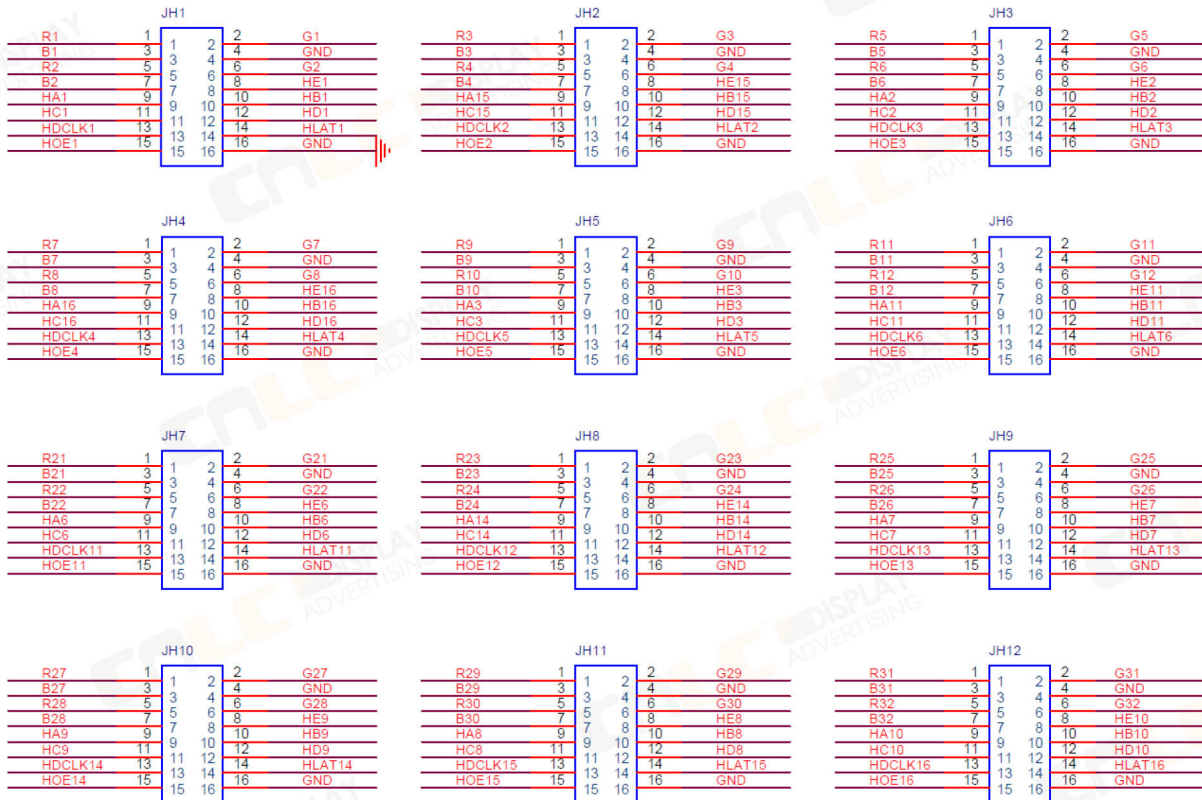


The background features a grid of squares in various shades of blue and green, with several overlapping circles in light blue and green. The text 'PRODUCT SPECIFICATION' is centered in a bold, blue, sans-serif font. A horizontal blue line is positioned below the word 'SPECIFICATION'.

PRODUCT SPECIFICATION

Pins



Pin Definitions (Take JH1 as an example)					
/	R1	1	2	G1	/
/	B1	3	4	GND	Ground
/	R2	5	6	G2	/
/	B2	7	8	HE1	Line decoding signal
Line decoding signal	HA1	9	10	HB1	Line decoding signal
Line decoding signal	HC1	11	12	HD1	Line decoding signal
Shift clock	HDCLK1	13	14	HLAT1	Latch signal
Display enable signal	HOE1	15	16	GND	Ground

