T30

Multimedia Player

V1.1.0

Specifications

Introduction

The T30 is the second generation of multimedia player launched by NovaStar for full-color LED displays. This multimedia player integrates playback and sending capabilities, allowing for solution publishing and screen control via various user terminal devices such as PC, mobile phone and tablet. The T30 can access the cloud publishing and monitoring platforms to enable cross-region clustered management of screens.

The T30 can synchronize playback across multiple screens. Multiple security measures like terminal authentication and playback verification are taken to protect playback. Ethernet port and network redundancy mechanisms are used to ensure long-term and stable playback of terminal devices.

Thanks to its powerful and stable core board with playback and sending capabilities integrated, the T30 is widely used for commercial displays and displays in smart cities such as lamp-post displays, chain store displays, advertisement players, mirror displays, retail store displays, door head displays, vehicle-mounted displays and displays without requiring PC.

Features

- Loading capacity up to 1,300,000 pixels with a maximum width of 4096 pixels and a maximum height of 4096 pixels
- 2x Gigabit Ethernet outputs with one master port and one backup port by default. Both the Ethernet ports can also be set as master ports.
- 1x Stereo audio output
- 1x USB 2.0 port, allowing for USB playback
- On-board brightness sensor connector, allowing for automatic and scheduled smart brightness adjustment
- Synchronous playback across multiple screens
- Powerful processing capability
  - 8 core 1.5 GHz processor
  - Hardware decoding and playback of H.265 4K HD videos
  - Hardware decoding of 1080p videos
  - 1 GB of RAM
  - 32 GB of internal storage (28 GB available)
- All-round control scheme
  - Solution publishing and screen control via user terminal devices such as PC, mobile phone and tablet
  - Clustered remote solution publishing and screen control
  - Clustered remote screen status monitoring
- Built-in Wi-Fi AP

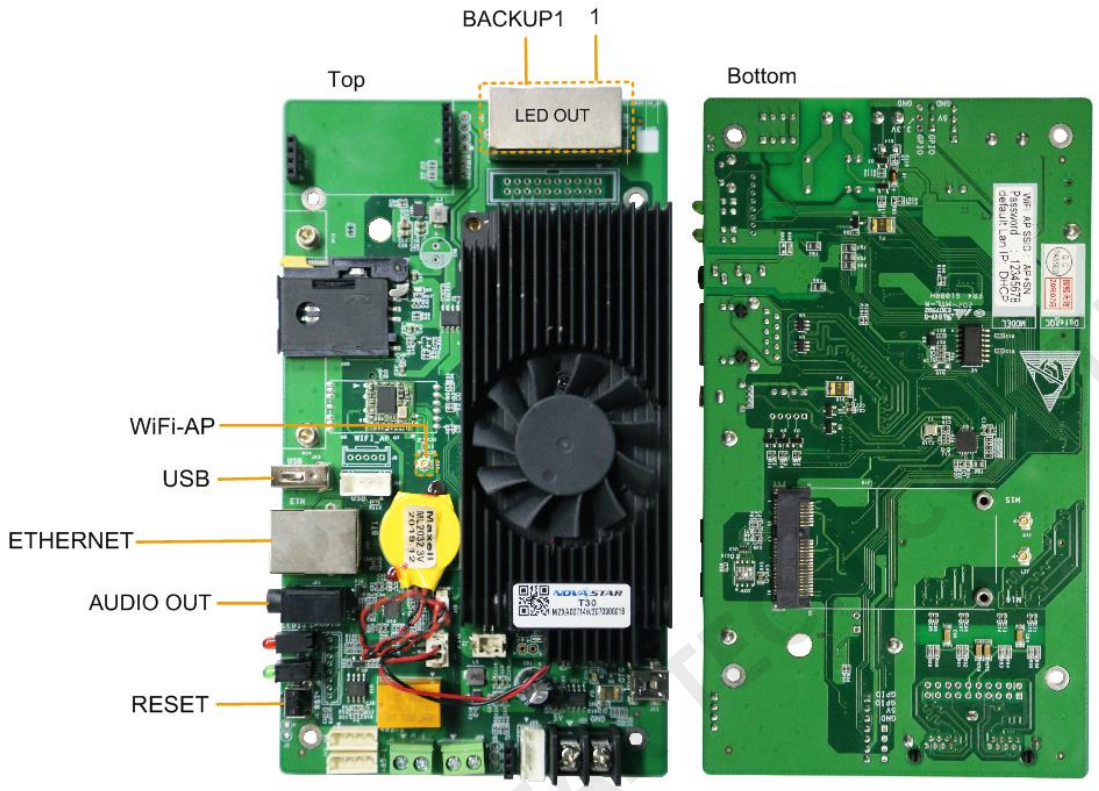
  User terminal devices can connect to the built-in Wi-Fi AP of the T30. The default SSID is "AP+*Last 8 digits of SN*", for example, "AP10000033", and the default password is "12345678".

