iBPC-4081-IoT

Industrial fanless embedded Box PC with Intel Atom E3845 CPU and 1 I/O Bus

Features

- Powerful Hardware Design
  - Intel E3845, 1.91 GHz, 64-bit, Quad core
  - VGA and HDMI Display Ports
  - Microphone-In and Earphone-Out
  - Built-In Dual Watchdog Timers and Real-Time Clock
  - 64-bit Hardware Serial Number
- Various Memory & Storage Options
  - 128 KB MRAM and 16 KB EEPROM for Data Retention
  - 128 GB SSD, CF card slot, and 4 GB DDR3 on-board
- Multiple Communication Interfaces
  - 2 x 10/100/1000BASE-T Ethernet Ports and 4 x USB 2.0 (host)
  - 4 x Serial Ports (RS-232/485)
- Operating Systems (Windows 10 IoT Enterprise LTSC)

Introduction

The iBPC series is a fanless embedded box PC designed for harsh environments, featuring a wide operating temperature range and wide voltage input capabilities.

The iBPC series offers comprehensive connectivity, including one RS-232 port, one RS-232/485 port, two RS-232/422/485 ports, VGA, HDMI, Audio, dual Gigabit Ethernet LAN ports, and four high-speed USB 2.0 interfaces. Powered by the Intel ATOM Quad-Core E3845 Processor (1.91GHz) with 4GB of onboard memory, the iBPC-4081 ensures reliable performance. It also features two SMA antenna cutouts, a +10 ~ 30 VDC power input, a power switch, and an optional I/O expansion board (XV-board) for isolated high-protection I/O.

The iBPC-4081-IoT comes pre-installed with Windows 10 IoT Enterprise LTSC. It supports both Universal Windows Apps and traditional Windows applications simultaneously. This ensures maximum compatibility with standard Windows 10 development tools, allowing applications to be quickly ported and deployed in demanding industrial environments.

Powerful Hardware Design

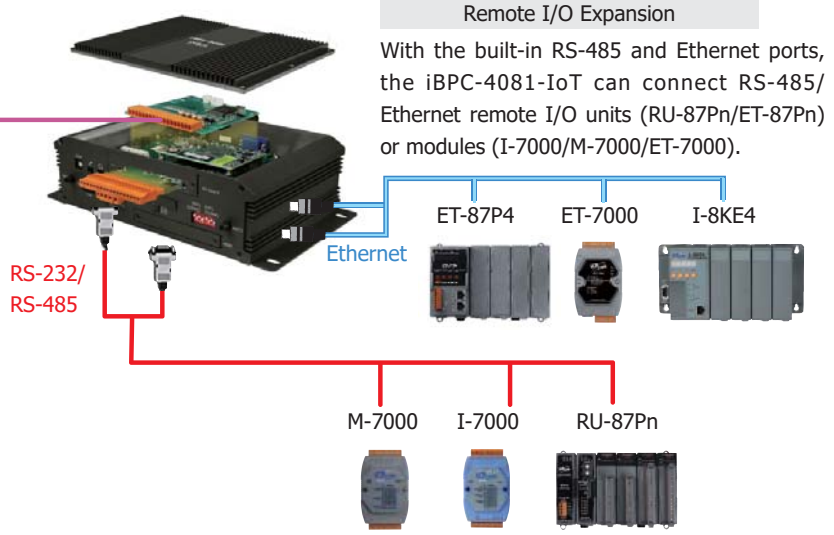
- Intel® Atom E3845 CPU (with 4 GB on-board memory)
- 2 × 10/100/1000M Ethernet and 4 × USB 2.0 port
- One 128 GB SSD and one CF card slot
- Built-In Dual Watchdog Timers and Real-Time Clock
- Ultra-Rugged Construction and Reliable Design
- Supports VGA and HDMI dual display
- RS-232/422/485 port
- I/O Expansion Bus for XV-board
- One Mini PCI Express Card slot
- Operating Temperature: -25 ~ +70°C

I/O Expansion Modules

Local I/O Expansion

I/O Expansion Bus

The iBPC-4081-IoT can support one an I/O expansion card, which allow you implement various I/O functions.