Specifications

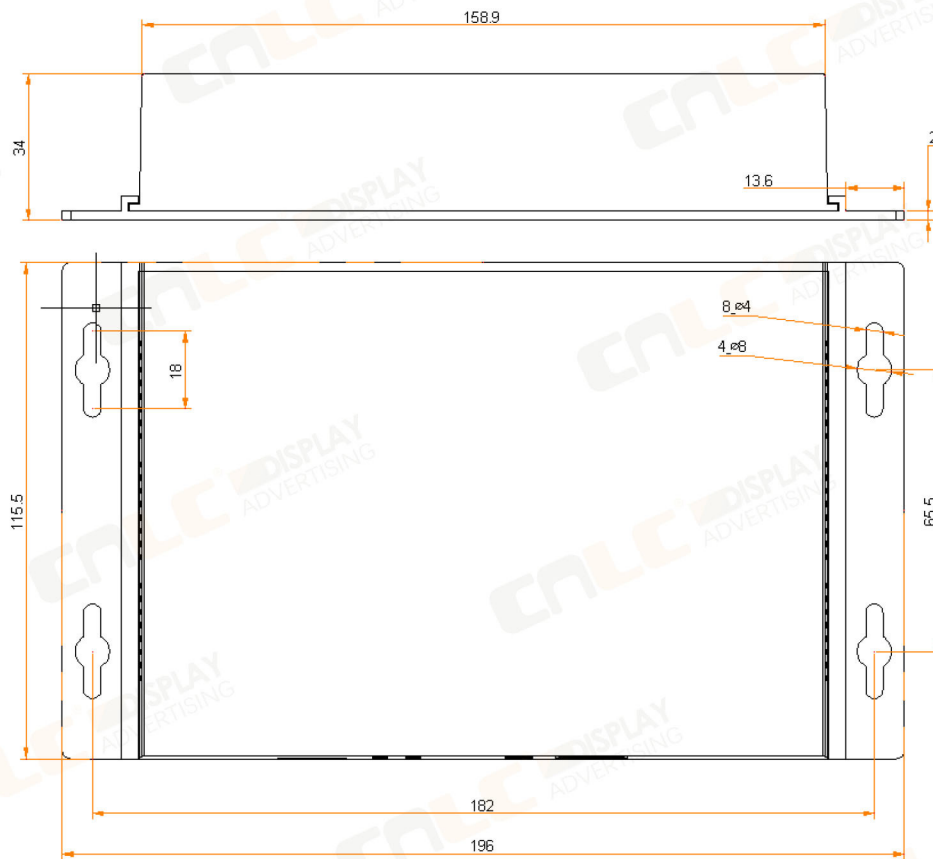
Maximum Resolution	512×384@60Hz (PWM driver ICs) 384×384@60Hz (Common driver ICs)	
Electrical Specifications	Input voltage	DC 3.8 V to 5.5 V
	Rated current	0.5 A
	Rated power consumption	2.5 W
Operating Environment	Temperature	-20°C to +70°C
	Humidity	10% RH to 90% RH, non-condensing
Storage Environment	Temperature	-25°C to +125°C
	Humidity	0% RH to 95% RH, non-condensing

Physical Specifications	Dimensions	145.7 mm × 91.5 mm × 18.3 mm
	Net weight	93.1 g Note: It is the weight of a single receiving card only.
Packing Information	Packing specifications	Each receiving card is packaged in a blister pack. Each packing box contains 100 receiving cards.
	Packing box dimensions	625.0 mm × 180.0 mm × 470.0 mm

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

Category	Description
	using the cluster solutions of NovaStar.
Connection method	<ul style="list-style-type: none"> 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 the supporting software, the Taurus can apply to the scenarios where no PC is required.

