Mirage 4K40-RGB

Status System

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Content

Mirage 4K40-RGB status system

This guide contains information about the values and fault conditions that can be reported by the status system on Mirage 4K40-RGB devices.

The status system provides an overview of the device at the current point in time. It contains a number of groups, which contain a set of status items. Each status item represents a component or sub-component of the system. Obtain specific details regarding a warning or error for a status item using the log system.

The numbers next to the status items in this guide correspond directly to the status item index within each group.

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.

Mirage 4K40-RGB

1. Access the documentation from the Christie website:

   - Go to this URL: *bit.ly/2C6H4HZ* or.
     https://www.christiedigital.com/en-us/business/products/projectors/3-chip-dlp/3d-projectors.

   - Scan the QR code using a QR code reader app on a smartphone or tablet.

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

Related documentation

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

- *4K40-RGB Product Safety Guide (P/N: 020-102957-XX)*
- *Mirage 4K40-RGB Installation and Setup Guide (P/N: 020-103014-XX)*
- *Mirage 4K40-RGB User Guide (P/N: 020-103015-XX)*
- *Mirage 4K40-RGB Specifications Guide (P/N: 020-103016-XX)*

- *Mirage 4K40-RGB Serial Commands Guide (P/N: 020-103028-XX)*
- *4K40-RGB Service Guide (P/N: 020-102960-XX)*

Status system states

The status system has three states to indicate the health of the device.

	OK	No known issue
	Warning	A problem with this item should be addressed.
	Error	A problem with this item prevents the projector from properly displaying video or turning on the projector.

Configuration Group (SST+CONF?)

The Configuration Group provides values and fault conditions for configuration-related items in Mirage 4K40-RGB.

#	Status	State	Value	Description
0	Projector Model		<projector model>	Displays the model for the Mirage 4K40-RGB projector.
			Unknown	Cannot retrieve the model information.
			Jig Mode	Reserved for engineering use.
1	Projector S/N		<serial number>	Displays the serial number of the projector.
			Unknown	The storage device containing the information is inaccessible or the data on the device is corrupted.
2	Output Resolution		<horizontal>x<vertical>	Displays the native output resolution of the projector.
3	Projector Build Date		<YYYY>/<MM>/<DD>	Displays the build date of the projector.
			Unknown	The storage device containing the information is inaccessible or the data on the device is corrupted.

System Group (SST+SYST?)

The System Group provides values and fault conditions relating to the system and its health for Mirage 4K40-RGB.

#	Status	State	Value	Description
0	Projector Hours	☐	<hours>:<minutes>	Displays the total amount of time that the projector has been on (including warm up and cool down times). This does not include the amount of time required to cool down the electronics when turning off the Keep Electronics on in Standby option while the projector is already in standby.
		🟧	N/A	Cannot retrieve or update the value.
1	Pitch/Roll	☐	<pitch value>/<roll value>	Provides the physical orientation of the projector: • A negative pitch means that the projector is pointing down. • A negative roll means the projector is tilted counter clockwise as seen from the rear.
		🟧	Communication Fault	Information is not available due to a hardware fault.
5 6 7 8	Lens Motor Horizontal-Axis Lens Motor Vertical-Axis Lens Motor Zoom- Axis Lens Motor Focus- Axis	☐	Calibrating	Currently calibrating the lens motor.
		☐	Calibrated	The motor range has been properly calibrated.
		☐	Unknown	The status of the motor is unknown because a problem occurred in the upstream communication path.
		🟧	Uncalibrated	The range for the current lens has not been determined and/or the reported position on the axis may be inaccurate.
		🟧	Failed	During reset or calibration, an error was detected related to the motor and/or sensor.
9	Built-In Self Test	☐	N/A	The built-in self test has not been executed yet.
		☐	Passed	The built-in self test completed successfully.
		🟧	Failed	The built-in self-test failed.

