TCC70G
Multimedia Player

Specifications

Change History

Document Version	Release Date	Description
V1.1.0	2024-05-30	• Updated the feature descriptions. • Updated the connector descriptions. • Updated the application descriptions. • Updated media decoding specifications.
V1.0.5	2023-10-16	Updated the description of the default Wi-Fi AP password.
V1.0.4	2023-06-14	Added the gross weight of the product.
V1.0.2	2022-01-12	• Updated the connector descriptions. • Updated the dimension drawings.
V1.0.1	2021-12-17	• Added certification information. • Added a note for the dimension drawings. • Updated the specification table.
V1.0.0	2021-11-10	First release

Introduction

The TCC70G, launched by NovaStar, is a multimedia player that integrates sending and receiving capabilities. It allows for solution publishing and screen control via various user terminal devices such as PC, mobile phone and tablet. The TCC70G can access the cloud publishing and monitoring platforms to easily enable cross-region clustered management of screens.

The TCC70G comes with eight standard HUB75E connectors for communication and supports up to 16 groups of parallel RGB data. On-site setup, operation and maintenance are all taken into account when the hardware and software of the TCC70G were designed, allowing for an easier setup, more stable operation and more efficient maintenance.

Thanks to its stable and secure integrated design, the TCC70G saves space, simplifies cabling, and is suitable for the applications requiring small loading capacity, such as vehicle-mounted displays, small traffic displays, displays in communities, and lamp-post displays.

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

- Maximum resolution supported by a single card: 512×384 pixels
  - Maximum pixel width: 1280 (1280×128)
  - Maximum pixel height: 512 (384×512)
- 1x Stereo audio output
- 1x USB 2.0 port

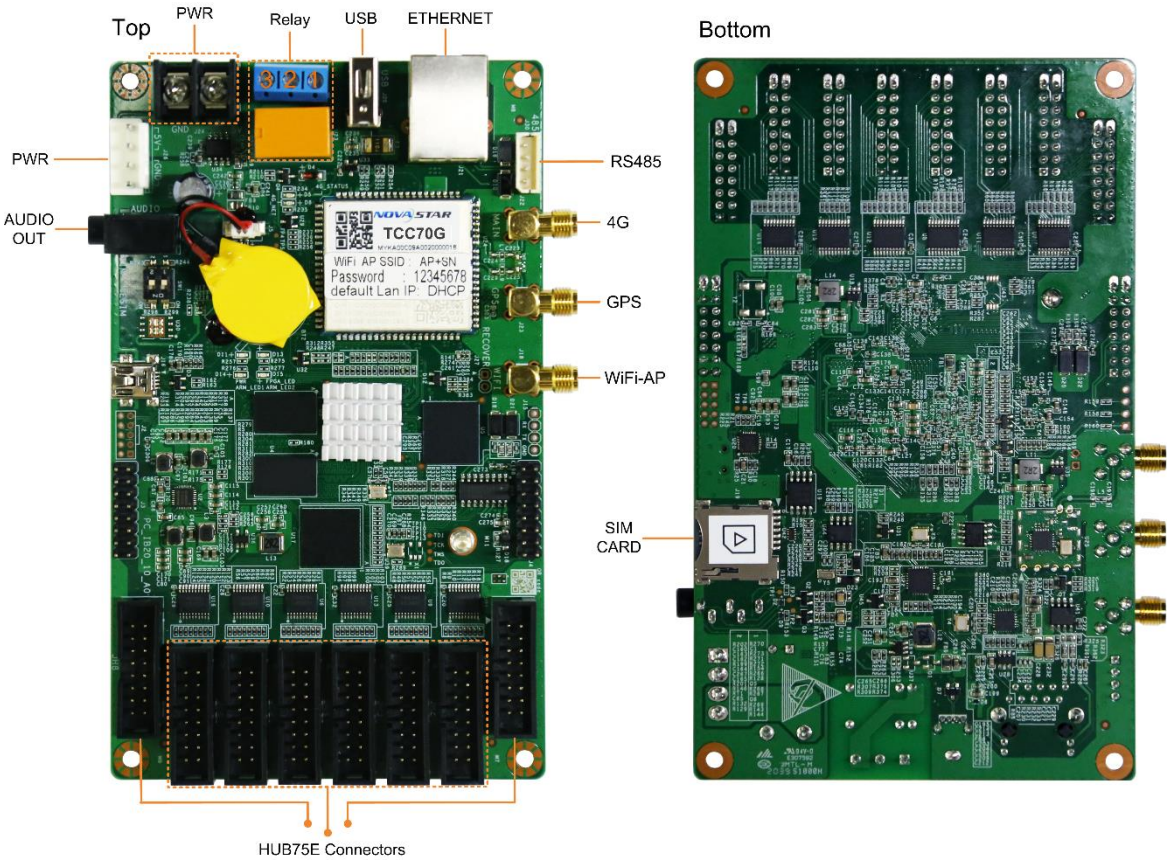
  Allows for USB playback and storage expansion.
- 1x RS485 connector