- Redundancy
  - Network redundancy: The T30 connects to the Internet via wired network or 4G network according to the priority, making the network more stable.
  - Ethernet port redundancy: One master Ethernet port and one backup Ethernet port are used for output. This redundancy mechanism increases the transmission reliability.

Appearance

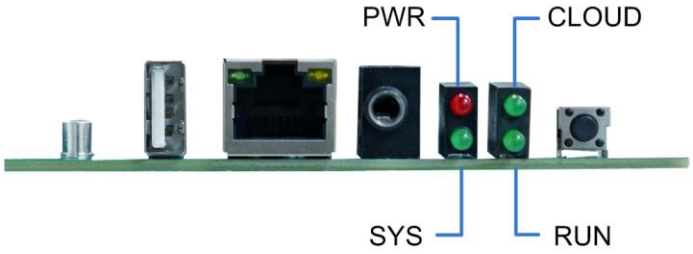
Top View and Bottom View



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

Name	Description
WiFi-AP	Connects to a Wi-Fi antenna.
ETHERNET	Connects to a network or the control PC.
USB	1x USB 2.0 port Support for USB playback The FAT32 (maximum file size: 4 GB) file system is supported. The exFAT file system is not supported.
AUDIO OUT	Audio output connector
RESET	Factory reset button Press and hold the button for 5 seconds to reset the product to its factory settings.
1	Ethernet output
BACKUP1	Backup Ethernet output

Side View



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

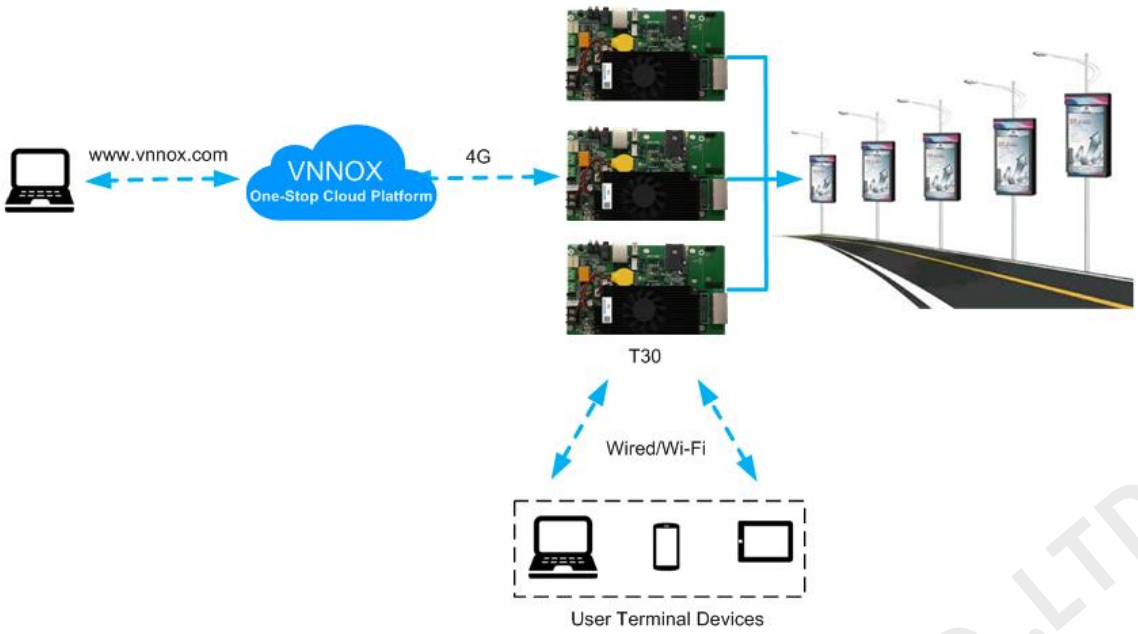
Applications

The T30 is widely used for commercial displays such as lamp-post displays, chain store displays, advertisement players, mirror displays, retail store displays, door head displays, vehicle-mounted displays, and displays without requiring a PC. Here lamp-post displays are used for the examples below.