#	Status	State	Value	Description
10	System ID Board	☐	OK	The device has been properly detected and initialized.
		☐	Unknown	The status of the device is unknown.
		🟥	Communication Fault	Cannot communicate with the device.
		🟥	Invalid Data	The information on the device is missing or corrupted.
11	Housekeeping Board	☐	OK	The device has been properly detected and initialized.
		☐	Unknown	The status of the device is unknown.
		🟧	Communication Fault	The device failed to respond or provided a bad response to a command while the light source is on. The projector remains on until AC power is removed, even if this warning condition is fixed.
		🟥	Detection Fault	Cannot read the device hardware information.
		🟥	Initialization Fault	Cannot properly initialize the device.
		🟥	Communication Fault	The device failed to respond or it provided a bad response to a command while the projector is in standby mode.
12	Keypad Display	☐	Auto Detect	The projector is attempting to detect the presence of the keypad display device.
		☐	Programming	Programming the device with the correct firmware.
		☐	OK	The device has been properly detected and initialized.
		🟧	Detection Fault	Cannot detect the keypad display device.
		🟧	Unexpected Behavior	The device is not responding correctly.
		🟧	Upgrade Failed	The device failed to upgrade properly.
27	Power Supply Input Voltage	☐	OK	The power supply input voltage is OK.
		🟧	AC Input Low	Displayed when the AC input is less than 180 VAC.

#	Status	State	Value	Description
		🟧	AC Input Failure	Displayed when the AC input is less than 85 VAC or the power is completely lost.
29	Lens ID	⬜	Detected	The lens was detected.
		⬜	Unknown	The communication path to the lens is not working; therefore, the state is unknown.
		🟧	Not Detected	Cannot detect the lens.
30	Main Control Board	⬜	OK	The main control board has been initialized at least once and is known to be OK.
		⬜	Unknown	The main control board status is unknown because it has not been powered up yet.
		🟥	Initialization Fault	Cannot successfully program the main control board.
32	12V Power Supply Output Voltage	⬜	<value>V	Displays the output voltage from the 12V power supply.
		⬜	Unknown	Displayed if the housekeeping board is not yet initialized.
33	48V Power Supply Output Voltage	⬜	<value>A	Displays the output voltage from the 48V power supply.
		⬜	Unknown	Displayed if the housekeeping board is not yet initialized.
46	Status LED Board	⬜	OK	The status of the status LED board (SLB) is OK.
		⬜	Unknown	Cannot determine the status of the status LED board (SLB) because the backpane (C4BP) is nonfunctional.
		🟧	Communication Fault	Cannot communicate with the status LED board (SLB).
47	Side Panel NFCT	⬜	OK	The side panel NFCT is OK.
		⬜	Unknown	The side panel NFCT status is unknown because the IKB is non-functional.
		🟧	Communication Fault	Cannot write to or read from the side panel NFCT.
48	Backplane	⬜	OK	The backplane has been properly detected and initialized.
		🟥	Detection fault	Cannot read the backplane hardware information.

#	Status	State	Value	Description
		🟥	Initialization fault	Cannot properly initiate the backplane.
		🟥	Runtime fault	The backplane experienced an unrecoverable failure during runtime.
49	Image Processor	⬜	Off	The image processor is in standby without any cached errors or warnings.
		⬜	OK	The image processor has been properly detected and initialized.
		⬜	Unknown	Cannot determine the image processor status due to an upstream issue.
		🟥	Detection fault	Cannot read the image processor hardware information.
		🟥	Initialization fault	Cannot properly initialize the image processor.
		🟥	Runtime fault	The image processor experienced an unrecoverable failure during runtime.
50 51 52	Formatter-Red Formatter-Green Formatter-Blue	⬜	Off	The formatter is in standby without any cached errors or warnings.
		⬜	OK	The formatter has been properly detected and initialized.
		⬜	Unknown	Cannot determine the formatter status due to an upstream issue.
		🟧	Power Bad	The formatter detected an unexpected power glitch and has started the process of parking the DMD. This is often recoverable.
		🟥	Detection Fault	Cannot read the formatter hardware.
		🟥	Initialization Fault	Cannot properly initialize the formatter.
		🟥	Runtime Fault	The formatter experienced an unrecoverable failure during runtime.
		🟥	Failed to configure clock	During initialization the clock could not be configured.
		🟥	Failed to program FPGA	During initialization programming the FPGA failed.
		🟥	Memory calibration failed	During initialization an error occurred with memory calibration.
		🟥	Communication fault	Cannot write to or read from the formatter board.

