Taurus Series
Multimedia Player

XI'AN NOVASTAR TECH CO., LTD.

T30 Specifications

Change History

Document Version	Release Date	Description
V1.0.0	2021-08-31	First release

Introduction

The T30 is the third 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 T30 enables users to manage LED displays from an Internet-connected device anywhere, anytime.

Thanks to its reliability, ease of use, and intelligent control, the T30 becomes a winning choice for commercial LED displays and smart city applications such as fixed displays, lamp-post displays, chain store displays, advertisement players, mirror displays, retail store displays, door head displays, shelf displays, and much more.

Features

Output

- Loading capacity up to 650,000 pixels

  Maximum width: 4096 pixels
  Maximum height: 4096 pixels
- 2x Gigabit Ethernet ports

  One serves as primary and the other as backup.
- 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 a LAN, public network, or computer 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
  - 16 GB of internal storage
- Flawless playback

  1x 4K video playback or 2x 1080p 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.
- Switching between Wi-Fi AP and Wi-Fi STA
  - In Wi-Fi AP mode, the user terminal connects to the built-in Wi-Fi hotspot of the T30. The default SSID is "AP+*Last 8 digits of SN*" and the default password is "12345678".
  - In Wi-Fi STA mode, the user terminal and the T30 are connected to the Wi-Fi hotspot of a router.
- 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

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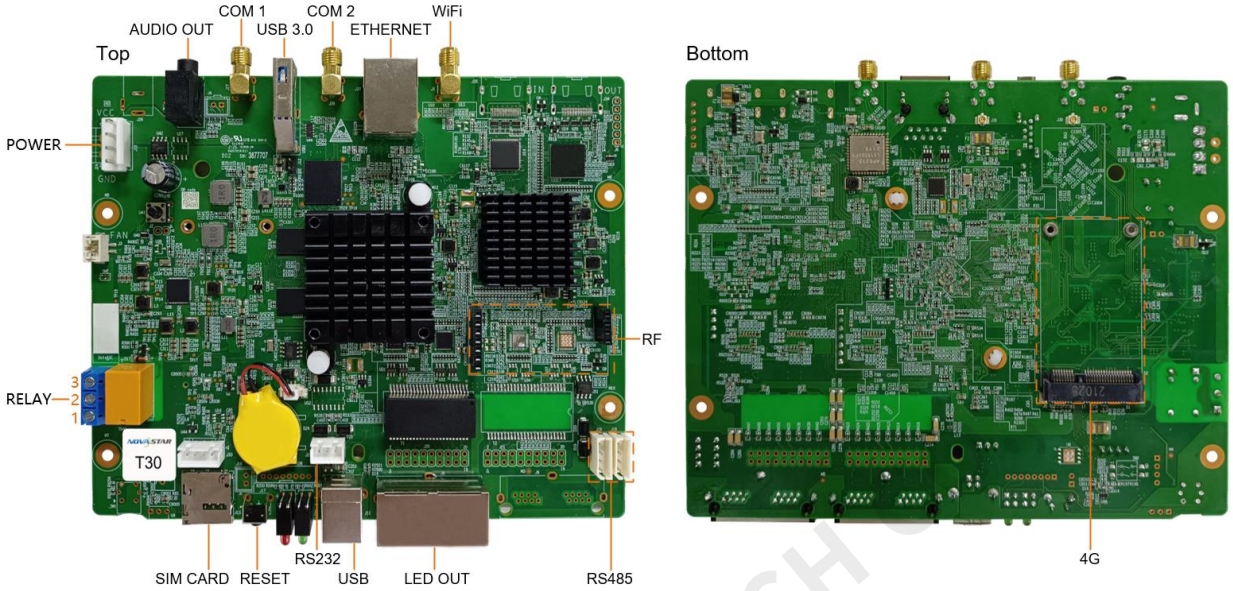
The T30 ships without a 4G module. Users have to purchase 4G modules separately if needed.

Network connection priority: Wired network > Wi-Fi network > 4G network When multiple types of networks are available, the T30 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
SIM CARD	SIM card slot Capable of preventing users from inserting a SIM card in the wrong orientation
RESET	Factory reset button Press and hold this button for 5 seconds to reset the product to its factory settings.
RS232	External expansion connector
USB	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
ETHERNET	Gigabit Ethernet port Capable of connecting to a LAN, public network, or computer for content publishing and screen control Indicator status description: • The yellow stays on: The T30 is connected to a fast Ethernet cable and the connection is available. • The green and yellow stay on simultaneously: The T30 is connected to a Gigabit Ethernet cable and the connection is available.

