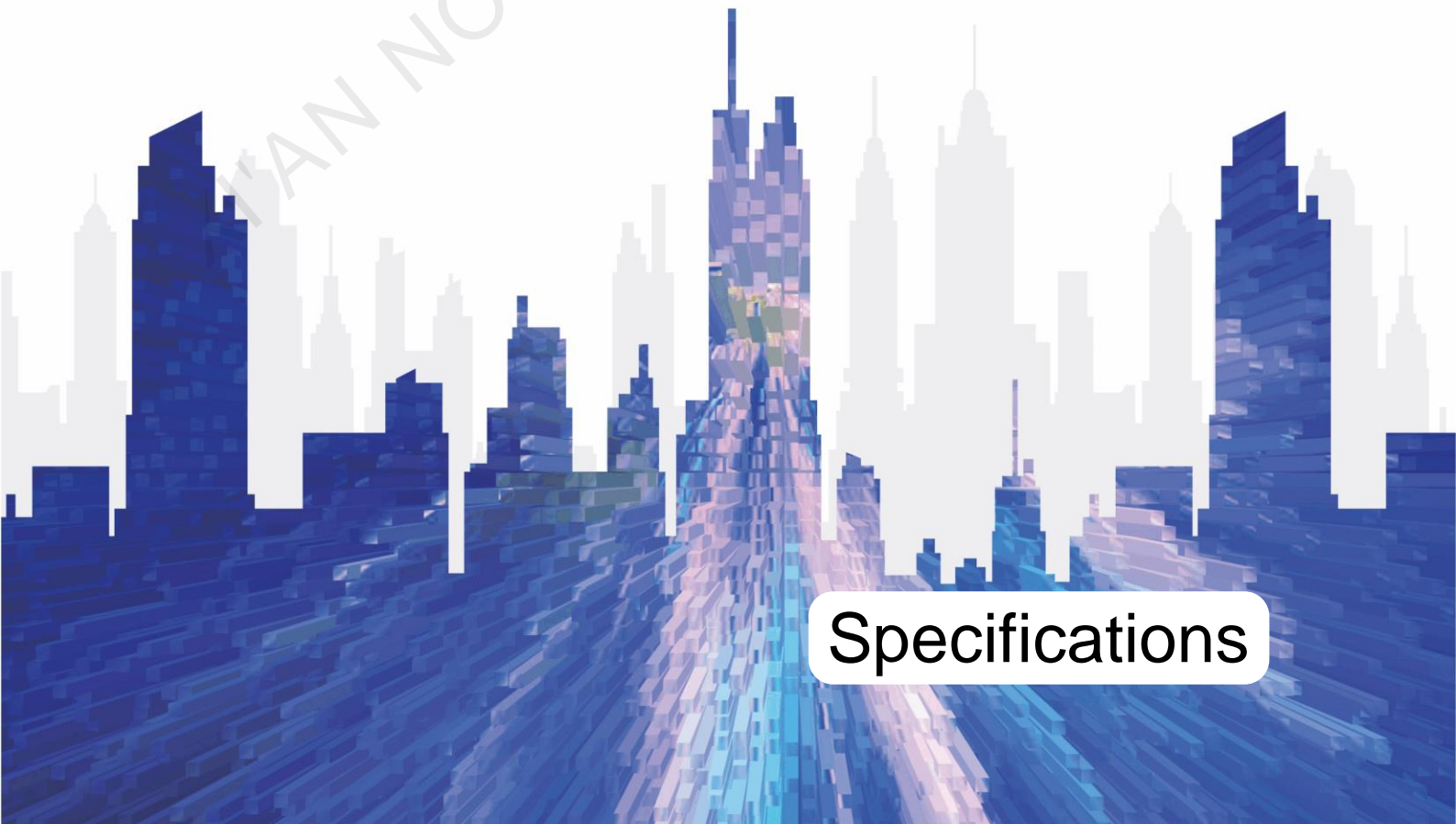


TCC70G Multimedia Player



Specifications

Change History

Document Version	Release Date	Description
V1.0.2	2022-01-12	<ul style="list-style-type: none"> Updated the connector descriptions. Updated the dimension drawings.
V1.0.1	2021-12-17	<ul style="list-style-type: none"> 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

