



Industrial PC

# CS86-BOX-7500T



PN: CS86-BOX-7500T

Content can change at anytime, check our website for latest information of this product.

[www.chipsee.com](http://www.chipsee.com)

# Contents

---

CS86-BOX-7500T	3
1. Product Overview	7
2. Ordering Options	8
2.1. Operating System	8
2.2. Optional Features	9
3. Hardware Features	10
4. Power Input	11
5. Connectivity	12
5.1. RS232/485 Connectors	12
5.2. USB HOST Connectors	13
5.3. LAN Connectors	14
5.4. HDMI/DP Connector	15
5.5. Audio In/Out Connector	16
6. Mounting Procedure	17
7. Mechanical Specifications	17
8. Disclaimer	18
9. Technical Support	18

# 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 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](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-

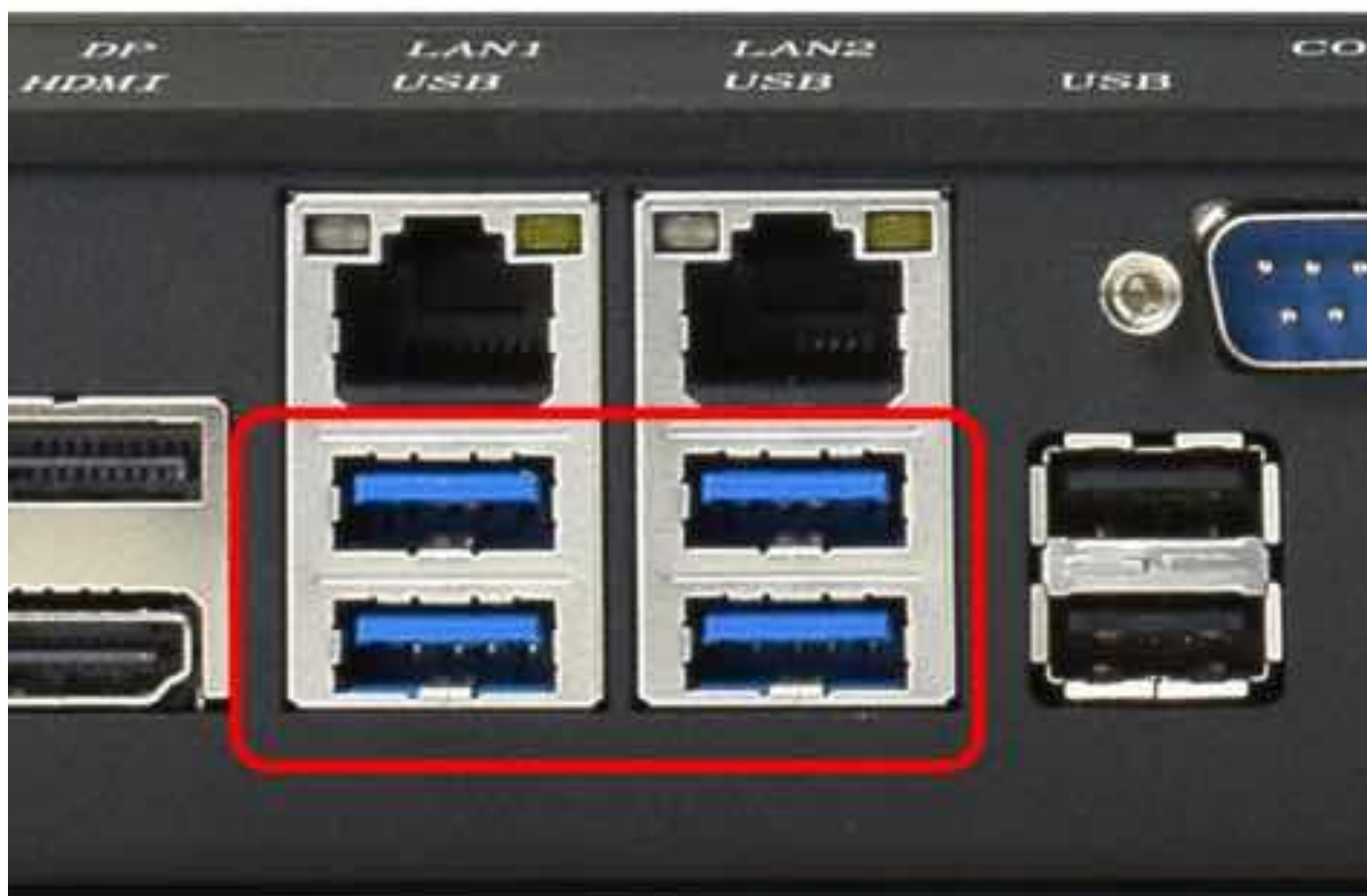
Pin Definition (COM3/4/5/6 support RS232)	
Pin 2	RXD
Pin 3	TXD
Pin 5	GND