Dimensions



Tolerance: ± 0.3 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

Notes and Cautions

This is Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

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
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

Operating Environment	Temperature	-20°C to +60°C
	Humidity	0% RH to 80% RH, non-condensing
Packing Information	Dimensions (L×W×H)	335 mm × 190 mm × 62 mm
	Accessories	<ul style="list-style-type: none"> • 1x Wi-Fi omnidirectional antenna • 1x Power adapter • 1x Quick Start Guide • 1x Packing list
Physical Specifications	Dimensions (L×W×H)	196.0 mm × 115.5 mm × 34.0 mm
	Net weight	301.8 g
	Gross weight	614.3 g
IP Rating	IP20 Please prevent the product from water intrusion and do not wet or wash the product.	
System Software	<ul style="list-style-type: none"> • Android operating system software • Android terminal application software • FPGA program <p>Note: Third-party applications are not supported.</p>	

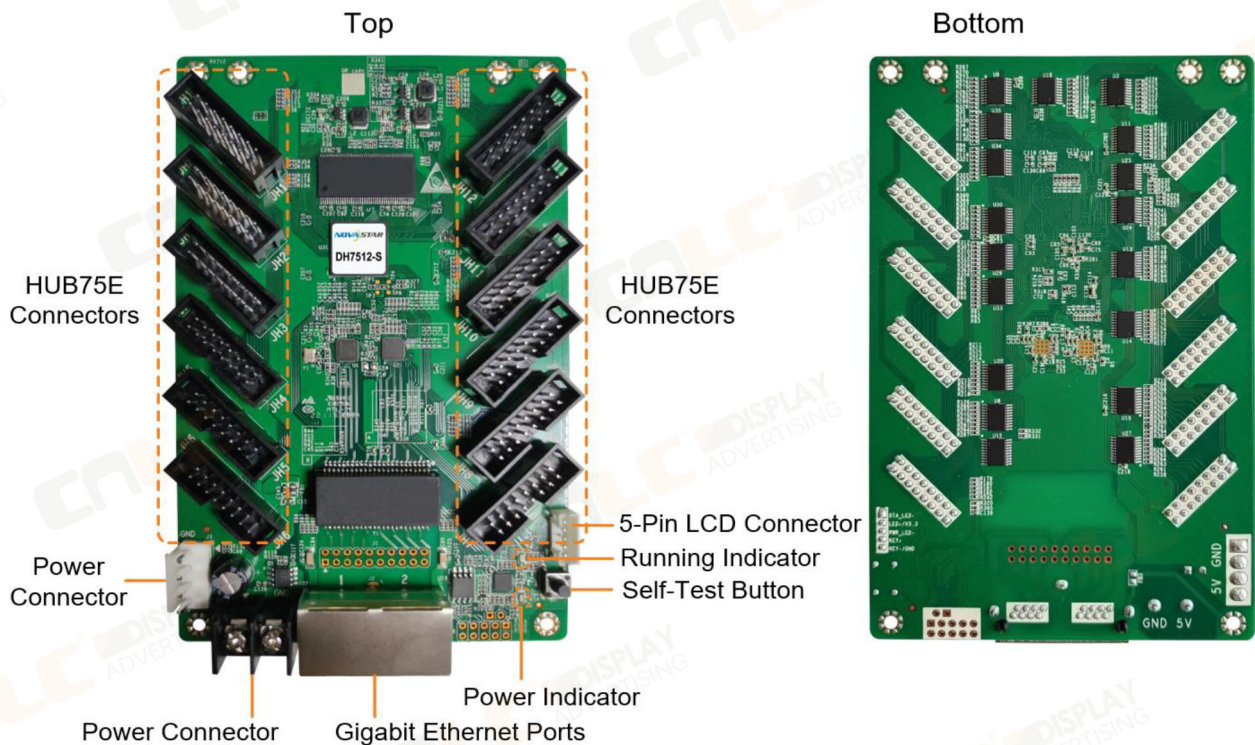
Audio and Video Decoder Specifications

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

Receiver card: DH7512-S

Appearance



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

Name	Description
HUB75E Connectors	Connect to the module.
Power Connector	Connect to the input power. Either of the connectors can be chosen.
Gigabit Ethernet Ports	Connect to the sending card, and cascade other receiving cards. Each connector can be used as input or output.
Self-Test Button	Set the test pattern. After the Ethernet cable is disconnected, press the button twice, and the test pattern will be displayed on the screen. Press the button again to switch the pattern.
5-Pin LCD Connector	Connect to the LCD.

