

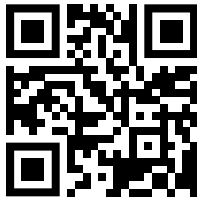
# Mirage SST Specifications

Learn about the product specifications. Due to continuing research, specifications are subject to change without notice.

## Product documentation

For installation, setup, and user information, see the product documentation available on the Christie website. Read all instructions before using or servicing this product.

1. Access the documentation from the Christie website:
  - Go to this URL: <http://bit.ly/2TI2aEW> or <https://www.christiedigital.com/en-us/3d/products-and-solutions/projectors/mirage-sst>.
  - Scan the QR code using a QR code reader app on a smartphone or tablet.



2. On the product page, switch to the **Downloads** tab.

## Related documentation

Additional information on this product is available in the following documents.

- *Mirage SST Product Safety Guide (P/N: 020-102992-XX)*
- *Mirage SST Installation and Setup Guide (P/N: 020-102956-XX)*
- *Mirage SST User Guide (P/N: 020-102993-XX)*
- *Mirage SST Status System Guide (P/N: 020-103007-XX)*
- *Mirage SST Serial Commands Guide (P/N: 020-103005-XX)*
- *Mirage SST Projector Head Service Guide (P/N: 020-103039-XX)*

## Technical support

Technical support for Christie Enterprise products is available at:

- North and South America: +1-800-221-8025 or [Support.Americas@christiedigital.com](mailto:Support.Americas@christiedigital.com)
- Europe, Middle East, and Africa: +44 (0) 1189 778111 or [Support.EMEA@christiedigital.com](mailto:Support.EMEA@christiedigital.com)

- Asia Pacific (*support.apac@christiedigital.com*)
  - Australia: +61 (0)7 3624 4888 or *tech-Australia@christiedigital.com*
  - China: +86 10 6561 0240 or *tech-supportChina@christiedigital.com*
  - India: +91 (80) 6708 9999 or *tech-India@christiedigital.com*
  - Japan: 81-3-3599-7481
  - Singapore: +65 6877-8737 or *tech-Singapore@christiedigital.com*
  - South Korea: +82 2 702 1601 or *tech-Korea@christiedigital.com*
- Christie Professional Services: +1-800-550-3061 or *NOC@christiedigital.com*

## Display

Learn about the display specifications.

Panel resolution and refresh rate	
Pixel format (H x V square pixels)	4096 x 2160
Processing path	23.97 - 120 Hz

Achievable contrast ratio
450:1 ANSI, up to 1800:1 Full Frame ON/OFF

Color and grayscale resolution	
Displayable colors	35.2 trillion
Grayscale resolution	45 bits total linear, 15 bits per RGB component

Gamma	
Nominal	2.2 ± 5%

## Control signal compatibility

Ethernet port	
Interface	10/100/1000 BaseT
Connector	Female RJ-45

3D sync	
Connector	BNC Male
Interface	TTL inputs and outputs

RS232 in	
Connector	9-pin subminiature D, female

RS232 in	
Bit rate	115,200 bps
Data format	1 start bit, 8 data bits, 1 stop bit, no parity

GPIO	
Connector	DE-9 Male
Interface	CDS GPIO/3D Trigger Support - 7bit configurable

Wired remote	
Connector	3-pin XLR female
Interface	Custom

## Optional input cards

Learn about the input cards that may be used with the projector.

Input card	Part number	Additional information
Dual 3G SD/HD-SDI	108-313101-02+	—
Dual Link DVI (DDIC)	108-312101-02+	Analog signals are not supported for this input card; therefore VGA port and VGA to DVI converters are not supported.
Twin HDMI (THIC)	108-311101-XX	—
Twin DisplayPort (TDPIC)	108-451101-XX	—
Terra SDVoE (TSIC)	144-132107-XX	—
Quad DisplayPort (QDPIC)	144-114107-XX	—
High Bandwidth Multi-Input Card (HBMIC)	144-116109-XX	—

## Temperature sensor thresholds

The projector shutdowns within one minute of an error threshold being reached.