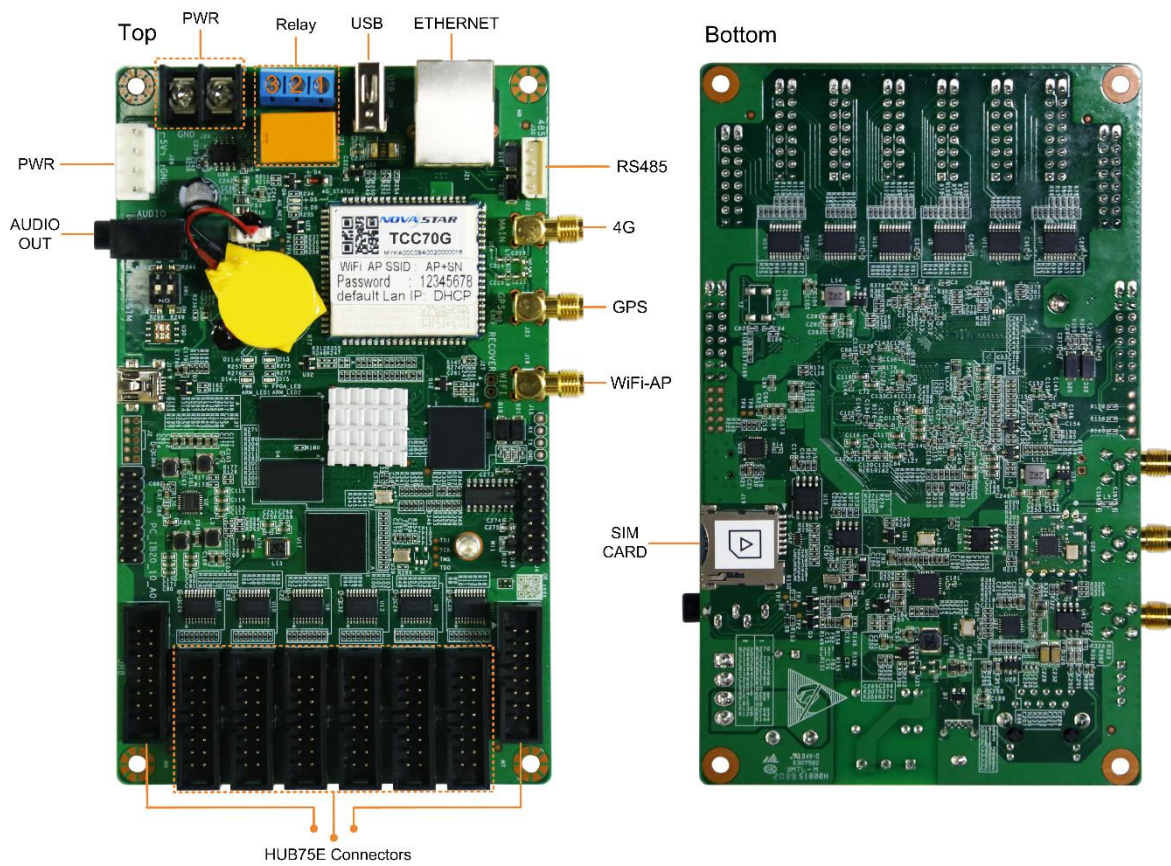
None

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: 512x384
 - Maximum width: 1280 (1280x128)
 - Maximum Height: 512 (384x512)
- 1x Stereo audio output
- 1x USB 2.0 port
Allows for USB playback.
- 1x RS485 connector
Connects to a sensor such as light sensor, or connects to a module 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)
- A variety of control schemes
 - 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 TCC70G. The default SSID is "AP+*Last 8 digits of SN*" and the default password is "12345678".
- 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)

