

JT200 Traffic Multimedia Player



Specifications

Change History

Document Version	Release Date	Description
V1.1.4	2023-09-28	<ul style="list-style-type: none"> • Changed the description of the default Wi-Fi AP password. • Changed the internal storage capacity from 16 GB to 32 GB.
V1.1.3	2023-06-14	<ul style="list-style-type: none"> • Updated the indicator descriptions. • Updated the descriptions in the Features chapter.
V1.1.1	2022-01-15	<ul style="list-style-type: none"> • Updated the legends of the appearance pictures. • Updated the indicator descriptions. • Added a note for the dimension diagrams.
V1.1.0	2021-12-27	<ul style="list-style-type: none"> • Added certification information. • Added a note for the power consumption. • Updated the appearance pictures.
V1.0.0	2021-09-30	First release

Introduction

The JT200 is a multimedia player designed by NovaStar for full-color traffic LED displays. This multimedia player integrates sending and receiving capabilities, allowing users to manage LED displays from a PC or various third-party client platforms anywhere, anytime.

Thanks to its reliability, ease of use, and intelligent control, the JT200 becomes a winning choice for LED displays used for rail transit, guidance displays on expressways, urban roads and parking lots, LED queuing system displays, and much more. In addition, the JT200 supports direct database connection and can connect to a variety of serial ports, making it fit for more applications.

Certifications

None

If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.

Features

Output

- 2x Gigabit Ethernet ports

One serves as the primary and the other as the backup.

The loading capacity of each port is up to 650,000 pixels with a maximum width of 4096 pixels and a maximum height of 4096 pixels.

- 1x Stereo audio connector

The audio sample rate of the internal source is fixed at 48 KHz. The audio sample rate of the external source supports 32 KHz, 44.1 KHz, or 48 KHz. If NovaStar's multifunction card is used for audio output, audio with a sample rate of 48 KHz is required.

Input

- 2x Sensor connectors

Connect to brightness sensors or temperature and humidity sensors.

Control

- 1x USB 3.0 (Type A) port

Allows for playback of content imported from a USB drive and firmware upgrade over USB.

- 1x USB (Type B) port

Reserved

- 1x Gigabit Ethernet port

Connects to the control computer, a LAN or public network for content publishing and screen control.

Performance

- Powerful processing capacity
 - Quad-core ARM A55 processor @1.8 GHz
 - Support for H.264/H.265 4K@60Hz video decoding
 - 1 GB of onboard RAM

- 32 GB of internal storage

- Flawless playback

2x 4K, 6x 1080p, 10x 720p, or 20x 360p video playback

Functionality

- All-round control plans

- Enables users to publish content and control screens from a computer, mobile phone, or tablet.
- Allows users to publish content and control screens from anywhere, anytime.
- Allows users to monitor screens from anywhere, anytime.

- Built-in Wi-Fi AP

The user terminal connects to the built-in Wi-Fi hotspot of the JT200. The default SSID is "AP+*Last 8 digits of SN*" and the default password is printed on the SSID label of the product.

- Synchronous playback across multiple screens

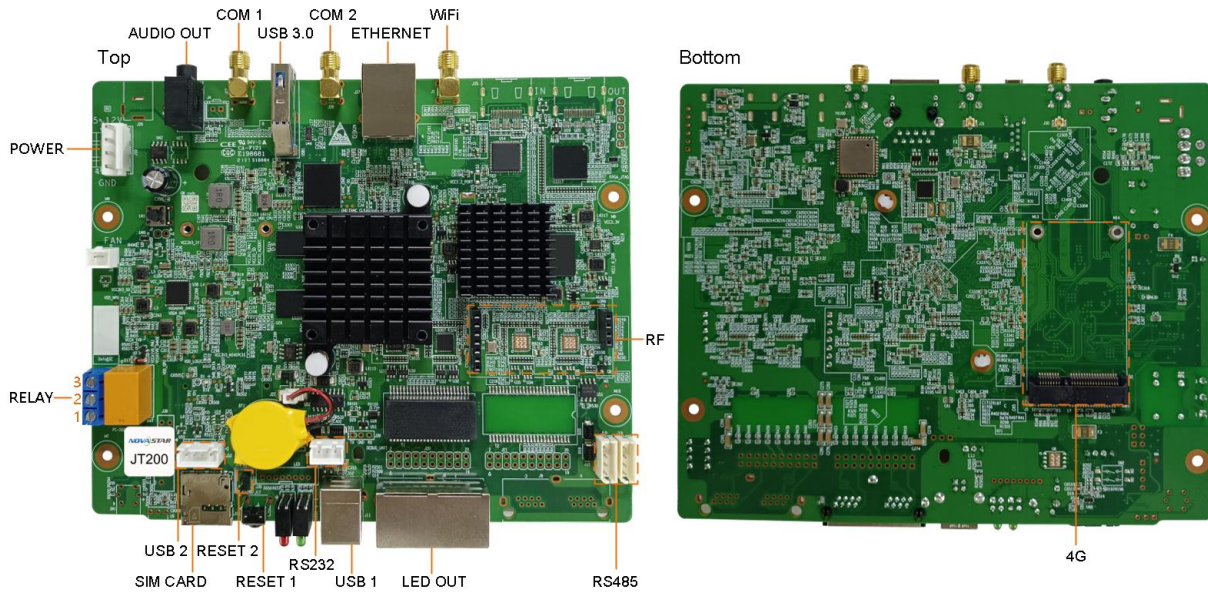
- NTP time synchronization
- GPS time synchronization (The specified 4G module must be installed.)
- RF time synchronization (The specified RF module must be installed.)

