Chipsee

Industrial PC

CS86-BOX-7500T

PN: CS86-BOX-7500T

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CS86-BOX-7500T

Front View

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IPC

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Product Overview

The CS86-BOX-7500T is a rugged, high-quality mountable multifunctional industrial PC without a display. Thanks to the integrated brackets and its light-weight construction, this single board computer can be firmly attached to any flat surface, such as industrial cabinets or walls.

CS86-BOX-7500T is powered by the high-performance Intel$^{®}$ Core™ i5 7500T CPU. The CS86-BOX-7500T Industrial Box PC also features a broad range of connectivity options, allowing it to meet even the most demanding requirements in harsh industrial or outdoor environments.

Key Applications

- Industrial Automation
- Process Control
- Smart Grid Management
- CNC Manufacturing
- Environmental Monitoring
- Machine Vision Inspection
- Predictive Maintenance

Despite the performances, the offered CPU consumes very little power. From the ground-up, the CPU is built for low power consumption.

A specially designed aluminum alloy housing with fins for increased heat dissipation serves as a passive cooler, eliminating the need for built-in fans. The fan-less design reduces noise, as well as the maintenance costs and efforts, increasing reliability at the same time.

> ⚠ **Caution**
>
> Be careful when handling the product while it is operating: it might become hot under heavy CPU load.

Ordering Options

Most of the Chipsee products can be customized during the ordering process. The product will be shipped with the pre-installed factory defaults if no extra requirements are specified. The table in the Hardware Features section provides information about the default options bundled with the product.

> ✏ **Note**
>
> You can order CS86-BOX-7500T from the official Chipsee Store or from your nearest distributor.

Operating System

By default, CS86-BOX-7500T comes with the Ubuntu Linux operating system (OS) pre-installed. A different OS can be selected during the ordering process. For operating systems, CS86-BOX-7500T supports Ubuntu Linux(default), Windows 7, Windows 8.1, Windows 10, Windows 11.

Optional Features

The CS86-BOX-7500T Industrial Box PC offers the highest levels of scalability in the entire product portfolio.

Feel free to contact Chipsee Technical Support at **support@chipsee.com** for all your customization needs.

CS86-BOX-7500T does not include WiFi/BT module by default. This module is optional and can be selected at the Chipsee store during the ordering process.

> ⚠️ **Warning**
>
> Installation, repair, and maintenance tasks should be performed by trained personnel only.
> Chipsee does not bear any responsibility for damage caused by inadequate handling of the product.

Hardware Features

The CS86-BOX-7500T Industrial Box PC offers a broad range of performance and connectivity options for scalable integration, providing expandability according to future needs. Some of the key features are listed in the table below.

CS86-BOX-7500T	
CPU	Intel Core i5 7500T, Quad(4) Core 4 Threads, 2.7GHz Base Frequency, 3.3GHz Turbo Frequency
Mother Board	Intel H110 Chipset
GPU	Intel® HD Graphics 630 integrated GPU, shared memory, supports dual HDMI display
RAM	Default 4GB (1 x single channel SO-DIMM 2133/2400/2666). Optional up to 64GB(2 x SO-DIMM)
Storage	Default 128GB, 1 x SATA3.0 7P Connector, 1 x M.2 M-KEY (SATA SSD)
USB	4 x USB 3.0 (Type A)
PCIe	1 x Mini-PCIe (WIFI/BT/4G)
Audio	Line in, line out, dual channel HD audio
LAN	2 x RJ45, 10/100/1000 Mbps (Intel i210)
UART	4 x RS232, 2 x RS485
4G	Optional, mini PCIe module available from the manufacturer
WiFi/BT	Optional, mini PCIe module available from the manufacturer
Display	1 x HDMI Out , 1 x DP Out
Power IN	9-36V DC
Power Consumption	40W
OS	Ubuntu Linux(default), Windows 7, Windows 8.1, Windows 10, Windows 11
Temp.	From -20°C to +60°C (Operational), From -30°C to +80°C (Storage)
Humidity	From 5% to 95% at 40°C relative humidity (no condensation)
Dimensions	260 x 187 x 52mm
Structure	Aluminum magnesium alloy
Mounting	VESA, Desktop, Wall, Embedded
Weight	2.85kg