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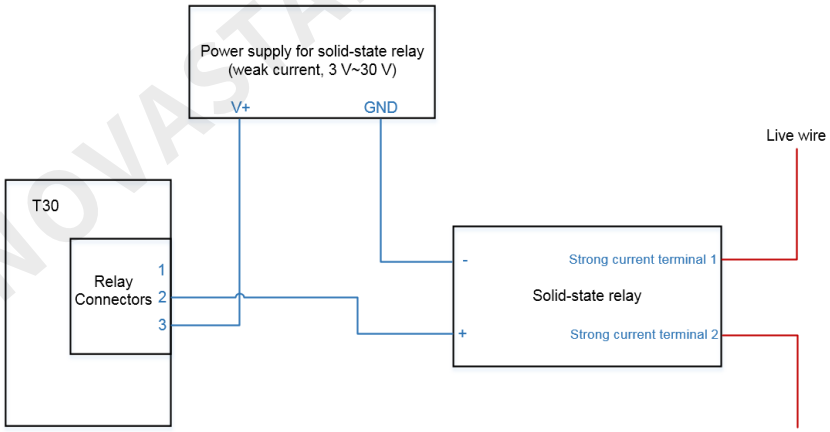
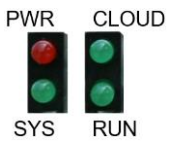
Name	Description
COM 2	GPS antenna connector
USB 3.0	USB 3.0 (Type A) port Allowing for playback of content imported from a USB drive and firmware upgrade over USB The Ext4 and FAT32 file systems are supported. The exFAT and FAT16 file systems are not supported.
COM 1	4G antenna connector
AUDIO OUT	Audio output connector
POWER	Power input connector
RELAY	3-pin relay control switch • DC: Maximum voltage and current: 30 V, 3 A • AC: Maximum voltage and current: 250 V, 3 A Two connection methods: • 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 form pin 2, or turn off the circuit to disconnect pin 3 from pin 2 and connect pin 2 to pin 1. Note: The T30 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. 
4G	4G module slot

Indicators



Name	Color	Status	Description
PWR	Red	Staying on	The power supply is working properly.

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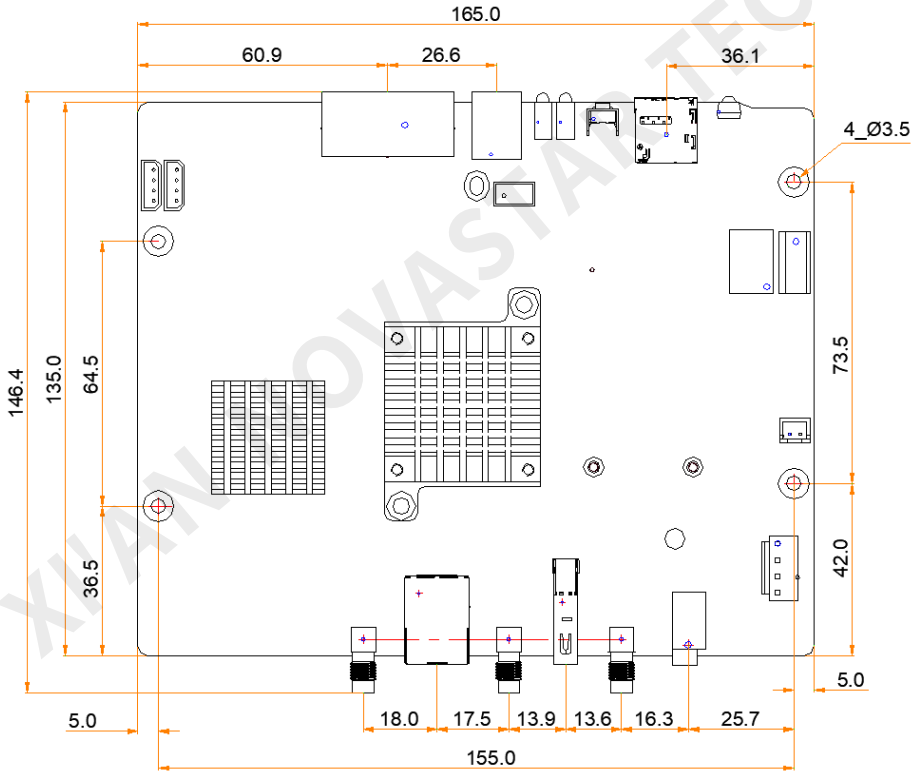
Name	Color	Status	Description
SYS	Green	Flashing once every 2s	The T30 is functioning normally.
		Flashing once every second	The T30 is installing the upgrade package.
		Flashing once every 0.5s	The T30 is downloading data from the Internet or copying the upgrade package.
		Staying on/off	The T30 is abnormal.
CLOUD	Green	Staying on	The T30 is connected to the Internet and the connection is available.
		Flashing once every 2s	The T30 is connected to VNNOX and the connection is available.
RUN	Green	Flashing once every second	No video signal
		Flashing once every 0.5s	The T30 is functioning normally.
		Staying on/off	FPGA loading is abnormal.

Dimensions



Tolerance: ±0.3 Unit: mm

Specifications

Electrical Parameters	Input voltage	DC 5 V~12 V
	Maximum power consumption	18 W

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Storage Capacity	RAM	1 GB
	Internal storage	16 GB
Storage Environment	Temperature	–40°C to +80°C
	Humidity	0% RH to 80% RH, non-condensing
Operating Environment	Temperature	–20ºC to +60ºC
	Humidity	0% RH to 80% RH, non-condensing
Packing Information	Dimensions (L×W×H)	278.0 mm × 63.0 mm × 221.0 mm
	List	• 1x T30 • 1x Wi-Fi omnidirectional antenna • 1x Power connector • 2x IPex cables • 1x Quick Start Guide
Dimensions (L×W×H)	165.0 mm × 146.4 mm × 21.2 mm	
System Software	• Android 11.0 operating system software • Android terminal application software • FPGA program Note: Third-party applications are not supported.	

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 1920×1088 pixels	30fps	38.4Mbps	AVI, MKV, MP4, MOV, 3GP	No support for 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,	Support for field coding and

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Category	Codec	Resolution	Maximum Frame Rate	Maximum Bit Rate (Ideal Case)	File Format	Remarks
					3GP, TS, FLV	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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