Location	Warning	Error
Air intake	37°C (98.6°F)	—
Main control board	82°C (179.6°F)	95°C (203°F)
Main control board FPGA	85°C (185°F)	—
Backplane	82°C (179.6°F)	95°C (203°F)
Image processor scaler	85°C (185°F)	95°C (203°F)

Location	Warning	Error
Image processor warp-red	85°C (185°F)	95°C (203°F)
Image processor warp-green	85°C (185°F)	95°C (203°F)
Image processor warp-blue	85°C (185°F)	95°C (203°F)
Formatter-Red	85°C (185°F)	95°C (203°F)
Formatter-Green	85°C (185°F)	95°C (203°F)
Formatter-Blue	85°C (185°F)	95°C (203°F)
Option card 0	85°C (185°F)	95°C (203°F)
Option card 1	82°C (179.6°F)	95°C (203°F)
Option card 2	82°C (179.6°F)	95°C (203°F)
Option card 3	82°C (179.6°F)	95°C (203°F)
Option card 4	82°C (179.6°F)	95°C (203°F)
Housekeeping board	82°C (179.6°F)	95°C (203°F)

For the Red DMD warning and error limits, refer to *Red DMD temperature thresholds* (on page 5).

## Warning thresholds for fans (for low speed RPMS)

Learn the warning thresholds (in RPMS) for each fan. All fan warnings are set to ~75% of their normal operating speeds.

Location	Warning	Error
Radiator fan A (fan #13)	1600	0
Radiator fan B (fan #14)	1600	0
Radiator fan C (fan #15)	1600	0
Radiator fan D (fan #16)	1600	0
HIP blower A (fan #17)	800	0
HIP blower B (fan #18)	800	0
Side intake fan A (fan #7)	1000	600
Side intake fan B (fan #8)	1000	600
Side intake fan C (fan #9)	1000	600
Side intake fan D (fan #10)	1000	600
Formatter-green (fan #23)	800	0
Formatter-red (Fan #24)	800	0

Location	Warning	Error
Formatter-blue (fan #25)	800	0
Card cage exhaust (fan #30)	1600	0
Card cage exhaust (fan #31)	1600	0
Card cage intake (fan #32)	1600	0
Card cage intake (fan #33)	1600	0

## Warning threshold for liquid cooling module

Learn the warning thresholds (in RPMs) for the liquid cooling components.

Location	Warning
Liquid cooling pump	180 RPM

## Red DMD temperature thresholds

The following table details the warning and error limits based on the laser rack power level.

Rack type	Power level	Warning	Error
Type A	100	56°C (132.8°F)	61°C (141.8°F)
	90	59°C (138.2°F)	64°C (147.2°F)
	80	61°C (141.8°F)	66°C (150.8°F)
	70	59°C (138.2°F)	64°C (147.2°F)
	60	65°C (149°F)	70°C (158°F)
	50	65°C (149°F)	70°C (158°F)
Type B	100	50°C (122°F)	58°C (136.4°F)
	90	53°C (127.4°F)	61°C (141.8°F)
	80	55°C (131°F)	63°C (145.4°F)
	70	58°C (136.4°F)	66°C (150.8°F)
	60	59°C (138.2°F)	67°C (152.6°F)
	50	62°C (143.6°F)	70°C (158°F)



Types C, D, and E use the default limits:

- Warning = 60°C (140°F)
- Error = 65°C (149°F)

## Auto dimming levels

The following table indicates at what level of air intake temperature auto dimming is applied.

Auto dimming	Type A rack	Type B rack
100% auto dim to 90% at	25°C (77°F)	34°C (93.2°F)
90% auto dim to 80% at	30°C (86°F)	37°C (98.6°F)
80% auto dim to 70% at	35°C (95°F)	39°C (102.2°F)
70% auto dim to 60%	37°C (98.6°F)	41°C (105.8°F)
60% auto dim to 50% at	42°C (107.6°F)	45°C (113°F)

## Power requirements

Learn the power requirements for the Mirage SST.

Parameter	Requirement
Rated voltage	100 - 240 VAC
Rated current	5 A maximum
Line frequency	50/60 Hz
AC input coupler	IEC 320 - C14
AC inrush current	40 A maximum
Maximum power consumption	500 W
Standby power consumption	20 W

## Physical specifications

Learn the dimensions and weight of the projector.

Description	Dimensions
<b>Projector size</b>	
Overall size, case only (L x W x H) (excluding lens, stack, and feet)	710.5 x 596.9 x 304.8 (mm) 28 x 23.5 x 12 (inches)
Overall size (L x W x H) (includes skid)	965 x 838 x 654 (mm) 38 x 33 x 25.75 (inches)
<b>Projector weight</b>	
Without lens	51 Kg (112.5 lbs)
Shipping without lens (includes packaging)	71 kg (156 lbs)
<b>Operating position</b>	Omni-directional

## Environment

Learn about the environment requirements for projector while operating and not operating.

