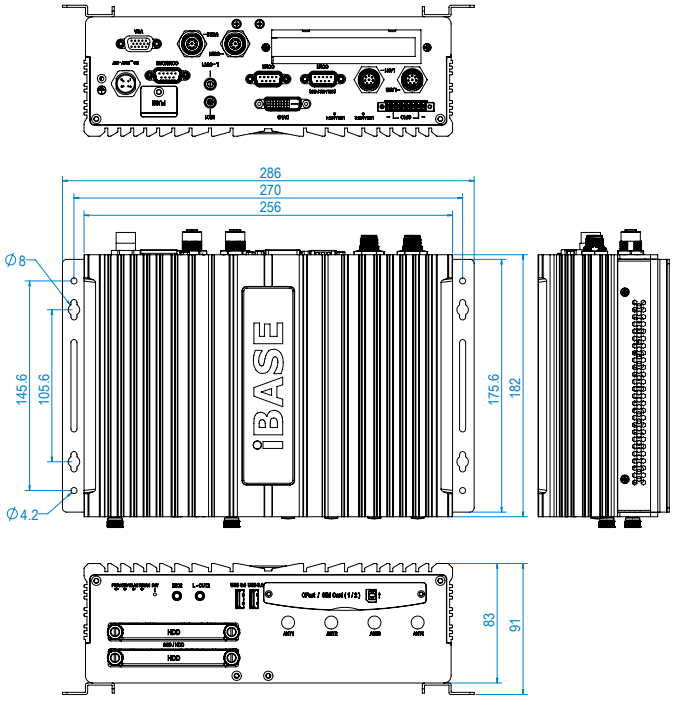
Specifications

System Mainboard	MBT-7001R
CPU Type	7th/6th Generation Intel® Core Processor
System Speed	2.6GHz
Memory	2x 4GB DDR4-2133 SO-DIMM (Dual Channel)
Construction	Aluminum
Chassis Color	Black
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
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 (-40F ~ 158F) 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)
Certification	EN50155:2007, EN50153:2014 EN50121-3-2:2015, CE class A, FCC class A, EN45545

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



MPT-1000V

In-Vehicle Computer System

E-mark Certified Intel® Atom® x7-E3950 Processor
In-Vehicle Computer System with Dual WWAN





Features

- Fanless and ruggedized design
- SIM socket supports Dual WWAN
- Removable 2.5” device bay
- Ignition power-on signal control
- Isolated USB, Serial, DIDO ports
- Onboard isolated 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

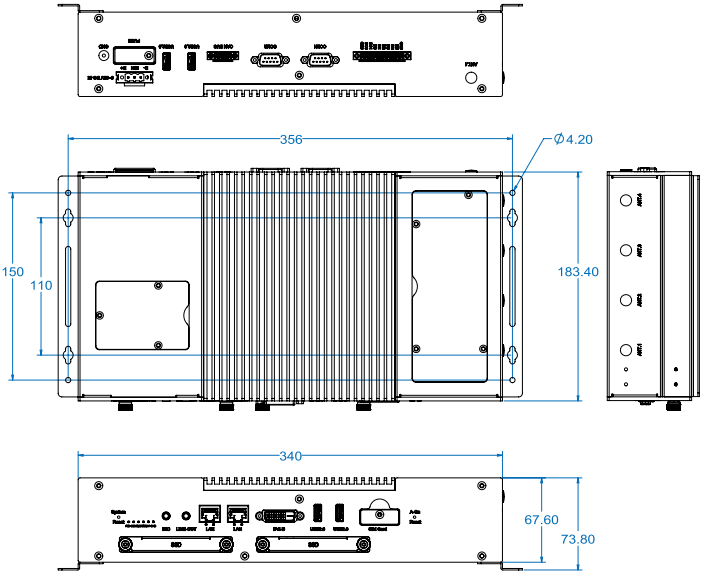
System Mainboard	MBT-1001V
CPU Type	Intel® Atom® x7-E3950 Processor
System Speed	1.6GHz , up to 2.0GHz
Memory	1x DDR3L SO-DIMM socket (horizontal type) w ECC support, default 4GB non ECC
Construction	Matel
Chassis Color	Black
Front panel I/O	1x power reset button 1x DVI-I 2x RJ45 GbE LAN, isolated, 2x USB 2.0 type-A, isolated 2x audio jack for Line-in/out 5x LED indications, one is programable 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: 1.2 k @0.5 W Isolation voltage: 2500 VRMS 1x DSUB9 for RS232/485, isolated 1x DSUB9 for RS485, isolated 1x 4-pin Terminal block connector for 2 master CANbus, isolated 2x USB 2.0 type-A, isolated 1x 4-pin ATX connector 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-32V DC, ignition control, 1.5KV galvanic isolation protection
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)
Operating Temperature	-40°C ~70°C, with SSD, not included add-on cards
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, 11msec (Z-axis)
Certification	E-Mark, CE (EN 62368 / EN55032 / EN55025)/ FCC Class B, E-Mark R118