Table 317 Table 1: Key Features

Power Input

The CS86-BOX-7500T Industrial Box PC should be powered by 9-36V DC.
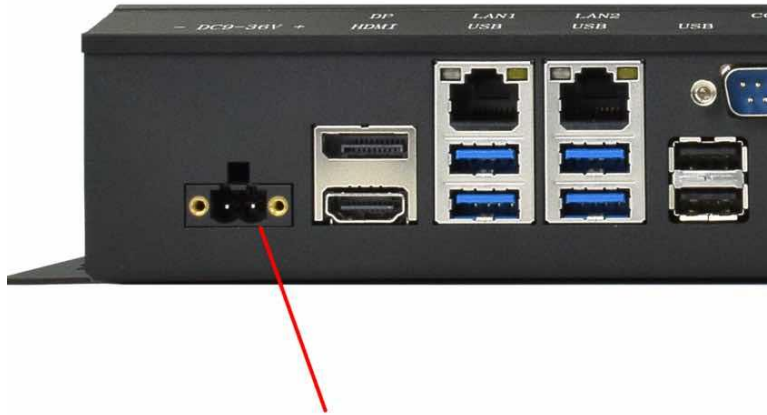
DC Power Input

The POWER button can be used to switch the power ON or OFF.

Power Button

Connectivity

There are many connectivity options available on the CS86-BOX-7500T industrial PC. It has 4 x USB3.0 Type A connectors configured as HOSTS, 1 x HDMI port, 1 x DP, 2 x RJ45 connectors supporting Gigabit Ethernet (GbE), and 6 x UART connectors that can be configured in RS485 mode (4 x RS232 + 2 x RS485) as per request.

RS232/485 Connectors

Product has 6 x 9-pin D-Sub connectors. The 2 ports: COM1~COM2, can be configured as either RS232, RS485 or RS422 communication interfaces through BIOS. The 4 ports: COM3/4/5/6 are RS232. If different configuration is required, please get in touch with Chipsee technical support at **support@chipsee.com**

Pin Definition (COM1 COM2 support RS232/485/422)	
Pin 1	DCD/RS485-B/RS422_TX-
Pin 2	RXD/RS485-A/RS422_TX+
Pin 3	TXD/RS422_RX+
Pin 4	DTR#/RS422_RX-

Pin Definition (COM3/4/5/6 support RS232)	
Pin 2	RXD
Pin 3	TXD
Pin 5	GND

*COM Ports*

USB HOST Connectors

CS86-BOX-7500T is equipped with 4 x USB 3.0 HOST ports.
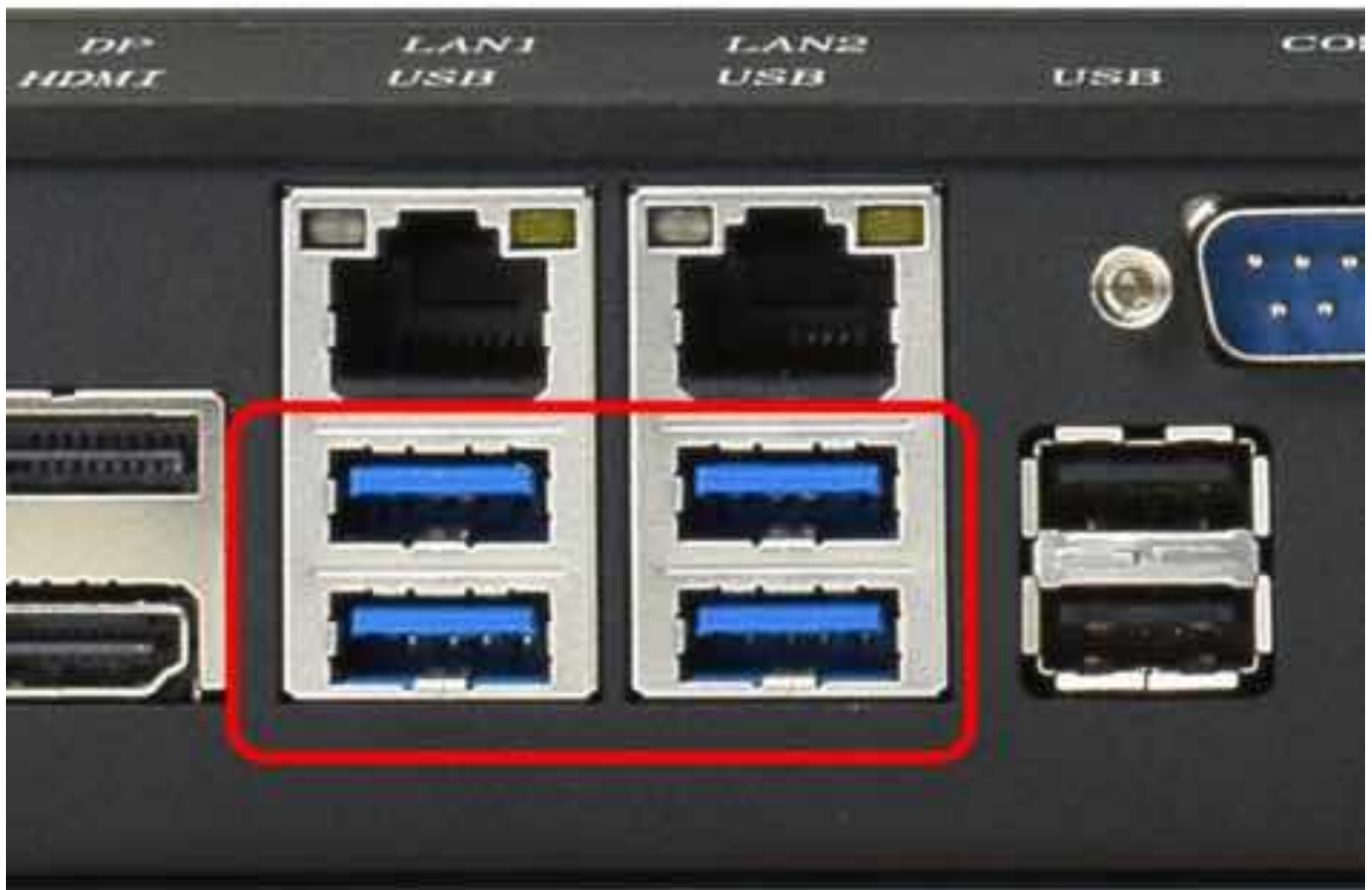
USB 3.0

