

Industrial Data Collection Server

Four 2.5" drive bays industrial data collection server for factory automation and harsh environment

The IIoT (Industrial Internet of Things) concept focuses on machine to machine (M2M) communication, so data collection, storage and analysis capability are the keys to creating a smart production line and to fulfill industrial 4.0 demands. The IBX-660 is an industrial data collection storage server which can store data from multiple peripheral devices via Ethernet in harsh environment to ensure data safety by configuring RAID mode with max. capacity support up to 8TB (RAID 0).

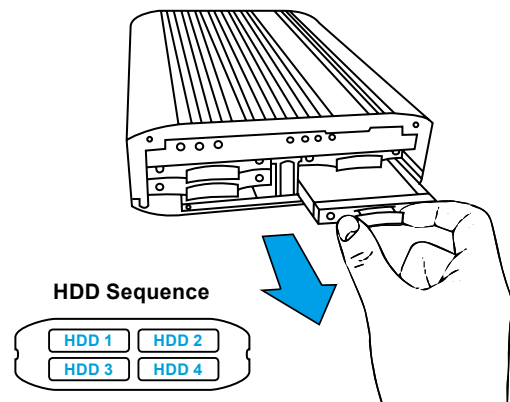
IBX-660

- Four 2.5" removable drive bays, and maximum storage capacity support up to 8TB
- 32GB eMMC (storage & boot)
- Rugged design with high resistance to vibration and impact
- Dust-resistant and fanless design
- Wide operating temperature range: -40°C ~ 50°C (-40°F ~ 122°F)



Software RAID Benefit

- Cost sensitive and easy-to-configured RAID mode
No RAID IC design work is needed, and users can be configured their own RAID mode on OS directly without re-installed their OS.
- Integrating eMMC for storage and boot-up device
The IBX-660 is built-in with eMMC 32GB which can be used as a storage and boot device. Users can install the OS into eMMC, and install four drives for RAID configuration to meet their needs for different applications.
- Four 2.5" HDD/SSD removable drive bays
Users can quickly replace the drives by opening the front panel of the chassis.
- RAID 0/1/5/10 support
To ensure user's data could be stored safely, RAID function can recover important data if one or more drives fail.



Mode	Minimum no. of Drives	Max Capacity* (4 drives)	Description	Advantages
RAID 0	2	8 TB	Stripe	Large size and the fastest speed
RAID 1	2	2 TB	Mirror	A single drive failure will not result in data loss
RAID 5	3	6 TB	Striping with distributed parity	Large size, fast speed, and redundancy
RAID 10	4	4 TB	1+0; Striped set of Mirrored Subset	Larger size and higher speed than RAID 1, and more redundancy than RAID 0

* Max. capacity: 2 TB each drive

Industrial Factory Application

Information technology adds intelligence to factories from design to the end of the process. Today's technologies automate the collection, storage and retrieval of data from across multiple factories and factory sub-systems to make the data available for analysis.



Energy Data Collection, Storage & Analysis

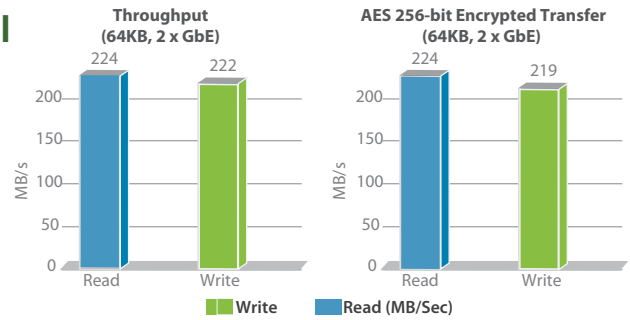
With a growing interest in renewable energy resources globally, the sun and the wind have become one of the most rapidly growing eco-friendly alternative energy sources in the recent years.

The IBX-660 can store the information of power production and consumption which will be collected and used by the control unit to create profiles of power consumption/production for each source/load of the system.