Ordering Information

MPT-1000VM	MPT-1000V with MBT-1001V, Intel® x7-E3950 processor, w/ 4GB non ECC RAM, no storage

Dimensions



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user’s manual & datasheet download, visit www.ibase.com.tw.

MPT-3000V

In-Vehicle Computer System

E-mark Certified Intel® Atom™ Processor E3845
In-Vehicle Computer System with WWAN Redundancy







Features

- Fanless and ruggedized design
- Dual SIM sockets supports 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)

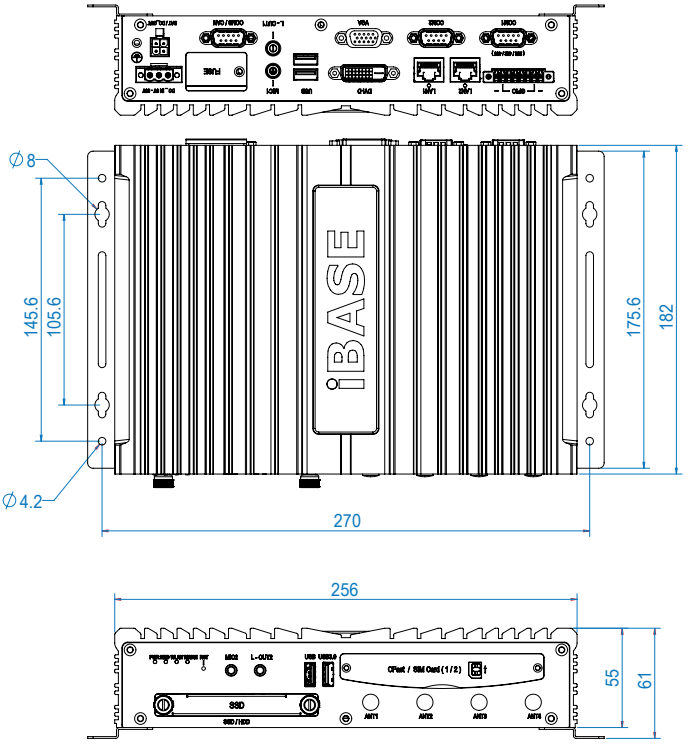
Specifications

System Mainboard	MBT-3001V
CPU Type	Intel® Atom™ Processor E3845
System Speed	1.91GHz
Memory	2x 2GB DDR3L-1333 SO-DIMM (Dual Channel)
Construction	Aluminum
Chassis Color	Black
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
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)
Certification	E-mark, CE class B, FCC class B

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



MPT-7000V

In-Vehicle Computer System

E-mark Certified 7th/6th Gen Intel® Core™ Processor
In-Vehicle Computer System with WWAN Redundancy







Features

- Fanless and ruggedized design
- Dual SIM sockets supports 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