Operating environment	
Temperature	<ul style="list-style-type: none"> <li>• Type A: 10 to 24°C (50 to 75°F) at full power and at reduced power above 24°C (75°F)</li> <li>• Type B: 10 to 30°C (50 to 86°F) at full power and at reduced power above 30°C (86°F)</li> <li>• Type C, D, E : 10 to 35°C (50 to 95°F) at full power</li> </ul>
Humidity (non-condensing)	20 to 80%
Altitude	3000 meters (10,000 feet) maximum at 10 to 25°C (50 to 77°F) ambient

Non-operating environment	
Temperature	-40 to 70°C (-40 to 158°F)

## Light illumination source specifications

Learn about the approved Christie-supplied light illumination sources for Mirage SST.

### Christie-supplied approved light illumination sources

Christie-supplied light illumination source	Part number
<b>Type A</b>	
Laser source type A, 10 m	168-101103-XX
Laser source type A, 20 m	168-101114-XX
Laser source type A, 30 m	168-101125-XX
Laser source type A, 50 m	168-101136-XX
<b>Type B</b>	
Laser source type B, 8 m	168-106108-XX
Laser source type B, 10 m	168-106119-XX
Laser source type B, 20 m	168-106120-XX
Laser source type B, 30 m	168-106131-XX
Laser source type B, 50 m	168-106142-XX
<b>Type C</b>	
Laser source type C, 8 m	168-107109-XX
Laser source type C, 10 m	168-107110-XX
Laser source type C, 20 m	168-107121-XX

<b>Christie-supplied light illumination source</b>	<b>Part number</b>
Laser source type C, 30 m	168-107132-XX
Laser source type C, 50 m	168-107143-XX
<b>Type D</b>	
Laser source type D, 8 m	168-108100-XX
Laser source type D, 10 m	168-108111-XX
Laser source type D, 20 m	168-108122-XX
Laser source type D, 30 m	168-108133-XX
Laser source type D, 50 m	168-108144-XX
<b>Type E</b>	
Laser source type E, 8 m	168-109101-XX
Laser source type E, 10 m	168-109112-XX
Laser source type E, 20 m	168-109123-XX
Laser source type E, 30 m	168-109134-XX
Laser source type E, 50 m	168-109145-XX

**Physical specifications**

<b>Description</b>	<b>Dimensions</b>
Width	778 mm (30.63 inches)
Depth	803 mm (31.61 inches)
Height	690 mm (27.17 inches)
Weight	150 kg (330.7 lbs)

**Environment specifications**

<b>Parameter</b>	<b>Requirement</b>
Operating ambient temperature	10 to 35°C (50 to 95°F)
Relative humidity	10 to 85%*
Storage temperature	-20 to 60°C (-4 to 140°F)

\* Noncondensing

**Electrical specifications**

<b>Parameter</b>	<b>Requirement</b>
Rated voltage	200-240 VAC, single phase
Line frequency	50/60 Hz



Parameter	Requirement
Maximum power consumption	5 kW

## Chiller specifications

Learn the specifications required for the chiller used to cool the laser illumination source.

Characteristics	Minimum	Typical	Maximum
Coolant	20% propylene glycol with additives, 80% distilled water		
Coolant temperature*	19°C (66°F)	22°C (71.6°F)	25°C (77°F)
Coolant temperature stability	—	0.1°C	0.5°C
Laser cold start temperature	19°C (66°F)	—	—
Warm up time	—	5 minutes	15 minutes
Coolant pressure	1.5 bar	—	3.5 bar
Coolant flow rate	20 liters/minute	—	—

\* Always above dew point.



When the projectors are used in a projection array, the chiller specifications are between 19°C (66°F) to 22°C (71.6°F) with a 0.1°C stability.

### Chiller cooling capacity

Light illumination source	Chiller cooling capacity
Type A	5.5kW
Type B	5.0kW
Type C	4.0kW
Type D	4.0kW
Type E	3.0kW

## Accessories

Learn about the accessories available for the projector.