➔ Quad-core Compact Server with AES-NI

The 4-bay compact IBX-660 is powered by an industrial-grade quad-core Intel® 1.91 GHz processor with AES-NI hardware encryption engine, 8GB DDR3L RAM configurations and 2 Gigabit LAN ports to deliver remarkable speeds.



➔ Fanless and Rugged Design for Harsh Environment

Engineered with a rugged steel body and no moving parts, this small form factor IBX-660 is capable of operating under wide temperatures from -40°C to +50°C (-40°F ~ 122°F) in fanless operation. Compliant with the military-grade MIL-STD-810G-514.6E-1 simulation test for anti-vibration, the IBX-660 is designed to withstand dust, rust, vibration and impact for reliable and energy-saving operations in harsh environment.



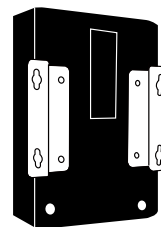
➔ Redundant Power Protection, 9~36 VDC Wide Power Input with Vehicle Power Support

The IBX-660 features dual power inputs that can ensure continual operation in various locations with 9 ~ 36 volts DC support. The ACC mode is designed for vehicle applications to control power on/off by using ACC signal.

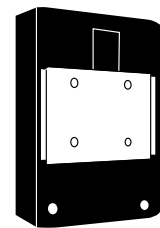


➔ Flexible System Installation & Easy Setup

Sometimes space may be an issue in installing new hardware. The IBX-660's optional VESA 75/100 wall mount and DIN-rail mount kits offer flexible installations in various locations.