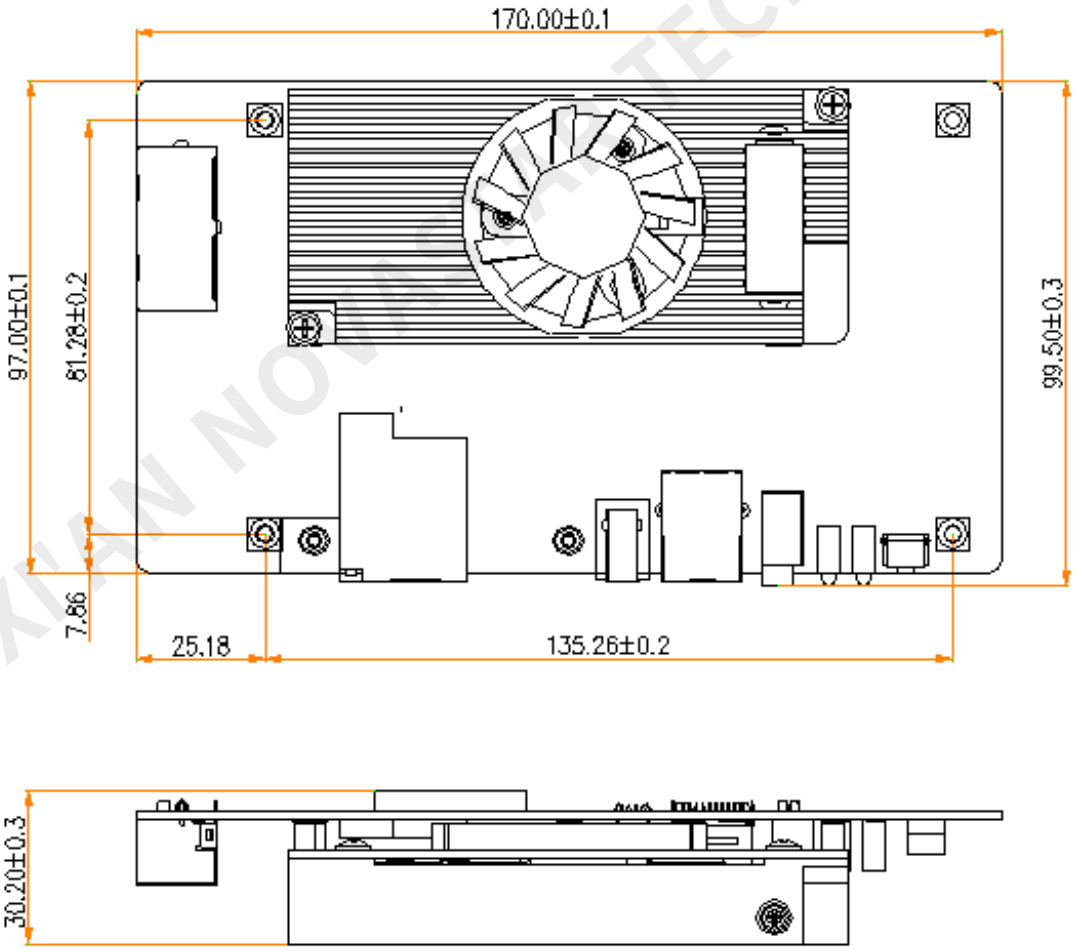
- The T30 can access the Internet via wired network or 4G network. Here 4G network is recommended.
- The T30 comes with an on-board brightness sensor connector.

  Users can connect a light sensor to the T30 and set smart brightness adjustment rules in ViPlex or VNNOX to enable smart brightness adjustment.
- Lamp-post displays have a high requirement for synchronization. You are advised to use time synchronization modules.

  Set one of the T30 units on an RF network as the master device and set other units as slave devices. The master device does not load a screen and is used for time reference only. Slave devices are used to load screens.



Dimensions



Note: The product dimension drawings cannot be used as references to make molds or trepan mounting holes. Please ask the business personnel of NovaStar for the structural drawings if needed.

