

Change History

Document Version	Release Date	Description
V1.7.0	2021-06-28	Updated front panel picture.

Introduction

The TB1-4G (Optional 4G) 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 phones and tablets. The TB1-4G (Optional 4G) also supports the cloud publishing and monitoring platforms to easily enable cross-regional cluster management of screens.

The TB1-4G (Optional 4G) can play solutions imported 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 security, stability, ease of use, smart control, etc., the TB1-4G (Optional 4G) widely applies to commercial display and 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 a PC.

www.tecnogroup.cl +56 9 54491032 @tecnogroup.cl TECNOGROUP

Change History

Document Version	Release Date	Description
V1.7.0	2021-06-28	Updated front panel picture.

Introduction

The TB1-4G (Optional 4G) 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 phones and tablets. The TB1-4G (Optional 4G) also supports the cloud publishing and monitoring platforms to easily enable cross-regional cluster management of screens.

The TB1-4G (Optional 4G) can play solutions imported 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 security, stability, ease of use, smart control, etc., the TB1-4G (Optional 4G) widely applies to commercial display and 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 a PC.

Features

- Loading capacity up to 650,000 pixels with a maximum width of 1920 pixels and a maximum height of 1080 pixels
- 1x Gigabit Ethernet output
- 1x Stereo audio output
- 1x USB 2.0, capable of playing solutions imported from a USB drive
- 1x USB Type B, capable of connecting to a PC

  Connecting this port to a PC allows users to configure screens, publish solutions, etc. with NovaLCT and ViPlex Express.
- Powerful processing capacity
  - 4 core 1.2 GHz processor
  - Hardware decoding of 1080P videos
  - 1 GB of RAM
  - 32 GB of internal storage (28 GB available)
- All-round control plans
  - Solution publishing and screen control via user terminal devices such as PC, mobile phones and tablets
  - Remote cluster solution publishing and screen control
  - Remote cluster screen status monitoring
- Built-in Wi-Fi AP

  User terminal devices can connect to the built-in Wi-Fi hotspot of the TB1-4G (Optional 4G). The default SSID is “AP+*Last 8 digits of SN*” and the default password is “12345678”.

- Support for 4G modules
  - The TB1-4G (Optional 4G) ships without a 4G module. Users have to purchase 4G modules separately if needed.
  - Wired network is prior to 4G network. When both networks are available, the T1-4G (Optional 4G) will choose signals automatically according to the priority.

Appearance

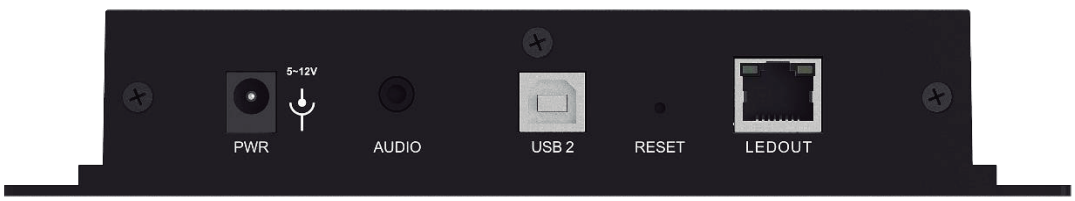
Front Panel



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

Name	Description
SIM CARD	SIM card slot
PWR	Power indicator Staying on: The power supply is working properly.
SYS	System indicator • Flashing once every 2 seconds: The Taurus is functioning normally. • Flashing once every second: The Taurus is installing the upgrade package. • Flashing once every 0.5 second: The Taurus is downloading data from the Internet or copying the upgrade package. • Staying on/off: The Taurus is abnormal.
CLOUD	Internet connection indicator • Staying on: The Taurus is connected to the Internet and the connection is available. • Flashing once every 2 seconds: The Taurus is connected to VNNOX and the connection is available.
RUN	FPGA indicator • Flashing once every second: No video signal • Flashing once every 0.5 second: The FPGA is functioning normally. • Staying on/off: The FPGA is abnormal.
USB 1	1x USB 2.0 Imports solutions from a USB drive for playback Only the FAT32 file system is supported and the maximum size of a single file is 4 GB.
ETHERNET	Fast Ethernet port Connects to the network or control PC.
WiFi-AP	Wi-Fi antenna connector
4G	4G antenna connector

Rear Panel



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

Name	Description
PWR	Power input connector
AUDIO	Audio output
USB 2	USB Type B
RESET	Factory reset button Press and hold this button for 5 seconds to reset the product to its factory settings.
LEDOUT	1x Gigabit Ethernet output port

Applications

The Taurus series products widely apply to commercial display, 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.

