T10 Plus

Multimedia Player

Specifications

Change History

Document Version	Release Date	Description
V1.0.1	2026-01-05	• Updated the playback performance. • Updated the indicator status description. • Updated the media decoding specifications.
V1.0.0	2025-08-29	First release

Introduction

The T10 Plus is a new generation of multimedia player created by NovaStar for full-color LED displays. This multimedia player integrates playback and sending capabilities, allowing users to publish content and control LED displays with a computer, mobile phone, or tablet. Working with our superior cloud-based publishing and monitoring platforms, the T10 Plus enables users to manage LED displays from an Internet-connected device anywhere, anytime.

The T10 Plus can play content from a USB drive, satisfying various playback demands. Multiple protection measures such as terminal authentication and player verification are taken to keep the playback secure.

Thanks to its reliability, ease of use, and intelligent control, the T10 Plus becomes a winning choice for commercial LED displays and smart city applications such as fixed displays, lamp-post displays, chain store displays, advertisement players, retail store displays, door head displays, shelf displays, and much more.

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

- Loading capacity up to 650,000 pixels

Maximum width: 2048 pixels, maximum height: 2048 pixels (maximum capacity per Ethernet port: 650,000 pixels)

- 1x Gigabit Ethernet output port
- 1x Stereo audio output connector

  The audio sample rate is fixed at 48 kHz. If NovaStar's multifunction card is used for audio output, audio with a sample rate of 48kHz is required.

Control

- 1x USB 2.0 (Type A) port

  Allows for USB playback, firmware upgrade and storage expansion.
- 1x USB (Type B) port

  Connects to the control computer for content publishing and screen control.
- 1x Fast Ethernet port

  Connects to the control computer, or connects to a LAN or public network for content publishing and screen control.
- 2x RS485 ports

  Connects to the brightness sensor or temperature and humidity sensor.

Performance

- Powerful processing capacity
  - Quad-core ARM A53 processor @1.4GHz
  - Support for hardware decoding of 4K videos
  - 2 GB of RAM
  - 32 GB of storage space
- Flawless playback

  Support for playback of 1x 4K, 2x 1080p, 4x 720p, 4x 480p, or 20x 360p videos

  Notes: Videos with resolutions between 2K and 4K will be converted into 4K videos.

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.
- Wi-Fi AP and Wi-Fi Sta can be turned on at the same time

  - Wi-Fi AP

    User terminal devices can be connected to the built-in Wi-Fi hotspot of the multimedia player. The default SSID is “Model+Last 8 digits of SN” and the default password is printed on the SSID label.

  - Wi-Fi AP+Wi-Fi Sta

    Users can connect the multimedia player to a Wi-Fi network and turn on the Wi-Fi hotspot at the same time.

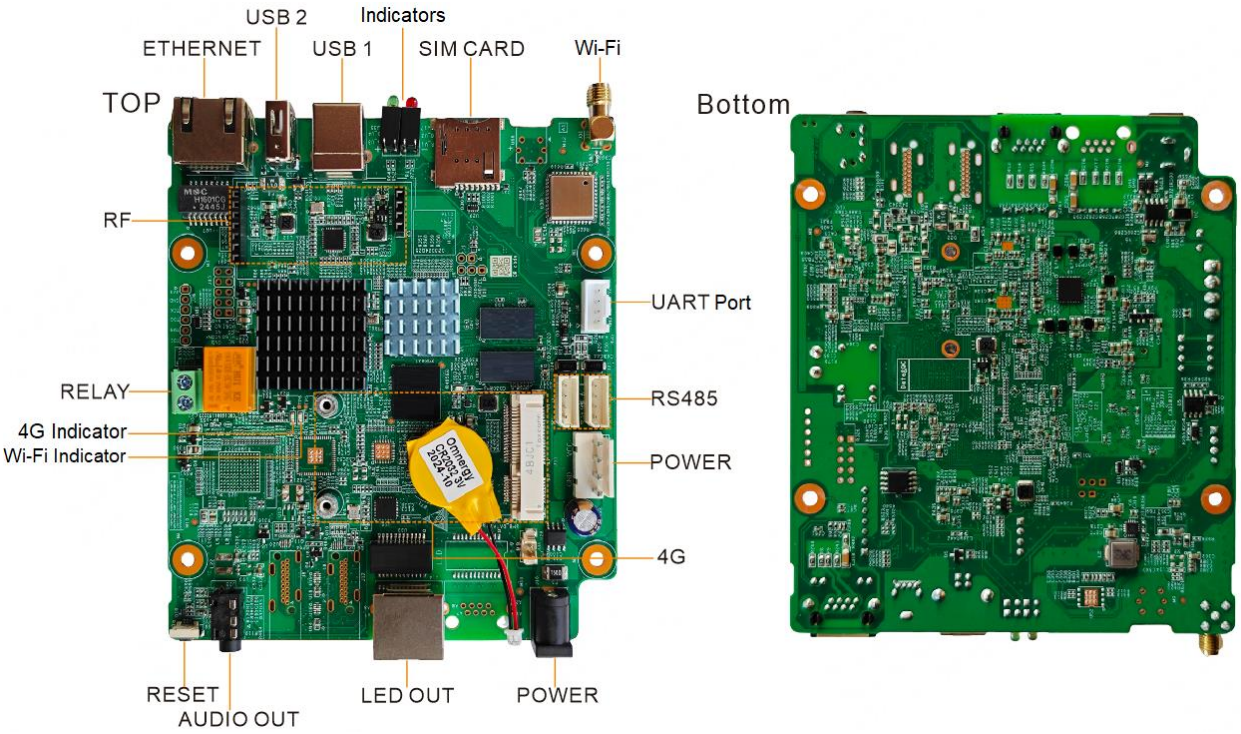
- Ultra-long-screen solution playback
- Synchronous playback across multiple screens