Indicators

Name	Color	Status	Description
PWR	Red	Staying on	The power supply is working properly.
SYS	Green	Flashing once every 2 seconds	The operating system is functioning normally.
		Staying on/off	The operating system is malfunctioning.
CLOUD	Green	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.
		Flashing once every second	The Taurus is upgrading the operating system.
		Flashing once every 0.5 second	The Taurus is copying the upgrade package.
RUN	Green	Flashing once every second	The FPGA has no video source.
		Flashing once every 0.5 second	The FPGA is functioning normally.
		Staying on/off	The FPGA loading is abnormal.

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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

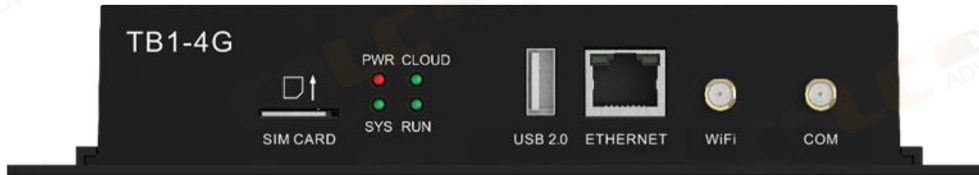
PH4 OUTDOOR SPECIFICATION

Module		
1	Pixel pitch	4mm
2	Pixel Density	62500 dots/m ²
3	Pixel configuration	1R1G1B
4	LED type	SMD1921
5	Module size	W320 *H160mm
6	Module weight	355±5g
7	Module resolution	W80*H40dots
8	Module QTY/ m ²	19.53 pcs/ m ²
9	Min. Viewing Distance	≥4m
10	Brightness	≥4500cd/m ²
11	Viewing Angle	H≥170°±5° V≥170°±5°
12	Driving Mode	1/10 scan
13	Interface	HUB75
14	Input voltage	4.2-5V
15	Max. Power Consumption	33 w Per piece
16	Avg. Power Consumption	17 w Per piece
17	Signal Processing Depth	16384
18	Vedio frame rate	60 frames/s
19	Refresh Rate	≥3840Hz
20	Defective Dots Rate	<0.0001 (LED industry standard: ≤ 0.0003)
21	Decay Rate(Operate 3 years)	≤15%
22	Brightness Conformity	≥98.5%
23	Colors	281 trillion
24	MTBF	≥10000 hours
25	Lifespan	≥100000 hours
26	Protective function	Over-heat/Over-load /Power-down /Power-leakage /Lightning-protection etc.
27	Operating Temperature	-20℃~+40℃
28	Operating Humidity	10-60% no condensation
29	Storage Temperature	-20℃~+60℃
30	Storage Humidity	10-60% no condensation
Control system parameter		
1	Color temperature	Adjustable by software.
2	Brightness level	256 levels, automatic or manual adjustment.
3	Control way	Computer, real-time, off-line, wireless, internet etc.
4	PC Operation	Windows(XP、 Vista)、 Win7/Win8. Win10
5	Video Signal	VGA/ DVI/ RF/ S-VIDEO/ RGBHV/ YUV/ YC/ COMPOSITION and so on
6	Communication Distance	Cat5 UTP 100 meters, Multimode optical fiber 500 meters, single 15 km.

Note: The specification may subject to change without prior notice.

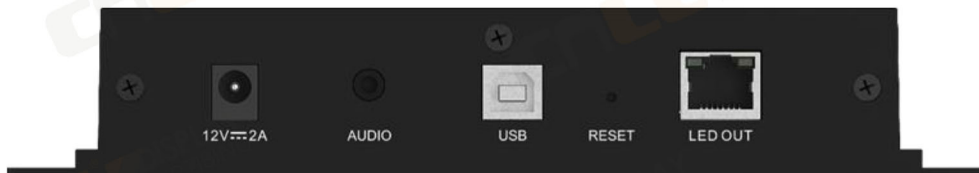
Appearance

Front Panel



Name	Description
SIM CARD	SIM card slot
USB 2.0	USB 2.0 (Type A) port, allowing for USB playback Only the FAT32 file system is supported and the maximum size of a single file is 4 GB.
ETHERNET	Fast Ethernet port, connecting to a network or control PC
WiFi	Wi-Fi antenna connector
COM	4G antenna connector