LAN Connectors

2 x **LAN (RJ45) connectors** provide Ethernet connectivity over standardized Ethernet cables. The integrated two-port Ethernet interface supports 10/100/1000BASE-T/TX specifications with automatic speed negotiation and Wake on LAN (WoL) functionality. Power over Ethernet (PoE) is not supported.
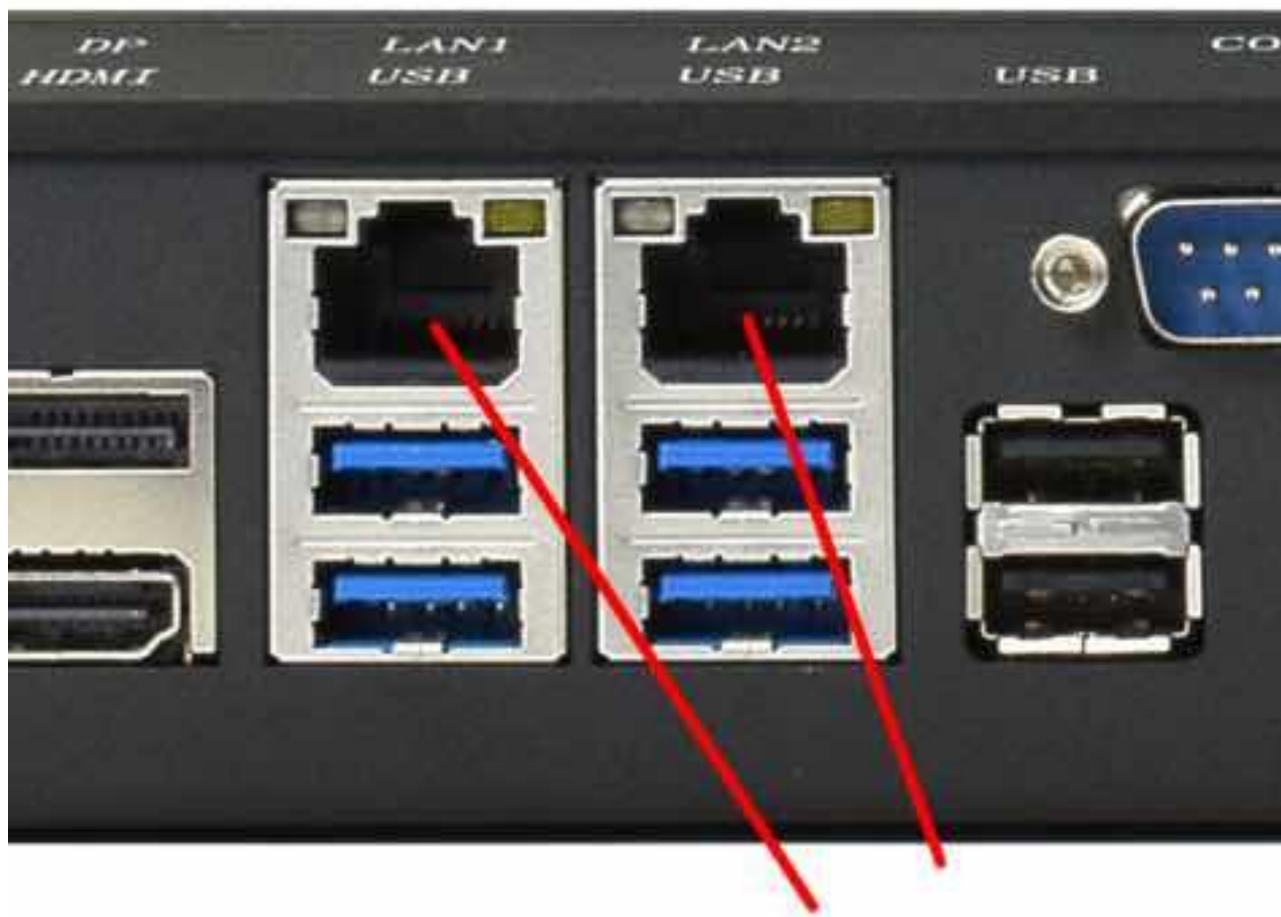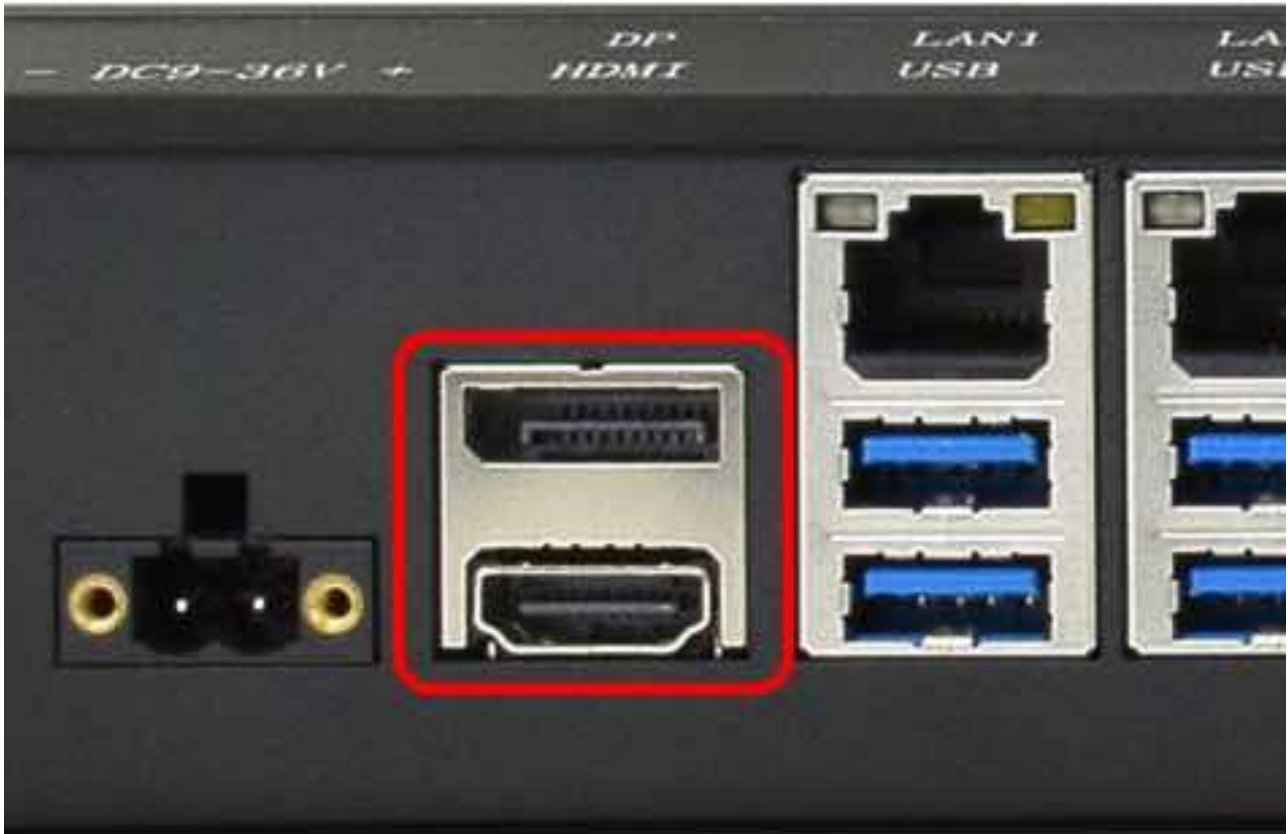

2 x RJ45 GbE LAN Connectors

> ✎ **Note**
>
> Use CAT5 or better cables to achieve full data throughput over maximum distance defined by the 1000BASE-T standard (100m).

HDMI/DP Connector

Although not equipped with the screen on its own, the The CS86-BOX-7500T Industrial Box PC features 2 video output ports: 1 x **HDMI** port and 1 x **DP** port.

HDMI(Down) and DP(Up) Ports

Audio In/Out Connector

The CS86-BOX-7500T has one 3.5mm audio port, supports line in, line out, dual channel HD audio .

*Audio Port*

Mounting Procedure

The CS86-BOX-7500T Industrial Box PC supports 100mm VESA mounting pattern, enabling simplified installation onto any standard VESA mounting rack.

The CS86-BOX-7500T Industrial Box PC also supports desktop mount, embedded mount, wall mount.

You can find detailed information about mounting in the Mount IPC Guide.

Mechanical Specifications

The outer mechanical dimensions of The CS86-BOX-7500T Industrial Box PC are 260 x 187 x 52mm (W x L x H). Please refer to the technical drawing in the figure below for details related to the specific product measurements.
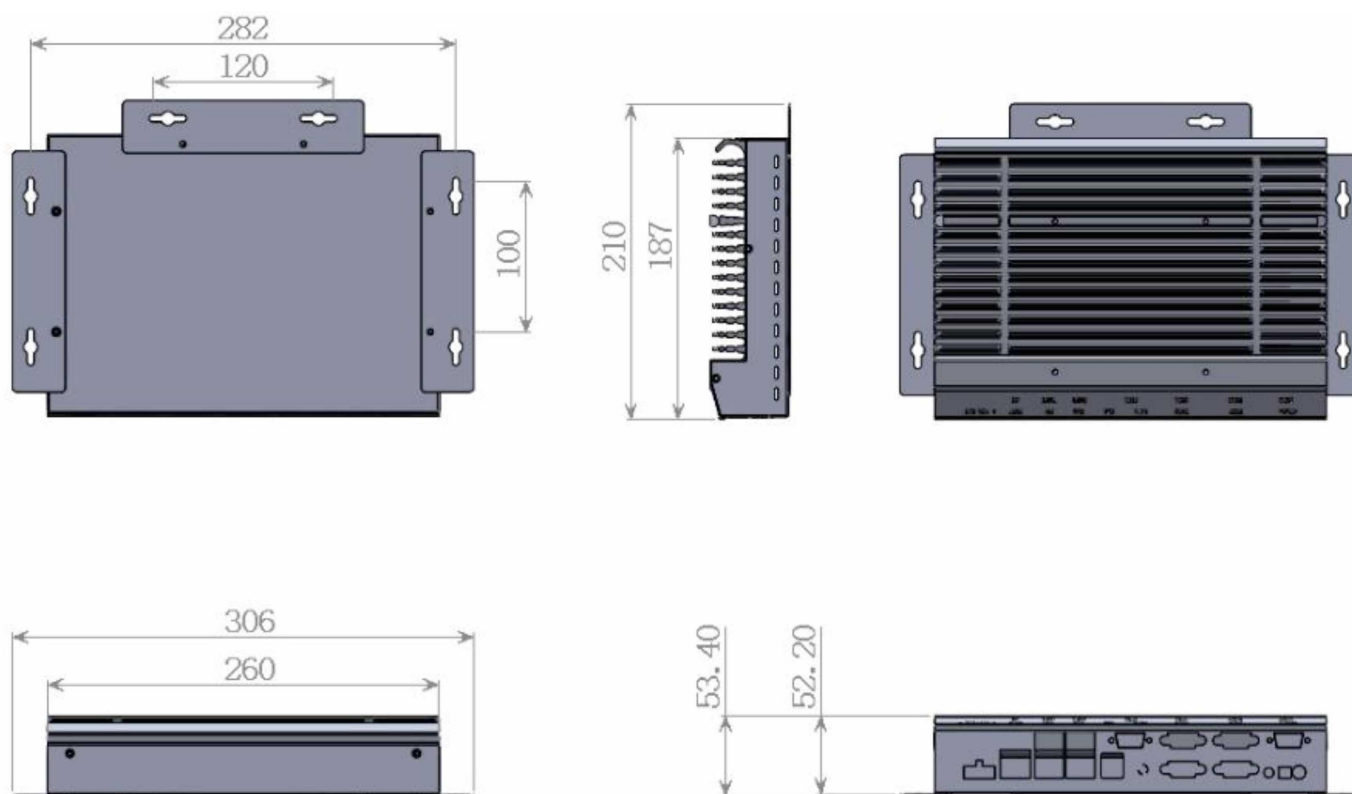
CS86-BOX-7500T Technical Drawing

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