  Connects to a sensor such as light sensor, or connects to other modules to implement corresponding functions.
- Powerful processing capability
  - 4 core 1.2 GHz processor
  - Hardware decoding of 1080p videos
  - 1 GB of RAM
  - 8 GB of internal storage (4 GB available)
- 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

  User terminal devices can connect to the built-in Wi-Fi AP of the TCC70G. The default SSID is "AP+*Last 8 digits of SN*" and the default password is printed on the SSID label of the product.
- Support for global 4G networks (Japan not included, CAT4 by default)

  For the details of the supported countries and regions as well as frequency bands, please contact the pre-sales technical engineers of NovaStar.
- Support for GPS positioning and GPS time synchronization
- Support for relays (maximum DC 30 V 3 A)

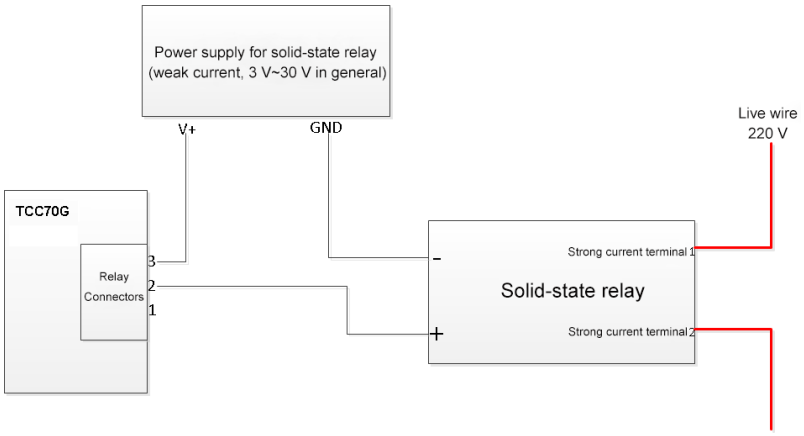
Appearance



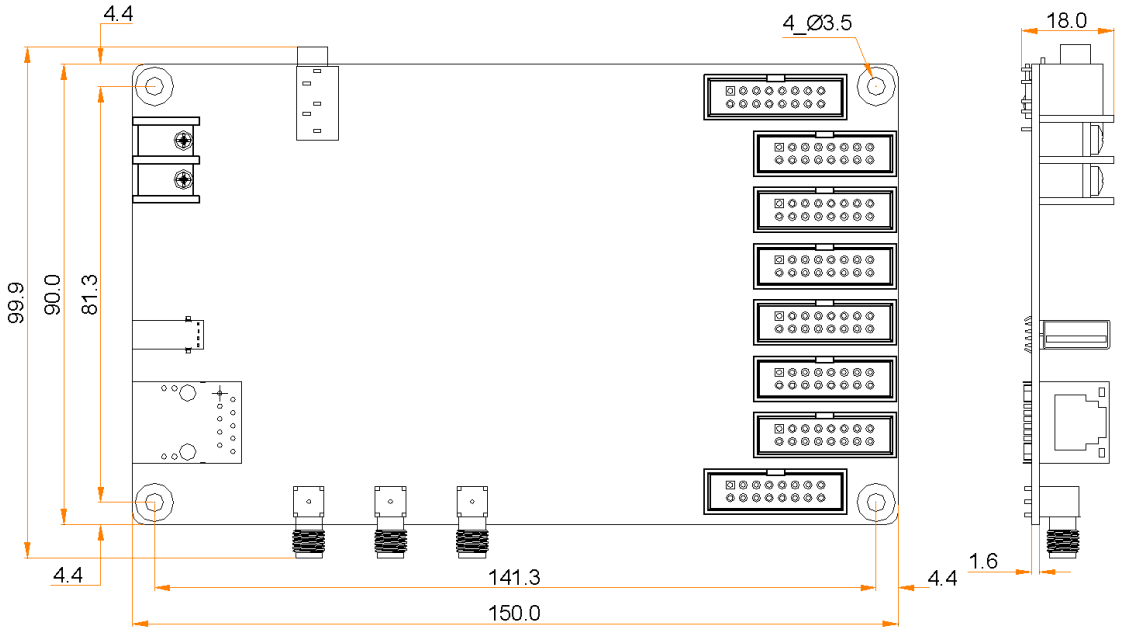
All product pictures shown in this document are for illustration purpose only. Actual product may vary.

Table 1-1 Connectors and buttons

Name	Description