#	Status	State	Value	Description
53 54 55 56 57	Option Card 0 Option Card 1 Option Card 2 Option Card 3 Option Card 4		Off	The option card is in standby without any cached errors or warnings.
			OK	The option card has been properly detected and initialized.
			Not Present	An option card is not installed in this slot.
			Unknown	Cannot determine the option card status due to an upstream issue.
			Detection fault	Cannot read the option card hardware information.
			Initialization fault	Cannot properly initialize the option card.
			Runtime fault	The option card experienced an unrecoverable failure during runtime.
58	Shutter		OK	The shutter is detected and operating properly.
			Unknown	Cannot determine the status of the device.
			Failed	Failed to reach the close position when the shutter is closed. Mute the DMD.
			Detection Fault	Failed to detect the shutter.
			Failed	Failed to reach the open position when the shutter is opened.
92	Power Supply 12VA		OK	Displayed when the power supply initializes successfully.
			Unknown	Displayed if the housekeeping board is not yet initialized.
			Communication Fault	Displayed if the 12V power supply fails to respond to the commands for getting its hardware version information.
			OverVoltage Detected	Displayed when the overvoltage protection circuit is tripped.
93	Power Supply 48VA		OK	Displayed when the power supply initializes successfully.
			Unknown	Displayed if the housekeeping board is not yet initialized.
			Communication Fault	Displayed if the 48V power supply fails to respond to the commands for getting its hardware version information.

#	Status	State	Value	Description
		🟧	OverVoltage Detected	Displayed when the overvoltage protection circuit is tripped.
96	12V Power Supply Output Current	⬜	<value>A	Displays the output current from the 12V power supply.
		⬜	Unknown	Displayed if the housekeeping board is not yet initialized.
97	48V Power Supply Output Current	⬜	<value>A	Displays the output current from the 48V power supply.
		⬜	Unknown	Displayed if the housekeeping board is not yet initialized.
100	Rotating Diffuser	⬜	<value> RPM	The diffuser is spinning at more than 500 RPM.
		⬜	Off	The diffuser is off.
		⬜	Unknown	Displayed if the housekeeping board is not yet initialized.
		🟧	<value> RPM - Low RPM	The diffuser is spinning less than 500 RPM but more than 100 RPM.
		🟧	Failed	The diffuser is spinning at less than 100 RPM.
143	Photon Module	⬜	OK	The module is working properly.
		⬜	Unknown	Upstream communication is down.
		🟧	Communication Fault	Cannot communicate with the photon module when the laser is on.
		🟧	Programming	Upgrading the photon software.
		🟥	Detection Fault	Cannot communicate with the photon module after system start up.
		🟥	Communication Fault	Cannot communicate with the photon module and remains after the laser is turned off. When the lasers are turning off, the software only checks if lost communication has been recovered and does not capture if established communication was lost.
		🟥	Upgrade Failed	The upgrade failed.

Signal Group (SST+SIGN?)

The Signal Group provides values and fault conditions relating to the video signal status for Mirage 4K40-RGB.

#	Status	State	Value	Description
0 1 2 3 4 11 12 21 22 31 32 41 42	HDBaseT Input Card 0, Input 1 Card 0, Input 2 Card 0, Input 3 Card 0, Input 4 Card 1 - Input 1 Card 1 - Input 2 Card 2 - Input 1 Card 2 - Input 2 Card 3 - Input 1 Card 3 - Input 2 Card 4 - Input 1 Card 4 - Input 2	☐	N/A	Either the card is not present or the card does not have a single input port.
		☐	<input type> (No Signal)	No signal is detected. Where <input type> : {DP, HDMI, DVI, 3G-SDI}
		☐	<input type>, <active window>@ <v-sync rate> (<status>)	Where <input type> : {DP, HDMI, DVI, 3G-SDI} <active window> : <columns>x<rows> <v-sync rate> : the input frame rate, in Hz (##.##Hz) <status> : {"Master", "No signal", "Inactive", "Locked"}
		☐ (orange)	<input type> <active window> @ <v-sync rate> (<status>)	Where <input type> : {DP, HDMI, DVI, 3G-SDI} <active window> : <columns>x<rows> <v-sync rate> : the input frame rate, in Hz (##.##Hz) <status> : {"Unlocked", "Out of phase"}
50	Output Frequency	☐	N/A	No video is being displayed.
		☐	<rate>Hz	Where <rate> : the output frame rate, in Hertz If the input frequency does not match the output frequency, `Free Running @ XX.YYHz` is displayed.
51	Frame Locked	☐	N/A	No video is being displayed or an internal test pattern is being displayed.
		☐	Locked	The output is locked to the selected input(s).
		☐	Unlocked	The output is not locked to the selected input(s).

