

MBOX600

Industrial Controller



Specifications

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Change History

Version	Release Date	Description
V1.1.2	2018-11-23	Added a product model table.
V1.1.1	2018-11-16	Updated operating temperature range.
V1.1.0	2018-10-29	Updated product appearance images, dimensions and specifications.
V1.0.1	2018-08-14	Updated product appearance images and specifications.
V1.0.0	2018-05-11	First release

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1 Overview

Introduction

Launched by NovaStar, the MBOX600 is an independent sending device featuring large loading capacity and can be applied to the scenarios where no PC is used to control the LED display.

Features

- The loading capacity of a single unit is up to 2560×960.
- Supported video formats include RGB, YCrCb4:2:2 and YCrCb4:4:4.
- Supports high bit level video playback, including 12 bit, 10 bit and 8 bit.
- The loading capacity for common video sources includes 1920×1200, 2048×1152, and 2560×960.
- The loading capacity for high bit level video sources is 1440×900.
- Supports 18-bit grayscale processing and display.
- Uses Intel processor.
- Supports automatic power-on.
- 4 × USB 2.0 ports and 2 × USB 3.0 ports
- 1 × HDMI output
- 1 × Audio output
- 1 × Wi-Fi antenna connector
- 1 × Gigabit Ethernet port

2 Hardware Structure

2.1 Appearance


2.1.1 Front Panel


Figure 2-1 Front panel appearance



Note: All product pictures shown in this document are for illustration purpose only. Actual product may vary.

Table 2-1 Front panel description

Name	Description
	Power switch
HLED	Hard disk status indicator Flashing: The device is reading and writing data.
PLED	Power status indicator Always on: The power input is normal.
RUN	FPGA status indicator <ul style="list-style-type: none"> Flashing slowly: If the interval between indicator on and off is 2 seconds, it indicates no video source. Flashing normally: If the interval between indicator on and off is about 0.5 second, it indicates the video source is available. Flashing quickly: The receiving card is displaying the startup screen. Breathing: The main Ethernet port malfunctioned and the backup Ethernet port is being used.

Name	Description
SYS	MCU status indicator Flashing: The MCU operates normally.
Auto-Power	Switch to enable or disable automatic power-on function <ul style="list-style-type: none"> • ON: The device is powered on automatically when the power is supplied without pressing the power switch. • OFF: Press the power switch to power on the device after the power is supplied.
CLR-CMOS	Button to clear CMOS configuration When the device is powered off, hold down this button for 5–10 seconds to clear CMOS configuration.
RESET	Press this button to reset the device to factory defaults.
	USB 2.0 port




2.1.2 Rear Panel

Figure 2-2 Rear panel appearance

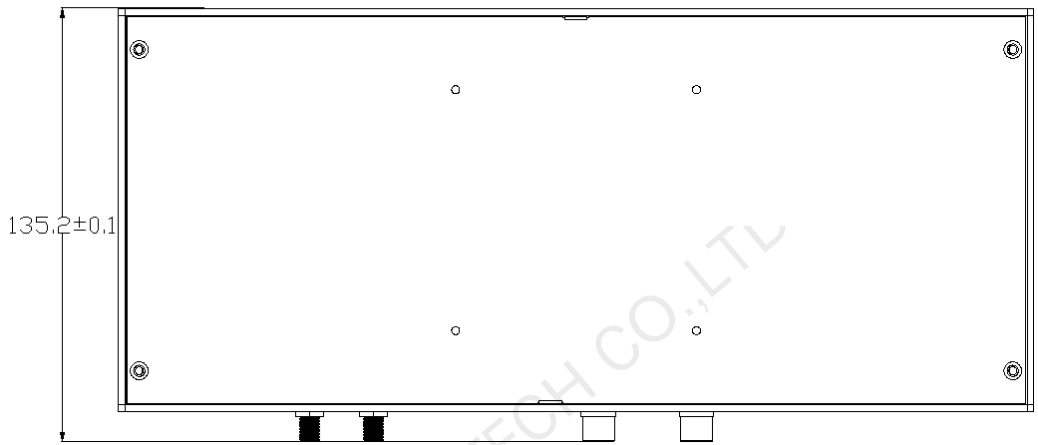
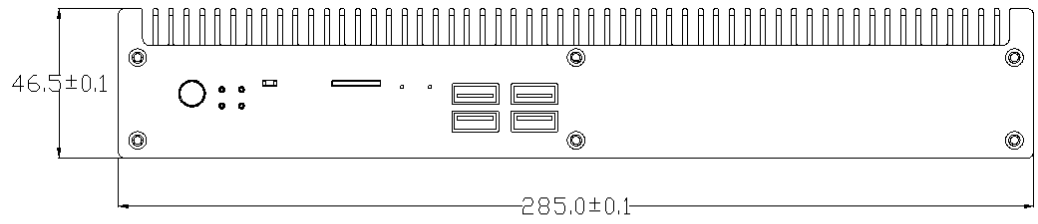


Note: All product pictures shown in this document are for illustration purpose only. Actual product may vary.

Table 2-2 Rear panel description

Name	Description
LEDOUT	Ethernet output
LIGHT	Light sensor connector
TEMP	Temperature sensor connector
	Audio output connector
HDMI	HDMI output connector
USB3.0	USB 3.0 port
COM1	Reserved
	Wi-Fi antenna connector
	Gigabit Ethernet ports
DC-12V	Power input connector

2.2 Dimensions



Unit: mm

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3 Specifications

CPU	Celeron 3855U: dual-core, 1.6 GHz, TDP 15 W, support for EIST power-saving technology or i5-6200U: dual-core, 2.3 GHz, TDP 15 W, support for Turbo and EIST power-saving technologies
RAM	Standard: 4 GB, Maximum: 8 GB
GPU	Intel HD Graphics 610/620 (Based on CPU)
HDD	Standard: 64 GB, Optional: 128 GB/256 GB
Front panel connectors	4 × USB 2.0
Rear panel connectors	4 × Ethernet output
	1 × Light sensor connector
	1 × Temperature sensor connector
	1 × Audio output connector
	1 × HDMI connector
	2 × USB 3.0
	1 × Reserved port
	1 × Wi-Fi antenna connector
	1 × Gigabit Ethernet port
	1 × Power input connector (12 V DC)
Capacity	2.3 million pixels
Max power consumption	43 W
Operating environment	-40°C–60°C
Storage environment	-40°C–80°C
Dimensions (L × W × H)	285.0 mm × 135.2 mm × 46.5 mm

4 Models

Model	CPU	Memory	Hard Disk
MBOX600 (3U4A1)	3855U	4G	32G
MBOX600 (3U4A2)	3855U	4G	64G
MBOX600 (3U4A3)	3855U	4G	128G
MBOX600 (3U4A4)	3855U	4G	256G
MBOX600 (3U8A1)	3855U	8G	32G
MBOX600 (3U8A2)	3855U	8G	64G
MBOX600 (3U8A3)	3855U	8G	128G
MBOX600 (3U8A4)	3855U	8G	256G
MBOX600 (7U4A1)	I5-7200U	4G	32G
MBOX600 (7U4A2)	I5-7200U	4G	64G
MBOX600 (7U4A3)	I5-7200U	4G	128G
MBOX600 (7U4A4)	I5-7200U	4G	256G
MBOX600 (7U8A1)	I5-7200U	8G	32G
MBOX600 (7U8A2)	I5-7200U	8G	64G
MBOX600 (7U8A3)	I5-7200U	8G	128G
MBOX600 (7U8A4)	I5-7200U	8G	256G