COM Ports

## USB HOST Connectors

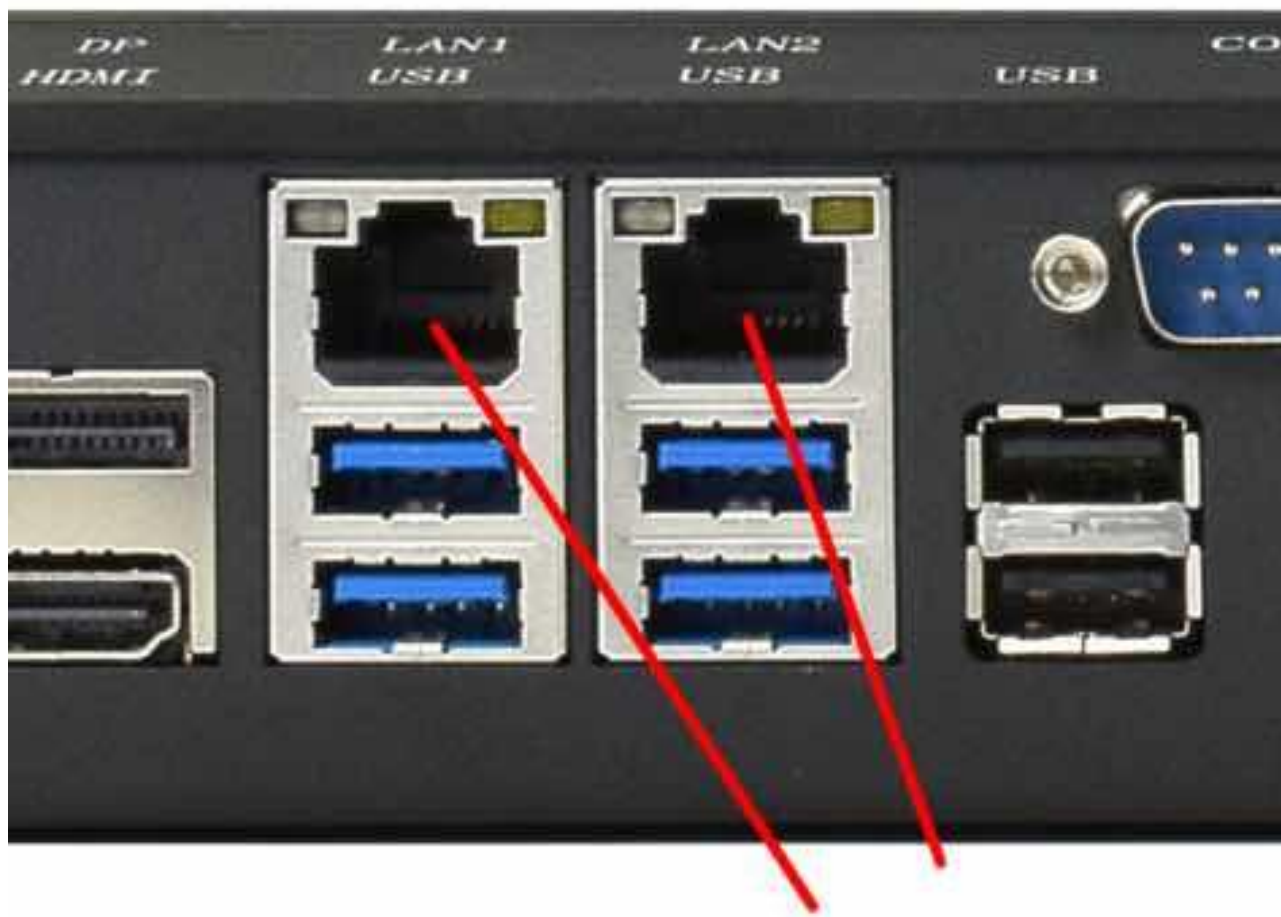
CS86-BOX-7500T is equipped with 4 x USB 3.0 HOST ports.



*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.