#	Status	State	Value	Description
52	3D Sync	☐	N/A	There is no 3D signal or 3D mode is set to Off.
		☐	Valid 3D Sync	A valid external 3D synch is detected.
		☐	Internal 3D Sync	The system is using the internal v-sync signal because the video is configured as a Dual-Input. External synch is ignored.
		🟧	Invalid 3D Sync (using internal sync)	There is an external 3D sync detected but it is not locked and/or in phase with the 3D video signal(s). The system is using the internal v-sync signal instead may have L/R swapped.
		🟧	No 3D Sync (using internal sync)	There is no external 3D sync detected. The system is using the internal v-sync signal instead but may have L/R swapped.
53	TSIC Connection	☐	N/A	Either the card is not present or the card does not have a single input port.
		☐	No Signal	No signal is detected.

Light Group (SST+LGHT?)

The Light Group provides values and fault conditions relating to the light source status for Mirage 4K40-RGB.

#	Status	State	Value	Description
0	Combiner State	☐	On	The lasers are on.
		☐	Off	The lasers are off.
		☐	Warming Up	The lasers are in the process of turning on.
		☐	Cooling Down	The lasers are off and returning to ambient temperature.
		☐	Waiting to Strike	Lasers will start getting ready to turn on when the lasers have cooled down sufficiently.
	Laser Bank Serial No	☐	<serial number>	Displays the laser rack serial number.
		☐	Unknown	Cannot retrieve the laser rack serial number.

#	Status	State	Value	Description
	Laser Bank Model	☐	<rack type>	Displays the type of laser rack connected (Type–fiber length)
		☐	Unknown	Cannot retrieve the laser rack type information.
	Laser Bank Firmware	☐	<laser bank software version>	Displays the version of the laser rack connected.
		☐	Unknown	Cannot retrieve the version laser rack connected.
	Laser Bank State	☐	On	The laser rack is on.
		☐	Stand By	The laser rack is in Standby mode.
		☐	Unknown	Cannot retrieve the status of the laser rack.
		☐	Cooling Down	The laser rack is cooling down.
		🟧	Connecting	The projector head is connecting to the laser rack.
		🟧	Handshaking	The projector head is handshaking with the laser rack.
		🟧	Warming Up	The laser rack is warming up.
		🟥	Disconnected	The laser rack is in Standby mode.
	Laser Bank Status	☐	OK	The laser rack health status is OK.
		☐	Unknown	Cannot retrieve the status of the laser rack.
		🟧	Warning	The laser rack health status has some warnings.
	Laser System Interlock	☐	Open	The laser rack interlock status is open.
		☐	Closed	The laser rack interlock status is closed.
		☐	Unknown	Cannot retrieve the status of the laser rack interlock.
	Laser Bank Armed State	☐	Armed	The Green button on the laser rack is pressed and the laser is armed.
		☐	Not Armed	The Green button the laser rack is not pressed and the laser is not armed.

#	Status	State	Value	Description
		🟧	Unknown	Cannot retrieve the status of the Green button on the laser rack.
	Laser Bank Color Balance	⬜	OK	The color balance is OK.
		⬜	Unknown	Cannot retrieve the status of the color balance.
		🟧	Warning	The color balance has a warning.
		🟥	Error	The color balance has an error.
	Ambient Temperature	⬜	OK	The ambient temperature setting is OK.
		⬜	Unknown	Cannot retrieve the status of the ambient temperature.
		🟧	Higher Than The Maximum Value	The maximum ambient temperature setting is less than the actual ambient temperature.
	Applied Laser Power	⬜	<applied laser power> - OK	The applied laser power is the same as the user set value.
		🟧	<applied laser power> - Ambient Approaching Limits	The user-set laser power value will be changed if the ambient condition continues to increase.
		🟧	<applied laser power> - Reduced Due to Ambient	The user-set laser power value is reduced due to the ambient condition.

Version Group (SST+VERS?)

The Version Group provides values and fault conditions related to software and hardware versions for Mirage 4K40-RGB.