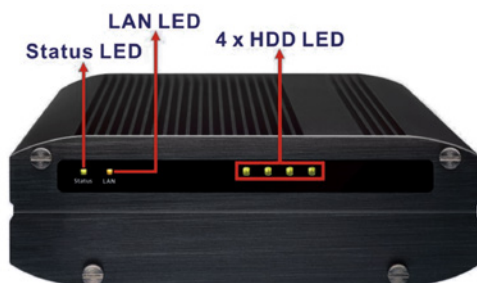
Wall Mount



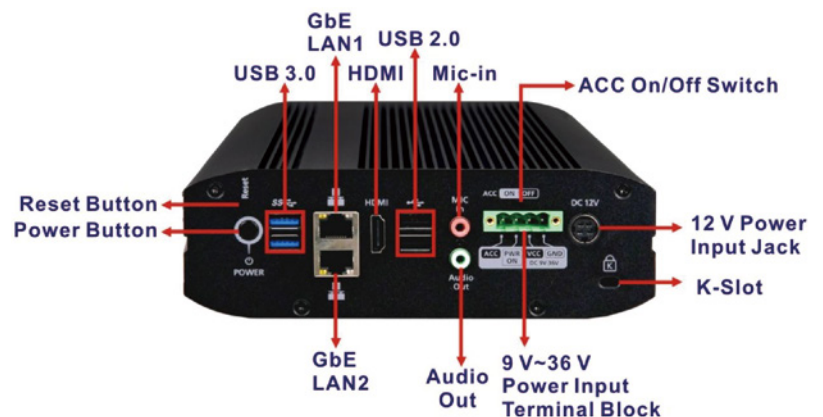
Din-rail Mount

▶ Fully Integrated I/O

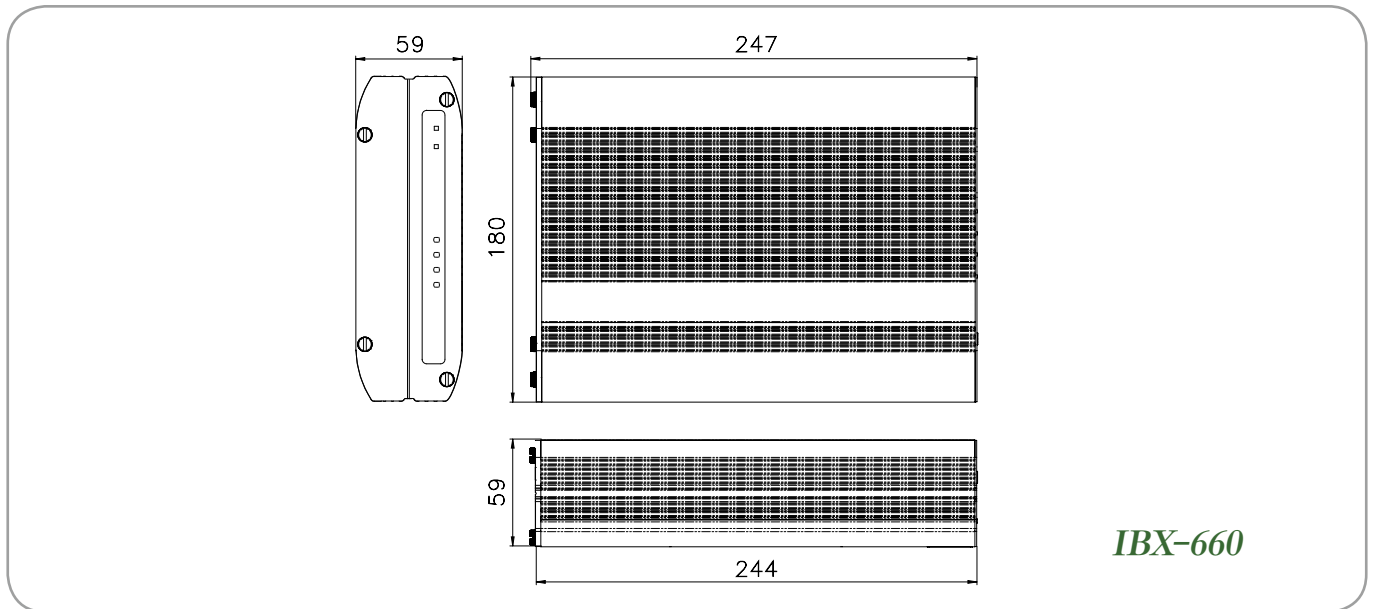
Front View



Rear View



Dimensions (Unit: mm)



Specifications

Model Name		IBX-660
Chassis	Color	Black
	Dimension (WxDxH)	180 x 247 x 59 mm
	System Fan	Fanless
Motherboard	CPU	Intel® Atom™ E3845 quad-core 1.91GHz
	Chipset	SoC
	System Memory	2 x 204-pin DDR3L SO-DIMM 8GB pre-installed (system max. 8GB)
Storage	Hard Drive	4 x 2.5" SATA HDD/SSD, removable drive bay
	eMMC	32GB (storage and boot)
I/O Interfaces	USB 3.0	2
	USB 2.0	2
	Ethernet	2 x RJ-45 PCIe GbE by Intel® I210
	Display	1 x HDMI
	Resolution	Up to 1080p support
	Audio	1 x Mic-in, 1 x Audio out
Expansions	PCIe Mini	1 x Full-size PCIe Mini slot
	SIM	1 x On-board SIM card slot
Power	Power Input	Power 1: DC power jack, external power adaptor, 12V, 90W, Input: 100-240V Power 2: 4-pin terminal block, 9-36V DC
	Power Consumption	40W (Intel® Atom® E3845 CPU with 8 GB 1600 MHz DDR3L memory, 4 x 2.5" HDD)
Reliability	Mounting	Wall-mount, DIN-rail mount
	Operating Temperature	-40°C ~ 50°C
	Weight (Net/Gross)	1.11 kg/3.2 kg
	Safety / EMC	CE/FCC
Others	LED Indicators	Status, LAN, HDD 1-4
OS	Supported OS	Microsoft® Windows® 10 IoT Enterprise/Linux

Packing List

1 x IBX-660	2 x Ethernet cable
1 x AC adapter	24 x Flat head screw (for 2.5 HDD)
1 x Power cord	

Ordering Information

Part No.	Description
IBX-660-8G-R10	Industrial edge server with four 2.5" drive bays, Intel® Atom™ E3845 quad-core 1.9GHz, pre-installed 8GB DDR3L RAM, 32GB eMMC
IBX-660-W10E64-E-R10	OS Image with Windows 10 IoT Enterprise Entry 64-bit for IBX-660 series, with DVD-ROM, RoHS