  Enabling synchronous playback halves the decoding capability of the device.

  - 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 brightness sensors or temperature and humidity sensors
- Support for 4G modules
  - The T10 Plus 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 networks are available, the device will choose a network according to the priority order.

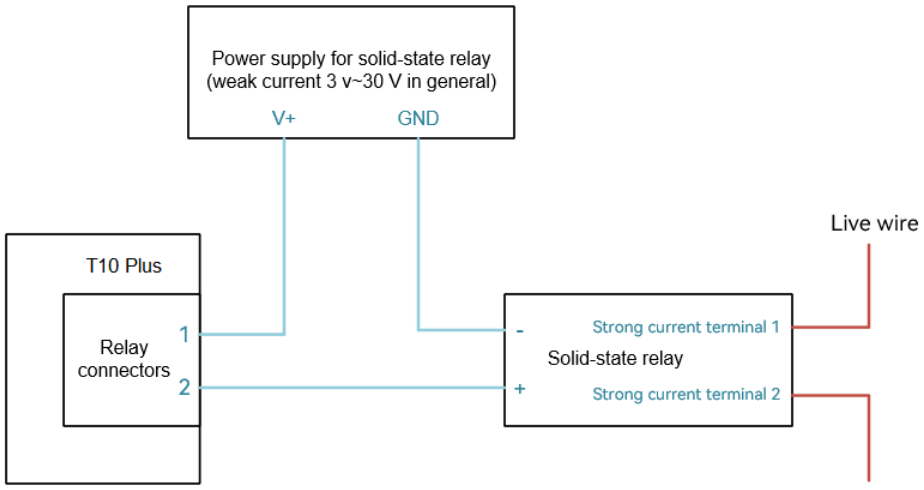
Appearance



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

Name	Description
ETHERNET	Fast Ethernet port Standard RJ45 connector (with built-in LEDs) connecting to the control computer or connecting to a LAN or public network for content publishing and screen control.
USB 2	USB 2.0 (Type A) port for USB playback, firmware upgrade and storage expansion (up to 128 GB) • Supported file systems: FAT32/NTFS • USB drive capacity range: 2 GB to 128 GB • The size of a single file must be greater than 0 KB and less than 4 GB.
USB 1	USB (Type B) port Connects to the control computer for content publishing and screen control.
SIM CARD	SIM card slot Capable of preventing users from inserting a SIM card in the wrong orientation.

Name	Description
Wi-Fi	Wi-Fi antenna connector (2.4GHz Wi-Fi supported)
UART Serial Port	Reserved port for connecting to a third-party GPS module, which can be used for positioning and time synchronization.
RS485	2x RS485 ports for connecting to the brightness sensor or temperature and humidity sensor.
POWER	Power input connector
4G	4G module slot
LED OUT	Gigabit Ethernet output Standard RJ45 connector (with no built-in LEDs)
AUDIO OUT	3.5mm audio output connector Note: 3-pole audio connectors can be connected.
RESET	Factory reset button Press and hold this button for 5s to reset the product to its factory settings.
RELAY	2-pin relay control switch Connection method: The connection method of pins 1 and 2 is not fixed. On the power control page of ViPlex Express, turn on the circuit to connect pin 1 to pin 2, and turn off the circuit to disconnect pin 1 from pin 2. Note: The T10 Plus 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.