#	Status	State	Value	Description
0	Main Control Board SW Version	⬜	<version>	Displays the software version running on the main control board.
		🟧	Unknown	Cannot determine the software version information.
1	Main Control Board HW Version	⬜	<name>.<level>.<mod>	<name> = Short name of the board <level> = Version of the board <mod> = Modification level of the board

#	Status	State	Value	Description
		🟥	Detection Fault	Cannot read the board type information.
2	Backplane HW Version	☐	\<name\>.\<level\>.\<mod\>	\<name\> = Short name of the board \<level\> = Version of the board \<mod\> = Modification level of the board This information is cached while the projector is in standby.
		☐	N/A	The backplane has never been turned on or initialized.
3	Image Processor HW Version	☐	\<name\>.\<level\>.\<mod\>	\<name\> = Short name of the board \<level\> = Version of the board \<mod\> = Modification level of the board This information is cached while the projector is in standby.
		☐	N/A	The image processor board has never been turned on or initialized.
4 5 6	Formatter-Red HW Version Formatter-Green HW Version Formatter-Blue HW Version	☐	\<name\>.\<level\>.\<mod\>	\<name\> = Short name of the board \<level\> = Version of the board \<mod\> = Modification level of the board This information is cached while the projector is in standby.
		☐	N/A	The formatter has never been turned on.
7 8 9 10	Option Card 1 HW Version Option Card 2 HW Version Option Card 3 HW Version Option Card 4 HW Version	☐	\<name\>.\<level\>.\<mod\>	\<name\> = Short name of the board \<level\> = Version of the board \<mod\> = Modification level of the board This information is cached while the projector is in standby.
		☐	N/A	The option card has never been turned on or initialized.
17	Power Supply HW Version	☐	\<model\>.\<version\>.\<name\>	The version information of the 48V power supply.
		☐	Unknown	Displayed if the housekeeping board is not yet initialized.

#	Status	State	Value	Description
18	Housekeeping Board HW Version	☐	<name>.<level>.<mod>	<name> = Name of the board (such as HKBC) <level> = Hardware version of the board <mod> = Modification level of the board
		☐	Unknown	Cannot retrieve the hardware version.
19	Keypad Display HW Version	☐	<name>.<level>.<mod>	<name> = Name of the board (such as IKB) <level> = Hardware version of the board <mod> = Modification level of the board
		☐	Unknown	The board is not ready yet so the hardware version has not been retrieved.
34	Option Card 0 HW Version	☐	<name>.<level>.<mod>	<name> = Short name of the board <level> = Version of the board <mod> = Modification level of the board This information is cached while the projector is in standby.
		☐	N/A	The option card has never been turned on or initialized.
59	Photon SW Version	☐	<major>.<minor>.<mod>-<Rev>(Boot)/<major>.<minor>.<mod>-<Rev>(Main)	Displays the Photon bootloader software version and Photon Main firmware software version.
		☐	Unknown	Cannot communicate with the Photon module or programming firmware.

Temperature Group (SST+TEMP?)

The Temperature Group provides values and fault conditions for temperature-related items in Mirage 4K40-RGB.

#	Status	State	Value	Description
2	Air Intake Temperature	☐	<value> °C	Displays the current temperature of the sensor.
		☐	Unknown	Temperature reading is unavailable.

#	Status	State	Value	Description
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
4	Main Control Board Temperature	⬜	<value> °C	Displays the current temperature of the sensor.
5	Backplane Temperature			
6	Image Processor Scaler Temperature	⬜	N/A	Temperature reading is unavailable.
7	Image Processor Warp-Red Temp			
8	Image Processor Warp-Green Temp	🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
9	Image Processor Warp-Blue Temp			
10	Formatter-Red Temperature	🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
11	DMD Waterblock Temperature	⬜	<value> °C	Displays the current temperature of the sensor.
		⬜	Unknown	Temperature reading is unavailable.
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	Not Present	The temperature sensor is not present.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.

#	Status	State	Value	Description
12	Formatter-Green Temperature	☐	<value> °C	Displays the current temperature of the sensor.
14	Formatter-Blue Temperature			
16	Option Card 1 Temperature	☐	N/A	Temperature reading is unavailable.
17	Option Card 2 Temperature			
18	Option Card 3 Temperature	🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
19	Option Card 4 Temperature			
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
20	Housekeeping Board Temperature	☐	<value> °C	Displays the current temperature of the sensor.
		☐	Unknown	Temperature reading is unavailable.
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
29	Main Control Board FPGA Temperature	☐	<value> °C	Displays the current temperature of the sensor.
		☐	N/A	Temperature reading is unavailable.
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.

#	Status	State	Value	Description
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
37	Option Card 0	⬜	<value> °C	Displays the current temperature of the sensor.
		⬜	N/A	Temperature reading is unavailable.
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.
64 65	12V A Power supply temperature 48V A Power supply temperature	⬜	<value> °C	Displays the current temperature of the sensor.
		⬜	Unknown	Temperature reading is unavailable.
		🟧	<value> °C - Low Temperature	Temperature is sitting inside the warning band.
		🟧	<value> °C - High Temperature	Temperature is sitting inside the warning band.
		🟥	<value> °C - Too Hot (shutdown)	Temperature is exceeding the error threshold.
		🟥	<value> °C - Too Cold (shutdown)	Temperature is below the error threshold.
		🟥	Communication Fault (shutdown)	Cannot retrieve the temperature from sensor.