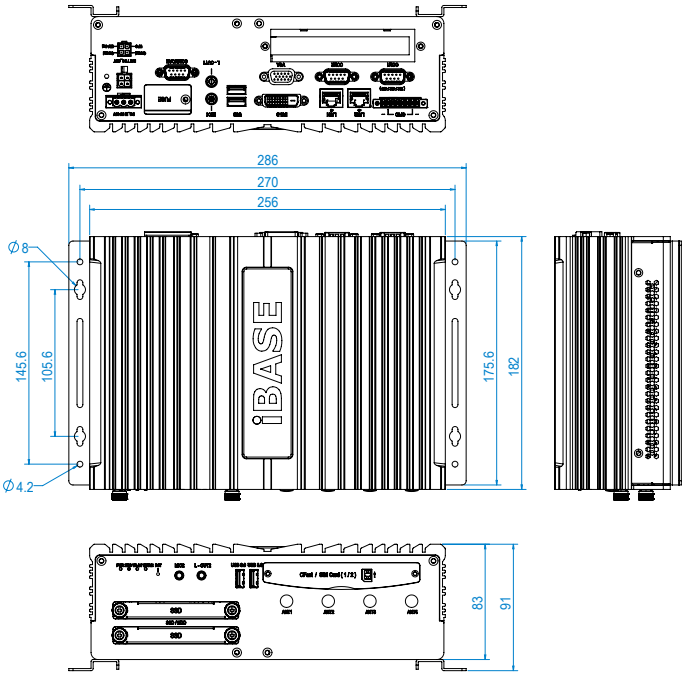
Specifications

System Mainboard	MPT-7001V
CPU Type	7th/6th Generation Intel® Core Processor
System Speed	2.6GHz
Memory	2x 4GB DDR4-2133 SO-DIMM (Dual Channel)
Construction	Aluminum
Chassis Color	Black
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-ize 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
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 (-40F ~ 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)
Certification	E-mark, CE class B, FCC class B

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



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user’s manual & datasheet download, visit www.ibase.com.tw.

MRD-286

All-in-One Bar-Type Panel PC

EN50155 Certified Intel® Atom® x7-E3950 / Pentium® N4200 Processor
All-in-One 28.6" Bar-Type Panel PC



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



Specifications

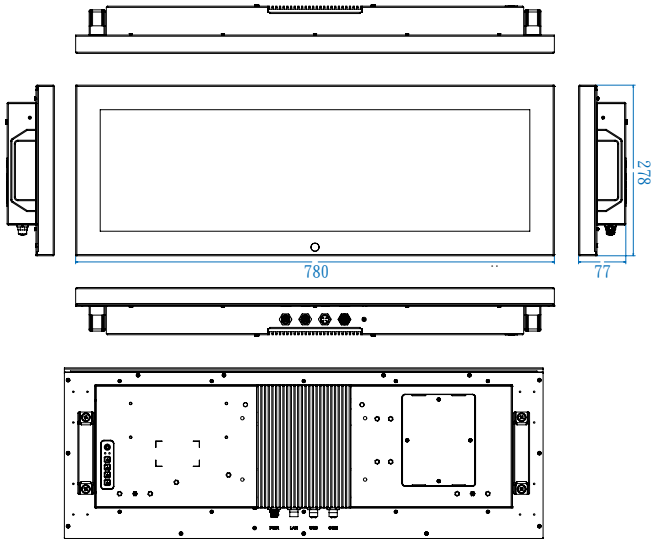
Display Size	28.6"
Max. Resolution	1920 x 540
Luminance (cd/m²)	1,000
Contrast	1000:1
Max. Color	16.7M
View Angle (H°/V°)	178/178
Backlight Lifetime(hrs)	50,000
Touch Type	None, enhanced glass, anti-scattering, IK07 rating
Touch Interface	None
Light Transmission (%)	90
Point of touch	None
USB 3.0	None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

Operating Temperature	-20°C~55°C
Storage Temperature	-25°C~70°C
Storage Humidity	0~90% @40°C
Certification	CE/FCC class A +LVD EN50155
Supported 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



MRD-238

All-in-One Bar-Type Panel PC

EN50155 Certified Intel® Atom® x7-E3950 / Pentium® N4200 Processor
All-in-One 24" Bar-Type Panel PC