Unit: mm

Specifications

Electrical Parameters	Rated voltage	DC 5 V–12 V
	Maximum power consumption	18 W
Storage	RAM	1 GB
	Internal storage	32 GB (28 GB available)
Storage Environment	Temperature	–40ºC to +80ºC
	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 mm × 218 mm × 63 mm
	List	• 1x T30 • 1x IPex to SMA extension cable • 1x Wi-Fi omnidirectional antenna • 1x L-shaped component • 2x Screws • 1x Quick Start Guide
Dimensions (L×W×H)	170.0 mm × 99.5 mm × 30.2 mm	
Net Weight	248.9 g	
IP Rating	IP20 Please prevent the product from water intrusion and do not wet or wash the product.	
System Software	• Android operating system software • Android terminal application software • FPGA program Note: Third-party applications are not supported.	

Audio and Video Decoder Specifications

Image

Item	Codec	Supported Image Size	Container	Remarks
JPEG	JFIF file format 1.02	48×48 pixels–8176×8176 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

Item	Codec	Supported Image Size	Container	Remarks
WEBP	WEBP	No restriction	WEBP	N/A

Audio

Item	Codec	Channel	Bit Rate	Sampling Rate	File Format	Remarks
MPEG	MPEG 1/2/2.5 Audio Layer 1/2/3	2	8Kbps–320Kbps, CBR and VBR	8KHz–48KHz	MP1, MP2, MP3	N/A
Windows Media Audio	WMA Version 4/4.1/7/8/9, wmapro	2	8Kbps–320Kbps	8KHz–48KHz	WMA	No support for WMA Pro, lossless codec and MBR
WAV	MS-ADPCM, IMA-ADPCM, PCM	2	N/A	8KHz–48KHz	WAV	Support for 4bit MS-ADPCM and IMA-ADPCM
OGG	Q1–Q10	2	N/A	8KHz–48KHz	OGG, OGA	N/A
FLAC	Compress Level 0–8	2	N/A	8KHz–48KHz	FLAC	N/A
AAC	ADIF, ATDS Header AAC-LC and AAC-HE, AAC-ELD	5.1	N/A	8KHz–48KHz	AAC, M4A	N/A
AMR	AMR-NB, AMR-WB	1	AMR-NB 4.75–12.2Kbps@8kHz AMR-WB 6.60–23.85kbps @16kHz	8KHz, 16KHz	3GP	N/A
MIDI	MIDI Type 0/1, DLS version 1/2, XMF and Mobile XMF, RTTTL/RTX, OTA, iMelody	2	N/A	N/A	XMF, MXMF, RTTTL, RTX, OTA, IMY	N/A

Video

Type	Codec	Resolution	Maximum Frame Rate	Maximum Bit Rate (Under Ideal Condition)	File Format	Remarks
MPEG-1/2	MPEG-1/2	48×48 pixels–1920×1080 pixels	30fps	80Mbps	DAT, MPG, VOB, TS	Support for Field Coding
MPEG-4	MPEG4	48×48 pixels–1920×1080 pixels	30fps	38.4Mbps	AVI, MKV, MP4, MOV, 3GP	No support for MS MPEG4 v1/v2/v3, GMC, DivX3/4/5/6/

Type	Codec	Resolution	Maximum Frame Rate	Maximum Bit Rate (Under Ideal Condition)	File Format	Remarks
						7/10
H.264/ AVC	H.264	48×48 pixels–4096×2304 pixels	4K@25fps, 1080P@60fps	100Mbps	AVI, MKV, MP4, MOV, 3GP, TS, FLV	Support for Field Coding, MBAFF
MVC	H.264 MVC	48×48 pixels–1920×1080 pixels	60fps	38.4Mbps	MKV, TS	Support for Stereo High Profile only
H.265/HEVC	H.265/ HEVC	64×64 pixels–4096×2304 pixels	4K@60fps, 1080P@60fps	100Mbps	MKV, MP4, MOV, TS	Support for Main Profile, Tile & Slice
GOOGLE VP8	VP8	48×48 pixels–1920×1080 pixels	30fps	38.4 Mbps	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–1920×1080 pixels	30fps	45Mbps	WMV, ASF, TS, MKV, AVI	N/A
MOTION JPEG	MJPEG	48×48 pixels–1920×1080 pixels	30fps	38.4Mbps	AVI	N/A

Note: The output data format is YUV420 semi-planar, and YUV400 (monochrome) is also supported by H.264.

Trademark

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Statement

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