Cooling Group (SST+COOL?)

The Cooling Group provides values and fault conditions related to cooling and fans for Mirage 4K40-RGB.

#	Status	State	Value	Description
3 5 6 8	Formatter-Green (Fan 4) Card Cage Intake (Fan 52) Card Cage Intake (Fan 53) HIP Blower A (Fan 1)	⬜	<tach> RPM	Displays the current tachometer reading.
		⬜	Off	Fan is off.

#	Status	State	Value	Description
9	Card Cage Exhaust (Fan 50)	☐	Unknown	The tachometer reading is unavailable.
10	Card Cage Exhaust (Fan 51)			
12	Liquid Cooling Flow Meter	🟧	Off - Overridden	Fan is off. The fan speed has been changed from its default recommended value.
15	HIP Blower B (Fan 2)			
31	Formatter-Red (Fan 5)			
45	Formatter-Blue (Fan 3)	🟧	\<tach> RPM - Overridden	Fan is on. The fan speed has been changed from its default recommended value.
55	Radiator 1 Fan A (Fan 6)			
56	Radiator 1 Fan B (Fan 7)			
57	Radiator 1 Fan C (Fan 8)			
58	Radiator 1 Fan D (Fan 9)	🟧	\<tach> RPM - Low RPM	Fan tachometer reading is lower than the minimum recommended speed.
59	Radiator 1 Fan E (Fan 10)			
60	Radiator 1 Fan F (Fan 11)			
61	Radiator 1 Fan G (Fan 12)			
62	Radiator 1 Fan H (Fan 13)			
63	Radiator 1 Fan I (Fan 14)			
64	Radiator 1 Fan J (Fan 15)			
65	Radiator 1 Fan K (Fan 16)			
66	Radiator 1 Fan L (Fan 17)			
85	LDCC 1 Fan A (Fan 21)			
86	LDCC 1 Fan B (Fan 22)			
87	LDCC 1 Fan C (Fan 23)			
88	LDCC 1 Fan D (Fan 24)			
93	Intake A (Fan 25)			
94	Intake B (Fan 26)			
95	Intake C (Fan 27)			
96	Intake D (Fan 28)			
97	Intake E (Fan 29)			
98	Intake F (Fan 30)			
99	Liquid Cooling Pump			

Serial Group (SST+SERI?)

The Serial Group provides values and fault conditions related to hardware serial numbers for Mirage 4K40-RGB.

#	Status	State	Value	Description
0	Main Control Board S/N	☐	\<serial number>	Displays the electronic serial number of the main control board.
		🟧	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly.

#	Status	State	Value	Description
1	Backplane S/N	☐	<serial number>	Displays the electronic serial number of the backplane.
		☐	N/A	The information is not currently available (card not present or not powered).
		☐ (orange)	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly
2	Image Processor S/N	☐	<serial number>	Displays the electronic serial number of the board.
		☐	N/A	The information is not currently available (card not present or not powered).
		☐ (orange)	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly
3 4 5	Formatter-Red S/N Formatter-Green S/N Formatter-Blue S/N	☐	<serial number>	Displays the electronic serial number of the formatter.
		☐	N/A	The information is not currently available (card not present or not powered).
		☐ (orange)	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly
6 7 8 9	Option Card 1 S/N Option Card 2 S/N Option Card 3 S/N Option Card 4 S/N	☐	<serial number>	Displays the electronic serial number of the option card.
		☐	N/A	The information is not currently available (card not present or not powered).
		☐ (orange)	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly
14 15	Housekeeping Board S/N Keypad Display S/N	☐	<serial number>	Displays the electronic serial number of the board.
		☐	Unknown	The serial number is unavailable because the board is not ready.
		☐ (orange)	Missing Serial Number	Cannot retrieve the value because the serial number was not programmed into the board correctly.

#	Status	State	Value	Description
16	Option Card 0 S/N	☐	\<serial number\>	Displays the electronic serial number of the option card.
		☐	N/A	The information is not currently available (card not present or not powered).
		🟧	Missing S/N	Cannot retrieve the value because the serial number was not programmed into the board correctly

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