Features

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

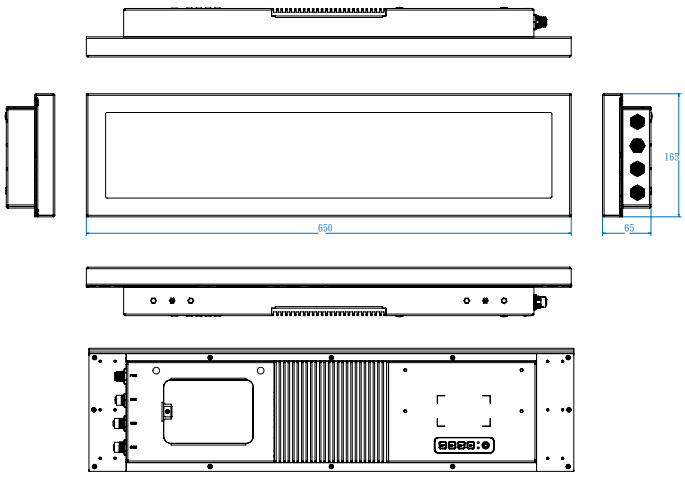
Specifications

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 M12 8-pin A-code for 2x USB 2.0
RS-232/422/485 Selectable in BIOS	1x 8-pin M12 A-code
RS-232	None
LAN	1x 8-pin M12 X-code GbE LAN
Additional Graphics	None
Audio	None
Digital I/O	None
Power Connector	1x M12 3-pin A-code
Power Button	IP65 membrane key
Processor	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
Thermal Design	None
Membrane Control	Dimming control, power on/off
Built-in Speaker/MIC	2x IP65 2W speaker
Internal Expansion Bus	None
Expansion Slot	None
Wireless	Optional
HDD	1x 2.5" HDD space, default 64GB SSD, easily accessible
Removable	None
Power Input Range	24V DC or 110V DC
Chassis Material	Metal
Color (Front/Back)	Black/Black
IP Rating	IP65 front/others IP40
Mounting	Side mount, VESA 100x100
Dimensions (mm)	650mm(W) x 165mm(D) x 65mm(H) 25.5"(W) x 6.49"(D) x 2.55"(H)
Net Weight (kgs)	TBD
Operating Temperature	-5°C~45°C
Storage Temperature	-25°C~70°C
Storage Humidity	0~90% @40°C
Certification	CE/FCC class A +LVD, EN50155
Supported 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



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

BYTEM-123-PC

Transportation Panel PC

EN50155 Certified Intel® Atom™ Processor E3845
12.1" Transportation Projected Touch Panel PC





Features

- EN50155 certification
- 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



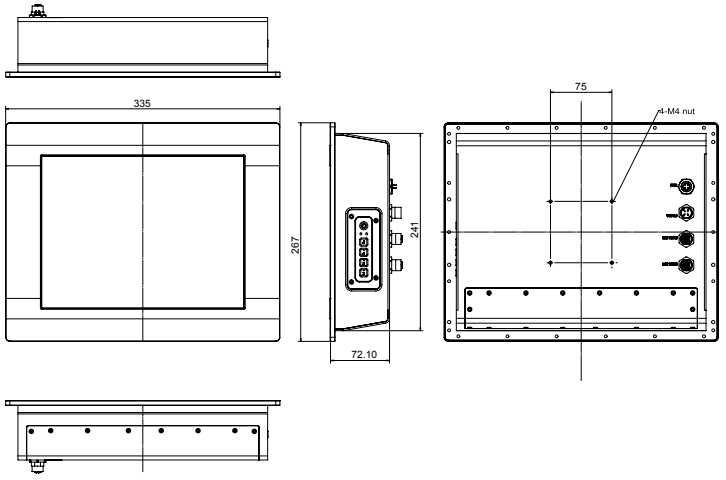
Specifications

Panel Type	12.1" TFT-LCD
Resolution	1024 x 768
Contrast Ratio	800:1
Viewing Angles	170/170
Backlight	30000(H)
Luminance	350 cd/m^2
Touch Type	Projected capacitive, 2 points
CPU Type	Intel® Atom™ Processor E3845 (Quad-Core @ 1.91GHz)
Memory	2x DDR3L SO-DIMM, up to 8GB, default DDR3L 4GB(4GBx1)
LAN	2x 10/100 LAN with M12 connector
Expansion Slots	1x mPCI-E (x1) w/ USB signal [half-size] 1x mSATA/mPCI-E (x1) w/ USB signal and mSATA supports [full-size]
I/O Interface	1x USB 3.0 2x USB 2.0 (Type-A + M12) 1x RS232/422/485"
Power Requirement	4-pin M12 connector 24V DC (default) power input Optional 48V DC, 72V DC & 110V DC
Construction	Aluminum front bezel and back cover IP65 front bezel/ IP54 for whole unit with I/O cover
Weight	3.6 kgs
Chassis	Silver/Silver
Storage	1x 2.5" SATA
Mounting	Wall mount and VESA 75x75 mm
Dimensions	335mm(W) x 267mm(D) x 72.1mm(H) 13.18"(W) x 10.51"(D) x 2.83"(H)
Operating Temperature	-25°C~ 55°C
Storage Temperature	-30°C~70°C
Relative Humidity	10%~90% (non-condensing)
Vibration	IEC61373
Certification	CE/FCC Class B EN50155-T1
Operating System	Windows 8 32/64 bit, Windows 7 Pro for Embedded 64 bit, WES7 64 bit