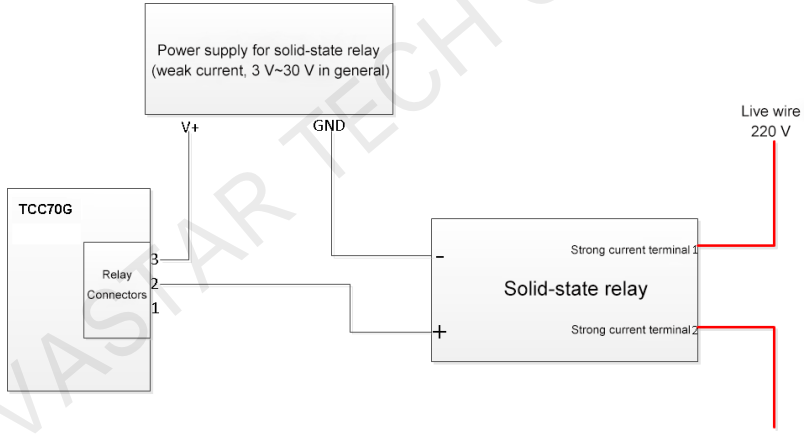
Appearance



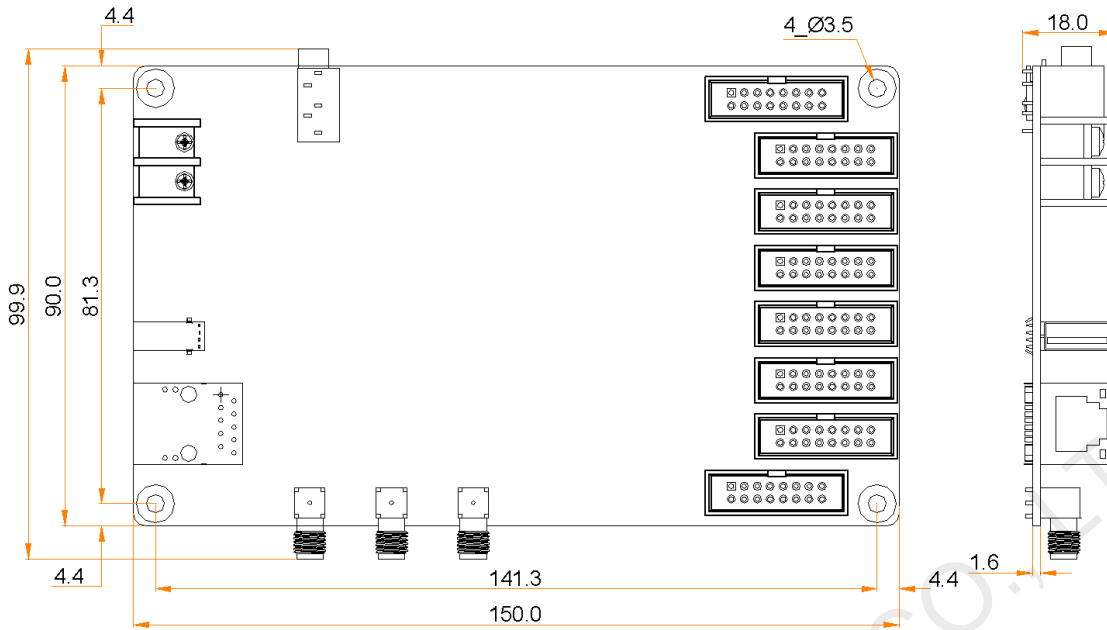
All product pictures shown in this document are for illustration purpose only. Actual product may vary.

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 playback of content imported from a USB drive. 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
HUB75E Connectors	HUB75E connectors Connect to a screen.
SIM CARD	SIM card slot
WiFi-AP	Wi-Fi AP antenna connector
GPS	GPS antenna connector
4G	4G antenna connector

Name	Description
RS485	<p>RS485 connector</p> <p>Connects to a sensor such as light sensor, or connects to a module to implement corresponding functions.</p>
Relay	<p>3-pin relay control switch</p> <p>DC: Maximum voltage and current: 30 V, 3 A</p> <p>AC: Maximum voltage and current: 250 V, 3 A</p> <p>Two connection methods:</p> <p>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.</p> <p>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 from pin 2, or turn off the circuit to disconnect pin 3 from pin 2 and connect pin 2 to pin 1.</p> <p>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.</p> 

Dimensions



If you want to make molds or trepan mounting holes, please contact NovaStar for structural drawings with higher precision.