- Support for 4G modules

The JT200 ships without a 4G module. Users have to purchase 4G modules separately if needed.

Network connection priority: Wired network > Wi-Fi network > 4G network When multiple types of networks are available, the JT200 will choose a signal automatically according to the priority.

Appearance



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

Name	Description
USB 2	Reserved USB port
SIM CARD	SIM card slot Capable of preventing users from inserting a SIM card in the wrong orientation
RESET 2	Factory reset connector Reset the product to its factory settings.
RESET 1	Factory reset button Press and hold this button for 5 seconds to reset the product to its factory settings.
RS232	External expansion connector
USB 1	Reserved USB (Type B) port
LED OUT	Gigabit Ethernet outputs
RS485	Sensor connectors Connect to brightness sensors or temperature and humidity sensors.
RF	RF module connector
WiFi	Wi-Fi antenna connector Support for switching between Wi-Fi AP and Wi-Fi Sta

Name	Description
ETHERNET	Gigabit Ethernet port Connects to the control computer, a LAN or public network for content publishing and screen control.
COM 2	GPS antenna connector
USB 3.0	USB 3.0 (Type A) port Allows for playback of content imported from a USB drive and firmware upgrade over USB The Ext4 and FAT32 file systems are supported. The exFAT and FAT16 file systems are not supported.
COM 1	4G antenna connector
AUDIO OUT	Audio output connector
POWER	Power input connector
RELAY	<p>3-pin relay control switch</p> <ul style="list-style-type: none"> • DC: Maximum voltage and current: 30 V, 3 A • AC: Maximum voltage and current: 250 V, 3 A <p>Two connection methods:</p> <ul style="list-style-type: none"> • Common switch: The connection method of pins 2 and 3 is not fixed. Pin 1 is not connected to the wire. On the power control page of ViPlex Express, turn on the circuit to connect pin 2 to pin 3, and turn off the circuit to disconnect pin 2 from pin 3. • Single pole double throw switch: The connection method is fixed. Connect pin 2 to the pole. Connect pin 1 to the turn-off wire and pin 3 to turn-on wire. On the power control page of ViPlex Express, turn on the circuit to connect pin 2 to pin 3 and disconnect pin 1 from pin 2, or turn off the circuit to disconnect pin 3 from pin 2 and connect pin 2 to pin 1. <p>Note: The JT200 uses DC power supply. Using the relay to directly control AC is not recommended. If it is required to control AC, the following connection method is recommended.</p>