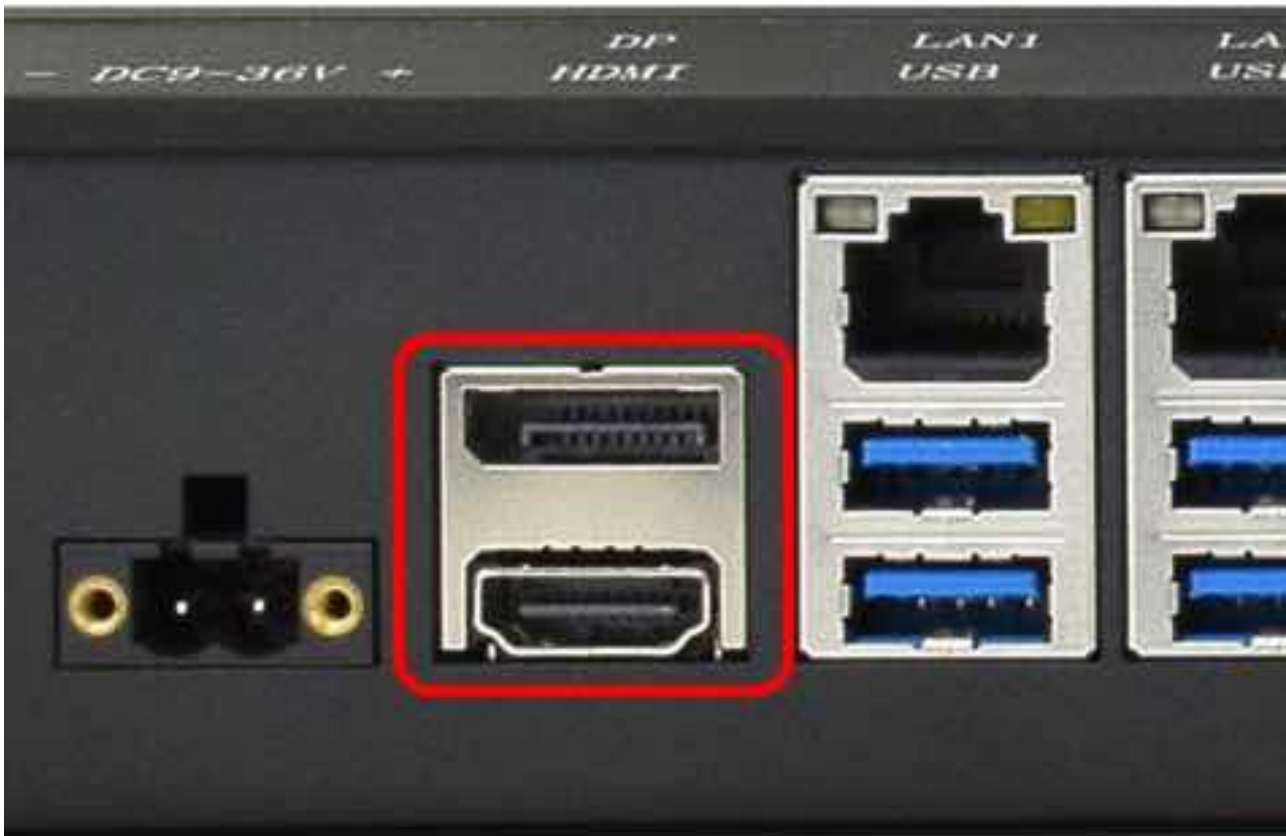
*2 x RJ45 GbE LAN Connectors*

### 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

**This document is provided strictly for informational purposes. Its contents are subject to change without notice. Chipsee assumes no responsibility for any errors that may occur in this document. Furthermore, Chipsee reserves the right to alter the hardware, software, and/or specifications set forth herein at any time without prior notice and undertakes no obligation to update the information contained in this document.**

**While every effort has been made to ensure the accuracy of the information contained herein, this document is not guaranteed to be error-free. Further, it does not offer any warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document, and no contractual obligations are formed either directly or indirectly by this document.**

**Despite our best efforts to maintain the accuracy of the information in this document, we assume no responsibility for errors or omissions, nor for damages resulting from the use of the information herein. Please note that Chipsee products are not authorized for use as critical components in life support devices or systems.**

## Technical Support

If you encounter any difficulties or have questions related to this document, we encourage you to refer to our other documentation for potential solutions. If you cannot find the solution you're looking for, feel free to contact us. Please email Chipsee Technical Support at [support@chipsee.com](mailto:support@chipsee.com), providing all relevant information. We value your queries and suggestions and are committed to providing you with the assistance you require.