### Projection lenses (sold separately)

Description	Part number
<b>High brightness lenses</b>	
0.38:1 4K enhanced	144-136101-XX
0.72:1 HB fixed	144-110103-XX

<b>Description</b>	<b>Part number</b>
0.9:1 fixed lens	144-111014-XX
1.13-1.31:1 HB zoom	144-103105-XX
1.13-1.66:1 HB zoom	144-129103-XX
1.31-1.63:1 HB zoom	144-104106-XX
1.45-2.17:1 HB zoom	144-130105-XX
1.63-2.17:1 HB zoom	144-105107-XX
1.95-3.26:1 HB zoom	144-131106-XX
1.99-2.71:1 HB zoom	144-106108-XX
2.71-3.89:1 HB zoom	144-107109-XX
3.89-5.43:1 HB zoom	144-108100-XX
4.96-7.69:1 HB zoom	144-109101-XX
<b>Ultra high contrast lenses</b>	
0.72:1 UHC 4K	163-116109-XX
0.9:1 UHC 4K	163-117100-XX
1.13-1.66:1 UHC 4K	163-118101-XX
1.45-2.17:1 UHC 4K	163-119102-XX
1.95-3.26:1 UHC 4K	163-120103-XX
2.71-3.89:1 UHC 4K	163-121105-XX
3.89-5.43:1 UHC 4K	163-122106-XX

**UPS power cord**

<b>Description</b>	<b>Part Number</b>
North America 125V/15A	108-429107-XX
Japan 125V/15A	108-447106-XX
China 250V/10A	108-417103-XX
UK 250V/10A	108-431109-XX
EU/Korea 250V/10A	108-418104-XX
Australia 250V/10A	108-436104-XX
South Africa/India 250V/10A	108-504100-XX

**Filters and coolant**

<b>Description</b>	<b>Part Number</b>
Air intake filter	003-006739-XX

Description	Part Number
Side-intake air filter—5 pack	003-005173-XX
Propylene glycol 10L coolant	003-006744-XX
Propylene glycol 740 coolant	003-005179-XX

### Miscellaneous

Other accessories (sold separately)	
Description	Part number
IR remote	003-120918-XX
Mystique	900-100285-XX 900-100286-XX 900-100274-XX 900-100275-XX
Christie Guardian	156-134109-XX 156-135100-XX
Rigging frames	165-101103-XX
Rigging frame adapter plate	168-105107-XX
Rigging handles	168-104106-XX



**Notice.** If not avoided, the following could result in property damage.

- Use appropriate packaging when shipping the product installed in the frame.

## Regulatory

This product conforms to the latest regulations and standards related to product safety, environmental, and electromagnetic compatibility (EMC) requirements.

## Safety

- ANSI/UL 60950-1 – Information Technology Equipment – Safety – Part 1: General Requirements
- CAN/CSA C22.2 No. 60950-1-07 – Information Technology Equipment – Safety – Part 1: General Requirements
- IEC/EN 60825-1 – Safety of Laser Products – Part 1: Equipment Classification and Requirements
- IEC/EN 60950-1 – Information Technology Equipment – Safety – Part 1: General Requirements
- IEC/EN 62471-5 – Photobiological Safety of Lamps and Lamp Systems – Part 5: Image projectors

## Electro-magnetic compatibility

### Emissions

- CAN ICES-003 (A)/NMB-003 (A) – Information Technology Equipment (Including Digital Apparatus) – Limits and Methods of Measurement
- CISPR 32/EN 55032, Class A – Electromagnetic Compatibility of Multimedia Equipment – Emission Requirements
- FCC CFR47, Part 15, Subpart B, Class A – Unintentional Radiators
- IEC 61000-3-2/EN61000-3-2: Limits for harmonic current emissions for equipment with input current  $\leq 16$  A
- IEC 61000-3-3/EN61000-3-3: Limitations of Voltage Changes, Voltage Fluctuations, and Flicker input current  $\leq 16$  A

### Immunity

- CISPR 24/EN55024 EMC Requirements – Information Technology Equipment

## Environmental

- China Ministry of Information Industry (along with 7 other Government Agencies) Order No.32 (01/2016) on the control of pollution caused by electronic information products, hazardous substances concentration limits (GB/T 26572 - 2011), and the applicable product marking requirement (SJ/T 11364 - 2014).
- EU Directive (2011/65/EU) on the restriction of the uses of certain hazardous substances (RoHS) in electrical and electronic equipment and the applicable official amendment(s).
- EU Directive (2012/19/EU) on waste and electrical and electronic equipment (WEEE) and the applicable official amendment(s).
- Regulation (EC) No. 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH) and the applicable official amendment(s).