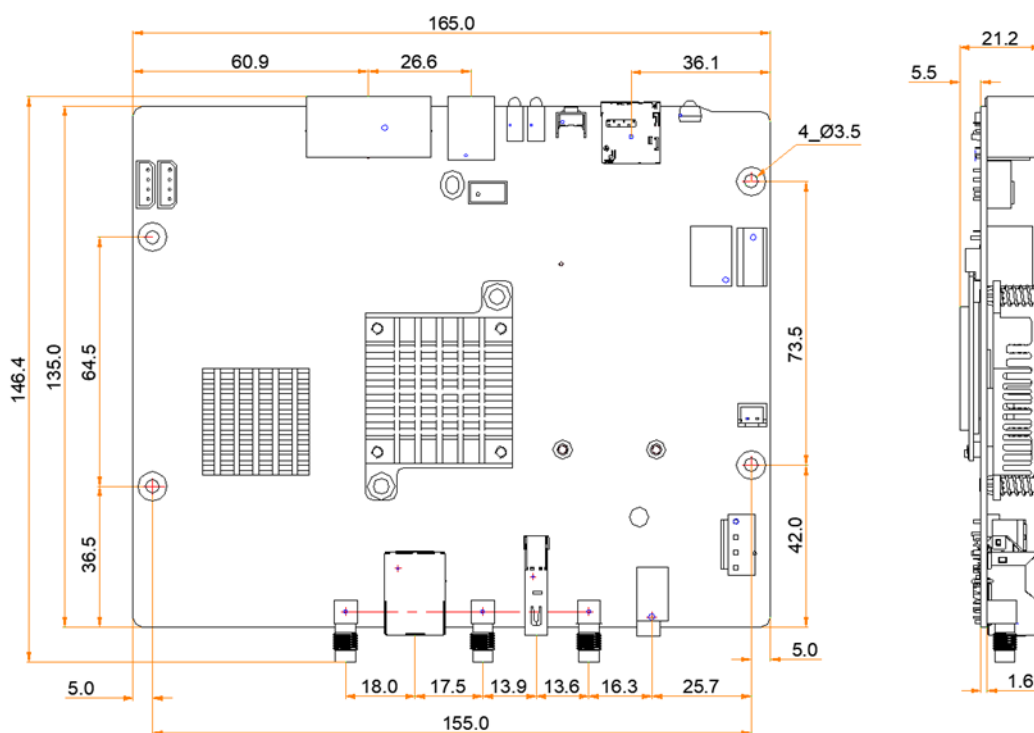
Name	Description
4G	4G module slot

Indicators



Name	Color	Status	Description
PWR	Red	Staying on	The power supply is working properly.
SYS	Green	Flashing once every 2s	The JT200 is functioning normally.
		Staying on/off	The JT200 is abnormal.
CLOUD	Green	Staying on	The JT200 is connected to the Internet and the connection is available.
		Flashing once every second	The JT200 is installing the upgrade package.
RUN	Green	Flashing once every second	No video signal
		Flashing once every 0.5s	The JT200 is functioning normally.
		Staying on/off	FPGA loading is abnormal.

Dimensions



If you want to make molds or trepan mounting holes, please contact NovaStar for structural drawings with higher precision.

Tolerance: ±0.3 Unit: mm

Specifications

Electrical Parameters	Input voltage	DC 5 V~12 V
	Maximum power consumption	18 W
Storage Capacity	RAM	1 GB
	Internal storage	32 GB
Operating Environment	Temperature	-20°C to +60°C
	Humidity	0% RH to 80% RH, non-condensing
Storage Environment	Temperature	-40°C to +80°C
	Humidity	0% RH to 80% RH, non-condensing
Physical Specifications	Dimensions	165.0 mm × 146.4 mm × 21.2 mm
	Net weight	179.7 g

Packing Information	Dimensions	278.0 mm × 63.0 mm × 221.0 mm
	List	<ul style="list-style-type: none"> • 1x JT200 • 1x Wi-Fi omnidirectional antenna • 1x Power connector • 2x IPex cables • 1x Quick Start Guide
System Software	<ul style="list-style-type: none"> • Android 11.0 operating system software • Android terminal application software • FPGA program <p>Note: Third-party applications are not supported.</p>	

The power consumption may vary according to the setup, environment and use of the product as well as many other factors.

Media Decoding Specifications

Image

Category	Codec	Supported Image Size	Container	Remarks
JPEG	JFIF file format 1.02	96×32 pixels to 817×8176 pixels	JPG, JPEG	No support for non-interlaced scan Support for SRGB JPEG Support for Adobe RGB JPEG
BMP	BMP	No Restriction	BMP	N/A
GIF	GIF	No Restriction	GIF	N/A
PNG	PNG	No Restriction	PNG	N/A
WEBP	WEBP	No Restriction	WEBP	N/A

Video

Category	Codec	Resolution	Maximum Frame Rate	Maximum Bit Rate (Ideal Case)	File Format	Remarks
MPEG-1/2	MPEG-1/2	48×48 pixels to 1920×1088 pixels	30fps	80Mbps	DAT, MPG, VOB, TS	Support for field coding
MPEG-4	MPEG4	48×48 pixels to	30fps	38.4Mbps	AVI, MKV,	No support for

Category	Codec	Resolution	Maximum Frame Rate	Maximum Bit Rate (Ideal Case)	File Format	Remarks
		1920×1088 pixels			MP4, MOV, 3GP	MS MPEG4 v1/v2/v3, GMC
H.264/AVC	H.264	48×48 pixels to 4096×2304 pixels	2304p@60fps	80Mbps	AVI, MKV, MP4, MOV, 3GP, TS, FLV	Support for field coding and MBAFF
MVC	H.264 MVC	48×48 pixels to 4096×2304 pixels	2304p@60fps	100Mbps	MKV, TS	Support for Stereo High Profile only
H.265/HEVC	H.265/HEVC	64×64 pixels to 4096×2304 pixels	2304p@60fps	100Mbps	MKV, MP4, MOV, TS	Support for Main Profile, Tile & Slice
GOOGLE VP8	VP8	48×48 pixels to 1920×1088 pixels	30fps	38.4Mbps	WEBM, MKV	N/A
GOOGLE VP9	VP9	64×64 pixels to 4096×2304 pixels	60fps	80Mbps	WEBM, MKV	N/A
H.263	H.263	SQCIF (128×96) QCIF (176×144) CIF (352×288) 4CIF (704×576)	30fps	38.4Mbps	3GP, MOV, MP4	No support for H.263+
VC-1	VC-1	48×48 pixels to 1920×1088 pixels	30fps	45Mbps	WMV, ASF, TS, MKV, AVI	N/A
MOTION JPEG	MJPEG	48×48 pixels to 1920×1088 pixels	60fps	60Mbps	AVI	N/A

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