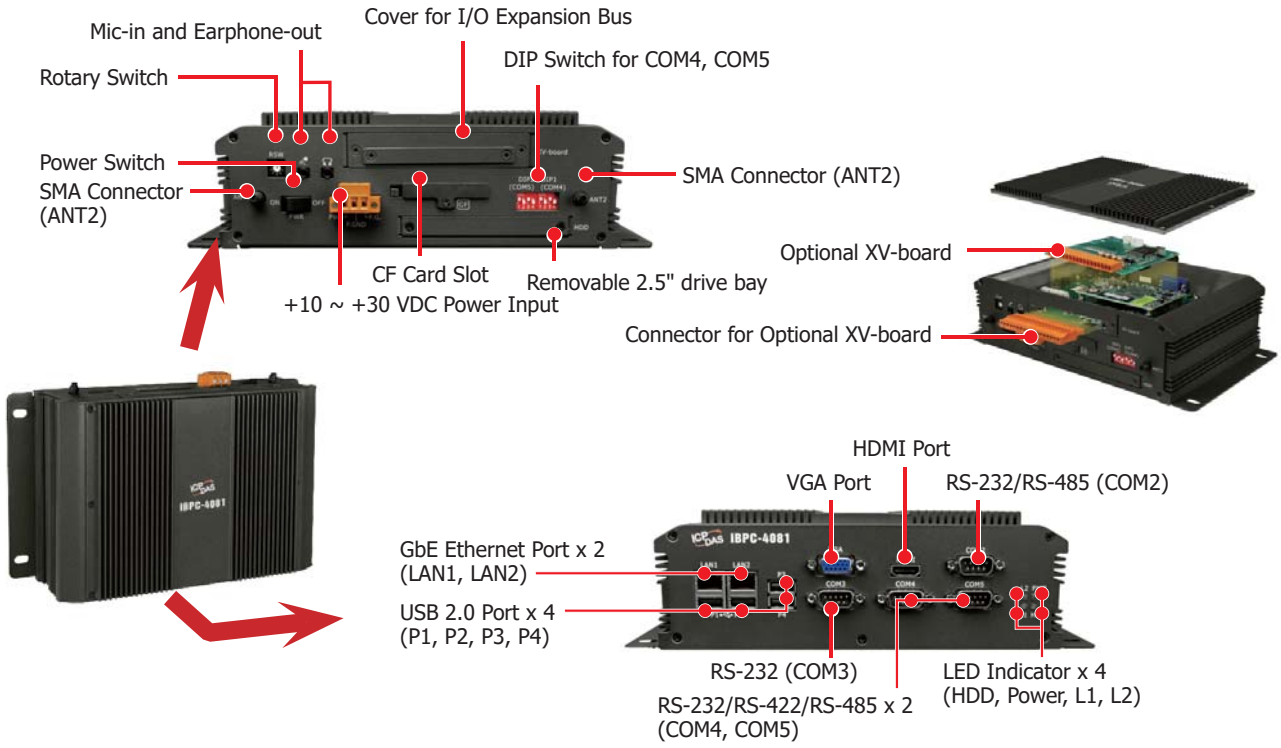
Remote I/O Expansion

With the built-in RS-485 and Ethernet ports, the iBPC-4081-IoT can connect RS-485/ Ethernet remote I/O units (RU-87Pn/ET-87Pn) or modules (I-7000/M-7000/ET-7000).

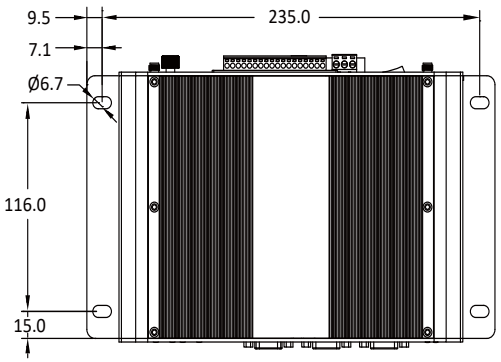
Specifications

Model	iBPC-4081-IoT
Software	
OS	Windows 10 IoT Enterprise LTSC (64-bit)
SDK	Dll for VC, Dll for Visual Studio.Net
CPU Module	
CPU	Intel E3845, 1.91 GHz, 64-bit, Quad core
System Memory	4 GB DDR3 SDRAM
MRAM	128 KB
Flash	32 GB
EEPROM	16 KB
Storage	1 x 128 GB SSD, 1 x CF card slot
RTC (Real Time Clock)	Provide seconds, minutes, hours, dates, day of week, month, year
64-bit Hardware Serial Number	Yes, for software copy protection
Watchdog Timer	Dual Watchdog Timer
Rotary Switch	1 x 10 Position (0 ~ 9)
Audio	Microphone-In and Earphone-Out
Buzzer	Yes
Display	
VGA Resolution	1280 x 1024 ~ 1920 x 1080 (16 : 9), 640 x 480 ~ 1024 x 768 (4 : 3)
HDMI Resolution	2560 x 1600 @ 24bpp
LED Indicator	1 x Power, 1 x HDD, 2 x Programmable
Communication Ports	
Ethernet	2 x RJ-45, 10/100/1000 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)
USB 2.0	4
SMA Connector	2
COM1	Internal communication with the high profile VX-Board modules
COM2	RS-232/485 (RS-232: RxD, TxD, GND; RS-485: Data+, Data-); 3000 VDC isolated
COM3	RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 VDC isolated
COM4	RS-232/RS-485/RS-422, 3000 VDC isolated
COM5	RS-232/RS-485/RS-422, 3000 VDC isolated
I/O Expansion	
I/O Type	XV-board, PCI-E Mini-Slot
Mechanical	
Casing	Metal
Ingress Protection Rating	IP30 (Aluminum)
Dimensions (W x L x H)	254 mm x 164 mm x 74 mm
Installation	DIN-Rail, Wall mounting
Environmental	
Operating Temperature	-25 ~ +70 °C
Storage Temperature	-40 ~ +75 °C
Ambient Relative Humidity	10 ~ 90 % RH, Non-condensing
Power	
Input Range	+10 ~ 30 VDC (1 kV Isolated)
Consumption	18 W (0.75 A @ 24 VDC)

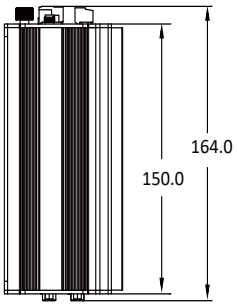
Appearance



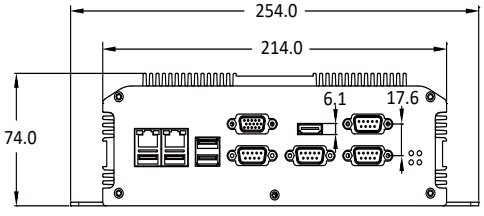
Dimensions (Units: mm)



Front View



Right Side View



bottom View

Ordering Information

iBPC-4081 CR	Industrial fanless embedded Box PC with Intel Atom E3845 CPU and 1 I/O Bus (RoHS)

Option Accessories

XV-Board	Add-on I/O Expansion Board