ETHERNET	Ethernet port Connects to a network or the control PC.
USB	USB 2.0 (Type A) port Allows for USB playback and storage expansion. Only the FAT32 file system is supported and the maximum size of a single file is 4 GB.
PWR	Power input connector
AUDIO OUT	Audio output connector OMTP headphones can be connected.
HUB75E Connectors	HUB75E connectors Connect to a screen.

Name	Description
SIM CARD	SIM card slot Capable of preventing users from inserting a SIM card in the wrong orientation.
WiFi-AP	Wi-Fi AP antenna connector (2.4 GHz Wi-Fi supported)
GPS	GPS antenna connector
4G	4G antenna connector
RS485	RS485 connector Connects to a sensor such as light sensor, or connects to a module to implement corresponding functions.
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 TCC70G 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. 

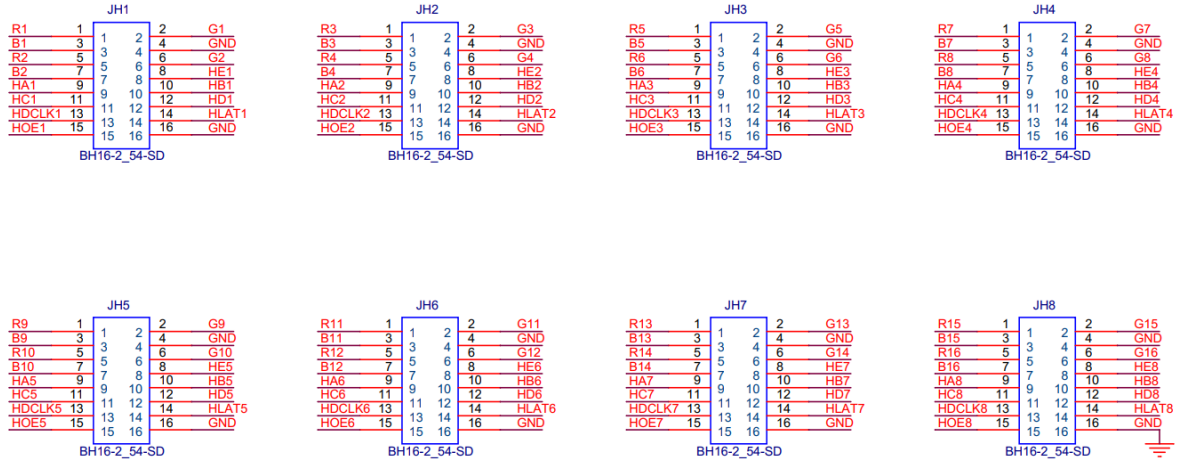
Dimensions



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

Tolerance: ±0.3 Unit: mm

Pin Definition



Pin Definitions					
/	R	1	2	G	/
/	B	3	4	GND	Ground
/	R	5	6	G	/
/	B	7	8	HE	Line decoding signal
Line decoding signal	HA	9	10	HB	
	HC	11	12	HD	