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



BYTEM-103-PC

Transportation Panel PC

EN50155 Certified Intel® Atom™ Processor E3845
10.4" Transportation Projected Touch Panel PC

EN50155 | Flat Bezel | F Panel IP65 | Fanless | 10"



Features

- EN50155 certification
- 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



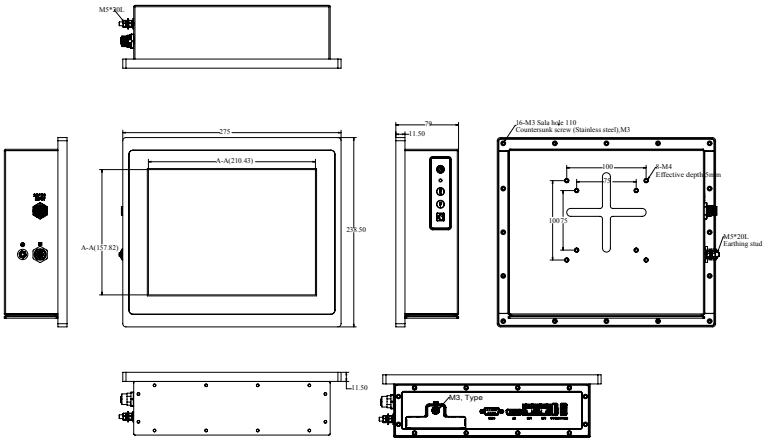
Specifications

Panel Type	10.4" TFT-LCD
Resolution	1024 x 768
Contrast Ratio	1000:1
Viewing Angles	176/176
Backlight	50000(H)
Luminance	500 cd/m^2
Touch Type	Projected capacitive, 2x points
CPU Type	Intel® Atom™ Processor E3845 (Quad-Core @ 1.91GHz)
Memory	2x DDR3L SO-DIMM, up to 8GB, default DDR3L 4GB (4GBx1)
LAN	1x 10/100 LAN with M12 connector
Expansion Slots	1x mPCI-E(x1) w/ USB signal [half-size] 1x mSATA/mPCI-E(x1) w/ USB signal and mSATA supports [full-size]
I/O Interface	1x USB 3.0 2x USB 2.0 (Type-A + M12) 1x RS232/422/485
Power Requirement	4-pin M12 connector 24V DC (default) power input, Optional 48V DC 72V DC & 110V DC
Construction	Aluminum front bezel and back cover IP65 front bezel/ Others IP40 not including I/O cover/ IP54 for all with I/O cover
Weight	4.3 kgs
Chassis	Silver/Silver
Storage	1x 2.5" SATA
Mounting	Wall mount and VESA 75x75, 100x100 mm
Dimensions	275mm(W) x 238.5mm(D) x 78.5mm(H) 10.82"(W) x 9.38"(D) x 3.09"(H)
Operating Temperature	-40°C~70°C (EN50155-TX)
Storage Temperature	-40°C~70°C
Relative Humidity	10%~90% (non-condensing)
Vibration	IEC61373
Certification	CE/FCC Class B EN50155-TX
Operating System	Windows 8 32/64 bit, Windows 7 Pro for Embedded 64 bit, WES7 64 bit

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



Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

IDT-7104

Accessories

4-Channel PCI Express® Power-over-Ethernet Card

NEW



Features

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

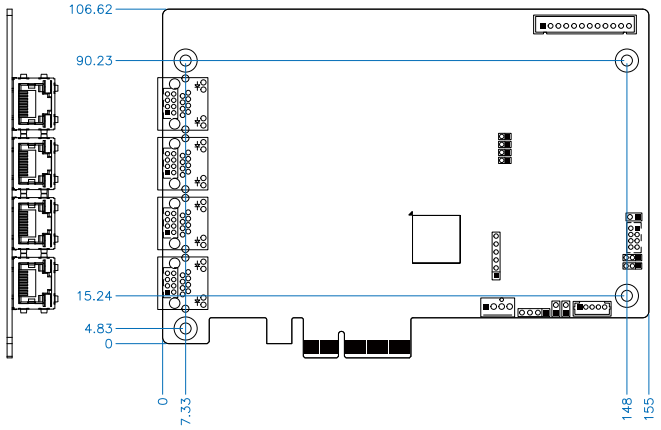
Specifications

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

Dimensions



HEADQUARTERS

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