Rear Panel



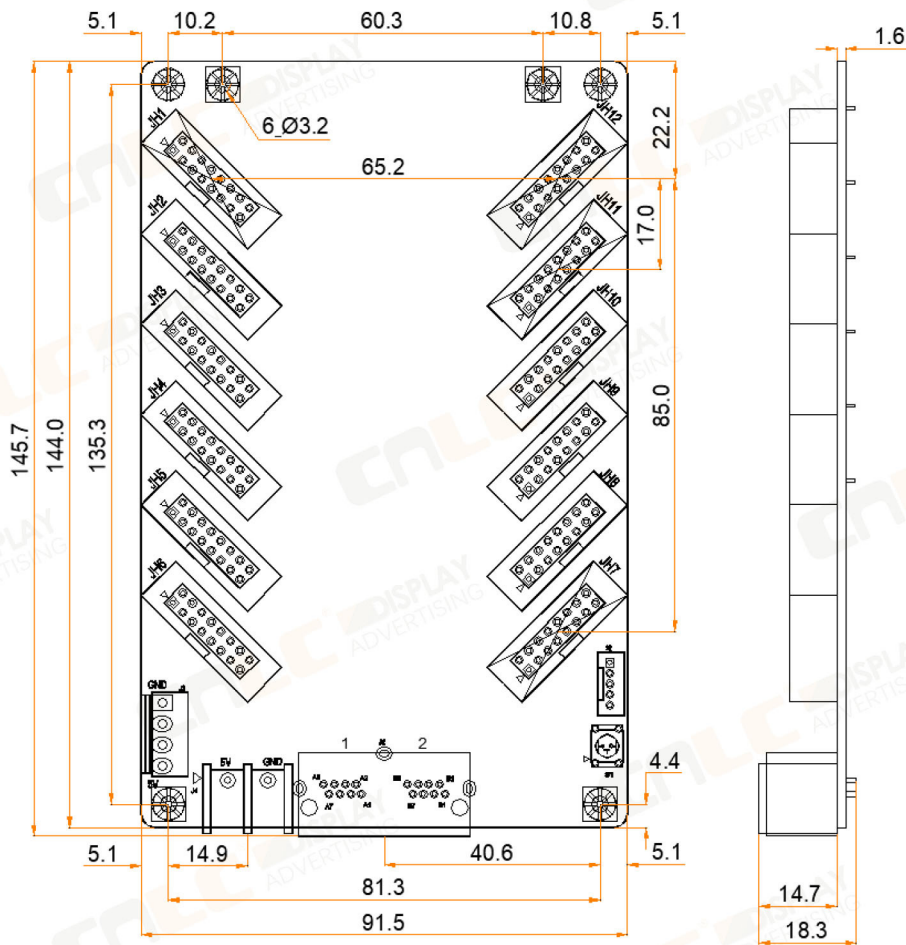
Name	Description
12V—2A	Power input connector
AUDIO	Audio output
USB	USB 2.0 (Type B) port
RESET	Factory reset button Press and hold this button for 5 seconds to reset the product to its factory settings.
LED OUT	Gigabit Ethernet output

Indicators

Indicator	Color	Status	Description
Running indicator	Green	Flashing once every 1s	The receiving card is functioning normally. Ethernet cable connection is normal, and video source input is available.
		Flashing once every 3s	Ethernet cable connection is abnormal.
		Flashing 3 times every 0.5s	Ethernet cable connection is normal, but no video source input is available.
		Flashing once every 0.2s	The receiving card failed to load the program in the application area and is now using the backup program.
		Flashing 8 times every 0.5s	A redundancy switchover occurred on the Ethernet port and the loop backup has taken effect.
Power indicator	Red	Always on	The power supply is normal.

Dimensions

The board thickness is not greater than 2.0 mm, and the total thickness (board thickness + thickness of components on the top and bottom sides) is not greater than 19.0 mm.



Tolerance: ± 0.3 Unit: mm

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/H EVC	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.

Size Specification:

