



Industrial PC

# CS86-BOX-7500T



PN: CS86-BOX-7500T

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# CS86-BOX-7500T

## Front View



## Rear View



## Side View 1



## Side View 2



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

Table 326 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](mailto: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-

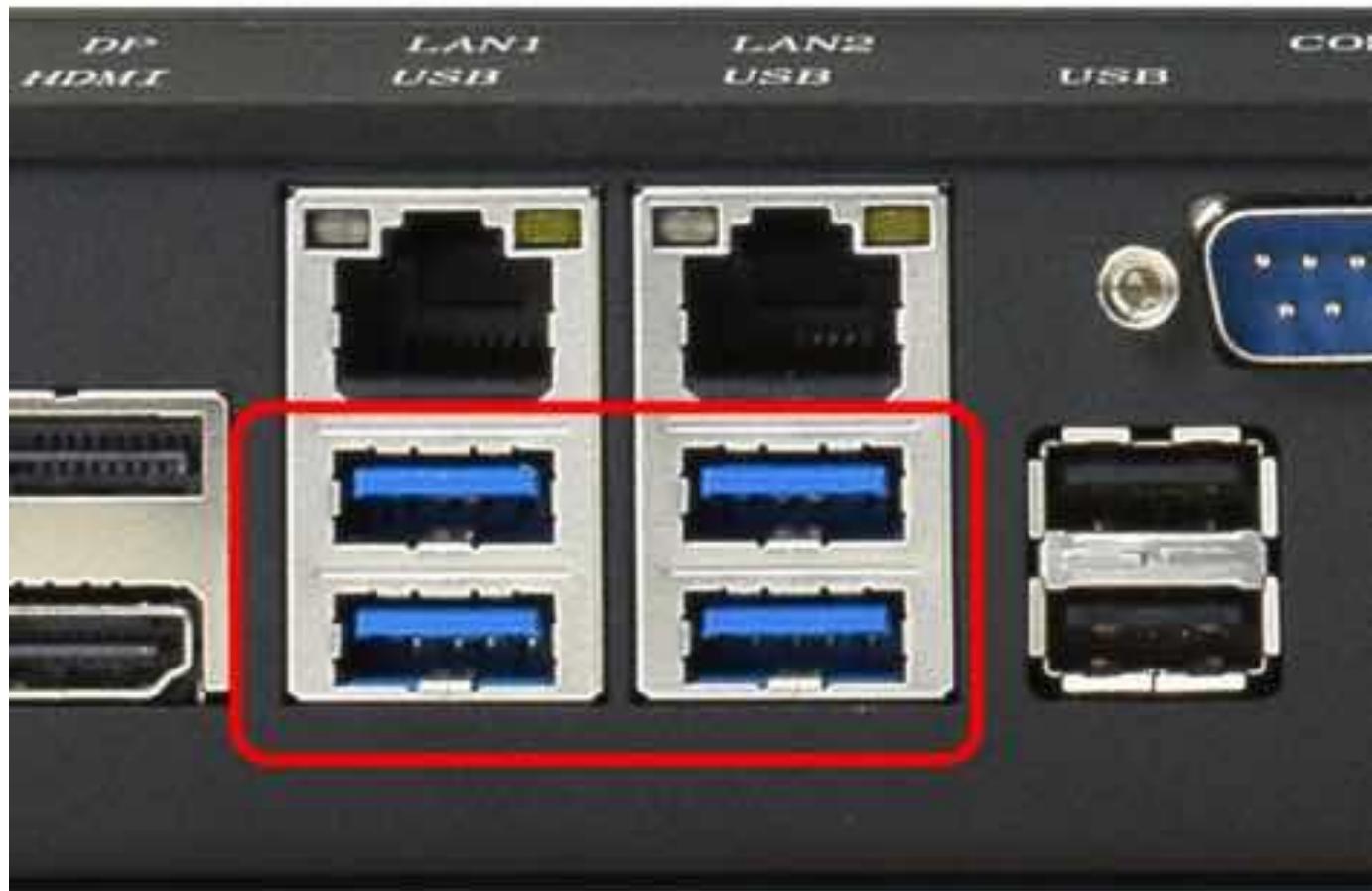
Pin Definition (COM3/4/5/6 support RS232)	
Pin 2	RXD
Pin 3	TXD
Pin 5	GND



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.



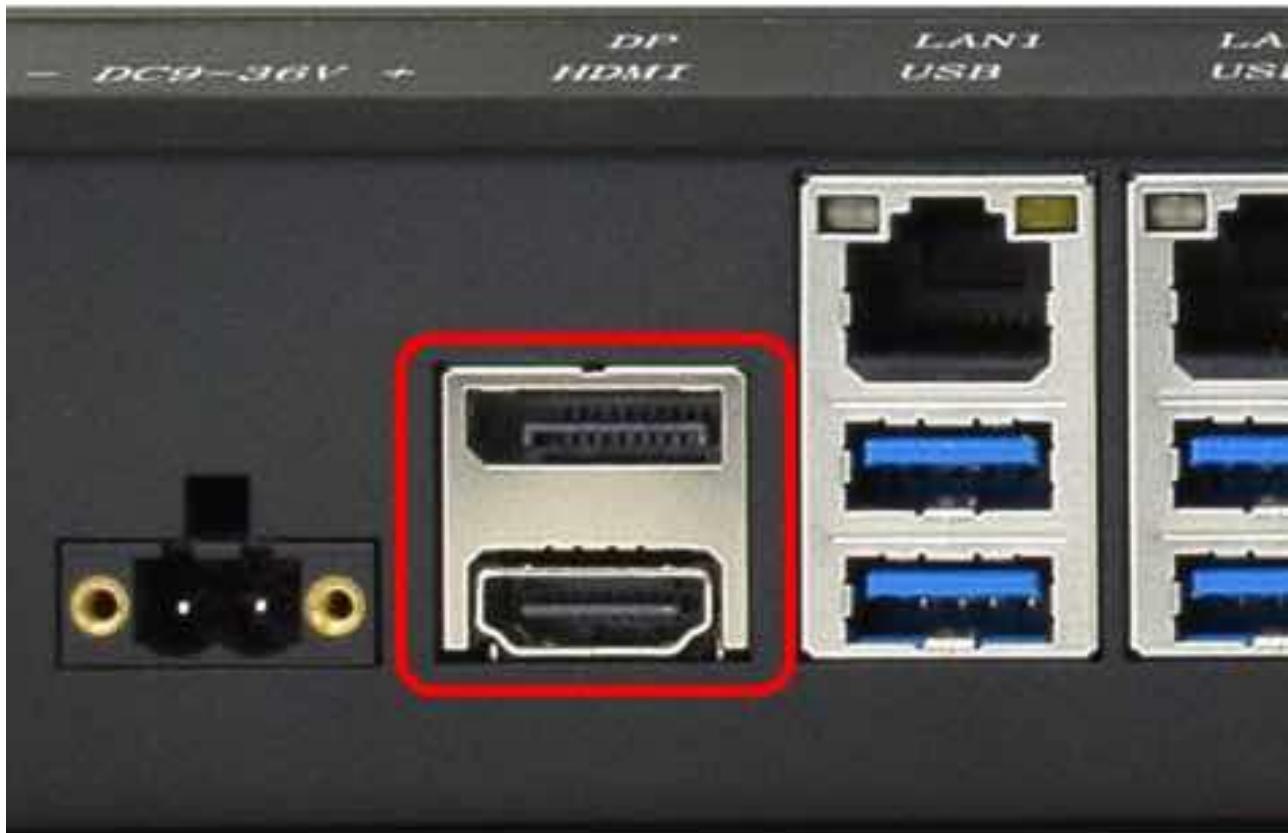
2 x *RJ45 GbE LAN Connectors*

### 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

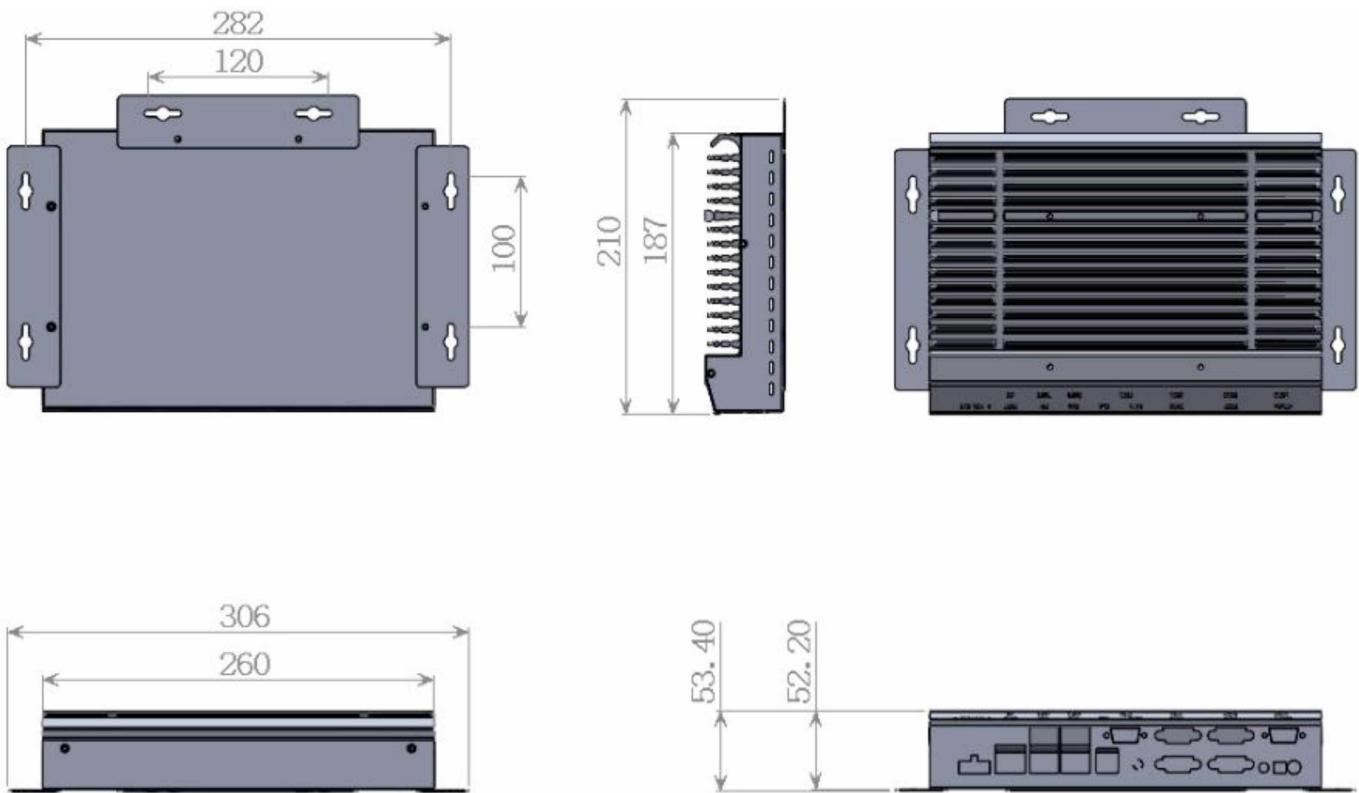
The CS86-BOX-7500T Industrial Box PC supports 100mm VESA mounting pattern, enabling simplified installation onto any standard VESA mounting rack.

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

## Disclaimer

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