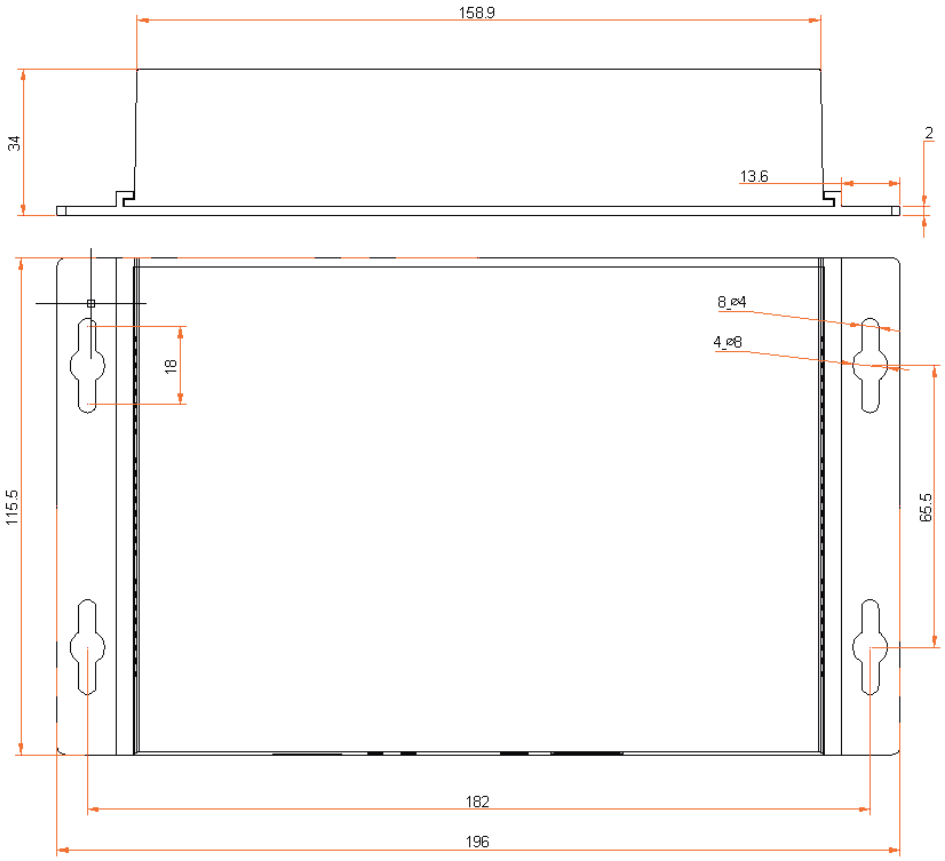
Table 1-1 lists the application scenarios of the Taurus.

Table 1-1 Applications

Category	Description
Market type	• Advertising media: Used for advertisement and information promotion, such as lamp-post displays and advertisement players. • Digital signage: Used for digital signage displays in retail stores, such as retail store displays and door head displays. • Commercial display: Used for the display of business information of hotels, cinemas, shopping malls, etc., such as chain store displays.
Networking method	• Independent screen: Connect to and manage a screen by using a PC or mobile client software. • Screen cluster: Manage and monitoring multiple screens in a centralized manner by using the cluster solutions of NovaStar.
Connection method	• Wired connection: The PC and Taurus are connected via Ethernet cable or LAN. • Wi-Fi connection: The PC, tablet and mobile phone are connected to the Taurus via Wi-Fi. Working with ViPlex, the Taurus can apply to the scenarios where no PC is required.

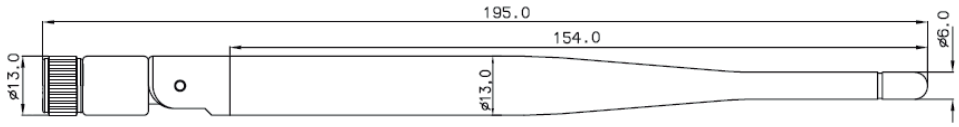
Dimensions

TB1-4G (Optional 4G)



Tolerance: ±0.1 Unit: mm

Antenna



Tolerance: ±0.1 Unit: mm

Specifications

Electrical Parameters	Input voltage	DC 5 V~12 V
	Maximum power consumption	15 W
Storage Capacity	RAM	1 GB
	Internal storage	32 GB (28 GB available)
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)	335 mm × 190 mm × 62 mm

	List	• 1x TB1-4G (Optional 4G) • 1x Wi-Fi omnidirectional antenna • 1x Power adapter • 1x Quick Start Guide
Dimensions (L×W×H)	196.0 mm × 115.5 mm × 34.0 mm	
Net Weight	291.3 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

Category	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
WEBP	WEBP	No Restriction	WEBP	N/A

Audio

Category	Codec	Channel	Bit Rate	Sampling Rate	File Format	Remarks
MPEG	MPEG1/2/2.5 Audio Layer1/2/3	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 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

Category	Codec	Channel	Bit Rate	Sampling Rate	File Format	Remarks
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

Category	Codec	Supported Resolution	Maximum Frame Rate	Maximum Bit Rate (Ideal Case)	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, and DivX3/4/5/6/7 …/10
H.264/AVC	H.264	48×48 pixels ~ 1920×1080 pixels	1080P@60fps	57.2Mbps	AVI, MKV, MP4, MOV, 3GP, TS, FLV	Support for field coding and 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 ~ 1920×1080 pixels	1080P@60fps	57.2Mbps	MKV, MP4, MOV, TS	Support for Main Profile, Tile & Slice
GOOGLE VP8	VP8	48×48 pixels ~ 1920×1080 pixels	30fps	38.4Mbps	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 for H.264.