Shift clock	HDCLK	13	14	HLAT	Latch signal
Display enable	HOE	15	16	GND	Ground

Specifications

Maximum Supported Resolution	512×384 pixels	
Electrical Parameters	Input voltage	DC 4.5 V~5.5 V
	Maximum power consumption	10 W
Storage Space	RAM	1 GB
	Internal storage	8 GB (4 GB available)
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	150.0 mm × 99.9 mm × 18.0 mm
	Net weight	121.3 g
	Gross weight	300.0 g
Packing Information	Dimensions	278.0 mm × 218.0 mm × 63.0 mm
	List	• 1x TCC70G • 1x Omnidirectional Wi-Fi antenna • 1x 4G antenna • 1x Quick Start Guide • 1x Packing list
System Software	• Android operating system software • Android terminal application software • FPGA program	

The amount of power consumption may vary depending on various factors such as product settings, usage, and environment.

Media Decoding Specifications

Image

Codec	Resolution	Format	Remarks
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	No restriction	BMP	N/A
GIF	No restriction	GIF	N/A
PNG	No restriction	PNG	N/A
WEBP	No restriction	WEBP	N/A

Audio

Codec	Channel	Bit Rate	Sampling Rate	Format	Remarks
MPEG1/2/2.5 Audio Layer1/2/3	2	8kbps~320kbps, CBR and VBR	8kHz~48kHz	MP1, MP2, MP3	N/A
WMA Version 4/4.1/7/8/9, wmapro	2	8kbps~320kbps	8kHz~48kHz	WMA	No support for WMA Pro, lossless codec and MBR
MS-ADPCM, IMA-ADPCM, PCM	2	N/A	8kHz~48kHz	WAV	Support for 4bit MS-ADPCM and IMA-ADPCM
Q1~Q10	2	N/A	8kHz~48kHz	OGG, OGA	N/A
Compress Level 0~8	2	N/A	8kHz~48kHz	FLAC	N/A
ADIF, ATDS Header AAC-LC and AAC-HE, AAC-ELD	5.1	N/A	8kHz~48kHz	AAC, M4A	N/A
AMR-NB, AMR-WB	1	AMR-NB 4.75~12.2kbps @8kHz AMR-WB 6.60~23.85kbps @16kHz	8kHz, 16kHz	3GP	N/A

Codec	Channel	Bit Rate	Sampling Rate	Format	Remarks
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

Codec	Resolution	Maximum Frame Rate	Maximum Bit Rate (Ideal Case)	Format	Codec
MPEG-1/2	48×48 pixels ~ 1920×1080 pixels	30fps	80Mbps	DAT, MPG, VOB, TS	Support for Field Coding
MPEG4	48×48 pixels ~ 1920×1080 pixels	30fps	38.4Mbps	AVI, MKV, MP4, MOV, 3GP	No support for MS MPEG4 v1/v2/v3, GMC, DivX3/4/5/6/7…/10
H.264	48×48 pixels ~ 1920×1080 pixels	1080P@60fps	57.2Mbps	AVI, MKV, MP4, MOV, 3GP, TS, FLV	Support for Field Coding, MBAFF
H.264 MVC	48×48 pixels ~ 1920×1080 pixels	60fps	38.4Mbps	MKV, TS	Support for Stereo High Profile only
H.265/ HEVC	64×64 pixels ~ 1920×1080 pixels	1080p@60fps	57.2Mbps	MKV, MP4, MOV, TS	Support for Main Profile, Tile & Slice
VP8	48×48 pixels ~ 1920×1080 pixels	30fps	38.4 Mbps	WEBM, MKV	N/A
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+
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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