Tolerance: ± 0.3 Unit: mm

Pin Definition

JH1					
R1	1	2	G1		
B1	3	4	GND		
R2	5	6	G2		
B2	7	8	HE1		
HA1	9	10	HB1		
HC1	11	12	HD1		
HDCLK1	13	14	HLAT1		
HOE1	15	16	GND		

BH16-2_54-SD

JH2					
R3	1	2	G3		
B3	3	4	GND		
R4	5	6	G4		
B4	7	8	HE2		
HA2	9	10	HB2		
HC2	11	12	HD2		
HDCLK2	13	14	HLAT2		
HOE2	15	16	GND		

BH16-2_54-SD

JH3					
R5	1	2	G5		
B5	3	4	GND		
R6	5	6	G6		
B6	7	8	HE3		
HA3	9	10	HB3		
HC3	11	12	HD3		
HDCLK3	13	14	HLAT3		
HOE3	15	16	GND		

BH16-2_54-SD

JH4					
R7	1	2	G7		
B7	3	4	GND		
R8	5	6	G8		
B8	7	8	HE4		
HA4	9	10	HB4		
HC4	11	12	HD4		
HDCLK4	13	14	HLAT4		
HOE4	15	16	GND		

BH16-2_54-SD

JH5					
R9	1	2	G9		
B9	3	4	GND		
R10	5	6	G10		
B10	7	8	HE5		
HA5	9	10	HB5		
HC5	11	12	HD5		
HDCLK5	13	14	HLAT5		
HOE5	15	16	GND		

BH16-2_54-SD

JH6					
R11	1	2	G11		
B11	3	4	GND		
R12	5	6	G12		
B12	7	8	HE6		
HA6	9	10	HB6		
HC6	11	12	HD6		
HDCLK6	13	14	HLAT6		
HOE6	15	16	GND		

BH16-2_54-SD

JH7					
R13	1	2	G13		
B13	3	4	GND		
R14	5	6	G14		
B14	7	8	HE7		
HA7	9	10	HB7		
HC7	11	12	HD7		
HDCLK7	13	14	HLAT7		
HOE7	15	16	GND		

BH16-2_54-SD

JH8					
R15	1	2	G15		
B15	3	4	GND		
R16	5	6	G16		
B16	7	8	HE8		
HA8	9	10	HB8		
HC8	11	12	HD8		
HDCLK8	13	14	HLAT8		
HOE8	15	16	GND		

BH16-2_54-SD

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
Packing Information	Dimensions	278.0 mm × 218.0 mm × 63.0 mm
	List	<ul style="list-style-type: none"> • 1x TCC70G • 1x Omnidirectional Wi-Fi antenna • 1x 4G antenna • 1x Quick Start Guide
System Software	<ul style="list-style-type: none"> • Android operating system software • Android terminal application software • FPGA program 	

The power consumption may vary according to the setup, environment and use of the product as well as many other factors.

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

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

Audio

Item	Codec	Channel	Bit Rate	Sampling Rate	File Format	Remarks
MPEG	MPEG1/2/2.5 Audio Layer1/2/3	2	8kbps~320K bps, CBR and VBR	8kHz~48kHz	MP1, MP2, MP3	N/A
Windows Media Audio	WMA Version 4/4.1/7/8/9, wmapro	2	8kbps~320K bps	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 Conditions)	Type	Codec
MPEG-1/2	MPEG-1/2	48x48 pixels ~ 1920x1080 pixels	30fps	80Mbps	DAT, MPG, VOB, TS	Support for Field Coding
MPEG-4	MPEG4	48x48 pixels ~ 1920x1080 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/AVC	H.264	48x48 pixels ~ 1920x1080 pixels	1080P@60fps	57.2Mbps	AVI, MKV, MP4,	Support for Field Coding, MBAFF

Type	Codec	Resolution	Maximum Frame Rate	Maximum Bit Rate (Under Ideal Conditions)	Type	Codec
					MOV, 3GP, TS, FLV	
MVC	H.264 MVC	48x48 pixels ~ 1920x1080 pixels	60fps	38.4Mbps	MKV, TS	Support for Stereo High Profile only
H.265/HEVC	H.265/ HEVC	64x64 pixels ~ 1920x1080 pixels	1080P@60fps	57.2Mbps	MKV, MP4, MOV, TS	Support for Main Profile, Tile & Slice
GOOGLE VP8	VP8	48x48 pixels ~ 1920x1080 pixels	30fps	38.4 Mbps	WEBM, MKV	N/A
H.263	H.263	SQCIF (128x96), QCIF (176x144), CIF (352x288), 4CIF (704x576)	30fps	38.4Mbps	3GP, MOV, MP4	No support for H.263+
VC-1	VC-1	48x48 pixels ~ 1920x1080 pixels	30fps	45Mbps	WMV, ASF, TS, MKV, AVI	N/A
MOTION JPEG	MJPEG	48x48 pixels ~ 1920x1080 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.

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