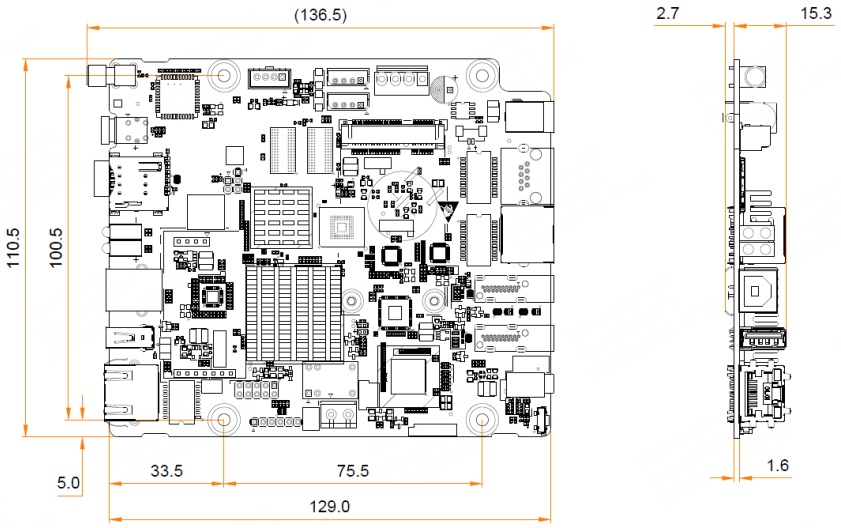
Name	Description
	
RF	RF module connectors

Indicators

Name	Color	Status	Description
PWR	Red	Staying on	The power supply is working properly.
SYS	Green	Staying on/off	The operating system is malfunctioning.
		Flashing once every 2s	The operating system is functioning normally.
CLOUD	Green	Off	The device is not connected to the Internet.
		Staying on	The device is connected to the Internet and the connection is available.
		Flashing once every 2s	The device is connected to VNNOX and the connection is available.
		Flashing once every second	The operating system is being upgraded.
		Flashing once every 0.5s	The device is copying the upgrade package/files from the USB drive.
RUN	Green	Flashing once every 4s	The FPGA has no video source.
		Flashing once every 0.5s	The FPGA is functioning normally.
		Staying on/off	The FPGA loading is abnormal.

Name	Color	Status	Description
4G	Green	Staying on	The network is connected and device communication is successful.
		Flashing once every second	The SIM card is abnormal.
		Off	No 4G module is detected.
Wi-Fi	Green	Staying on	The built-in Wi-Fi Sta is turned on but no network is connected.
		Flashing once every 2s	Wi-Fi Sta is configured and a network is being connected.
		Off	Wi-Fi Sta is turned off.

Dimensions



Tolerance: ±0.3 Unit: mm

Note

To make molds or trepan mounting holes, please contact NovaStar for a higher-precision structural drawing.

Specifications

Electrical Parameters	Input voltage	DC 5 V to 12 V

	Maximum power consumption	15 W
Storage Capacity	RAM	2 GB
	Internal storage	32 GB
Storage Environment	Temperature	–40°C to +80°C
	Humidity	5% RH to 95% RH, non-condensing
Operating Environment	Temperature	–20°C to +60°C
	Humidity	5% RH to 85% RH, non-condensing
Physical Specifications	Dimensions (L×W×H)	136.5 mm × 110.5 mm × 18.0 mm
	Net weight	114.1 g
	Gross weight	296.0 g
Packing Information	Dimensions (L×W×H)	278.0 mm × 63.0 mm × 221.0 mm
	Accessories	1x Wi-Fi omnidirectional antenna 1x QR code 1x Certificate of Approval
IP Rating	IP20 Please prevent the product from water intrusion and do not wet or wash the product.	
System Software	Android 10 operating system software Android terminal application software FPGA program	

Media Decoding Specifications

Image

Category	Codec	Resolution	Format	Remarks
JPEG	JFIF file format 1.02	64×64 pixels to 4096×2304 pixels	JPG, JPEG	Support for interlaced scanning only

Category	Codec	Resolution	Format	Remarks
				Support for SRGB JPEG Support for Adobe RGB JPEG
BMP	BMP	64×64 pixels to 4096×2304 pixels	BMP	N/A
GIF	GIF	64×64 pixels to 1920×1088 pixels	GIF	At a resolution of 1280×720, the supported frame rate range is 1fps to 30fps. At a resolution of 1920×1088, the supported frame rate range is 1fps to 10fps.
PNG	PNG	64×64 pixels to 4096×2304 pixels	PNG	N/A
WEBP	WEBP	64×64 pixels to 4096×2304 pixels	WEBP	

Video

Codec	Resolution	Max Frame Rate	Max Bit Rate (Ideal Case)	Format
H.264	64×64 pixels to 4096×2304 pixels	30fps	60Mbps	MP4, AVI, MKV, MOV
H.265/HEVC	64×64 pixels to 4096×2304 pixels	60fps	100Mbps	MP4, MKV, MOV
MPEG4	64×64 pixels to 1920×1088 pixels	60fps	29Mbps	MP4, AVI, MKV, MOV
VP8	64×64 pixels to 1920×1088 pixels	60fps	60Mbps	MKV, WEBM
VP9	64×64 pixels to 4096×2304 pixels	30fps	49Mbps	MKV, WEBM

Statement

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