

Technical Reference

020-102418-01

Boxer 2K



NOTICES

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WARRANTY

Products are warranted under Christie's standard limited warranty, the complete details of which are available by contacting your Christie dealer or Christie. In addition to the other limitations that may be specified in Christie's standard limited warranty and, to the extent relevant or applicable to your product, the warranty does not cover:

- a. Problems or damage occurring during shipment, in either direction.
- b. Projector lamps (See Christie's separate lamp program policy).
- c. Problems or damage caused by use of a projector lamp beyond the recommended lamp life, or use of a lamp other than a Christie lamp supplied by Christie or an authorized distributor of Christie lamps.
- d. Problems or damage caused by combination of a product with non-Christie equipment, such as distribution systems, cameras, DVD players, etc., or use of a product with any non-Christie interface device.
- e. Problems or damage caused by the use of any lamp, replacement part or component purchased or obtained from an unauthorized distributor of Christie lamps, replacement parts or components including, without limitation, any distributor offering Christie lamps, replacement parts or components through the internet (confirmation of authorized distributors may be obtained from Christie).
- f. Problems or damage caused by misuse, improper power source, accident, fire, flood, lightning, earthquake or other natural disaster.
- g. Problems or damage caused by improper installation/alignment, or by equipment modification, if by other than Christie service personnel or a Christie authorized repair service provider.
- h. Problems or damage caused by use of a product on a motion platform or other movable device where such product has not been designed, modified or approved by Christie for such use.
- i. Problems or damage caused by use of a projector in the presence of an oil-based fog machine or laser-based lighting that is unrelated to the projector.
- j. For LCD projectors, the warranty period specified in the warranty applies only where the LCD projector is in "normal use" which means the LCD projector is not used more than 8 hours a day, 5 days a week.
- k. Except where the product is designed for outdoor use, problems or damage caused by use of the product outdoors unless such product is protected from precipitation or other adverse weather or environmental conditions and the ambient temperature is within the recommended ambient temperature set forth in the specifications for such product.
- l. Defects caused by normal wear and tear or otherwise due to normal aging of a product.

The warranty does not apply to any product where the serial number has been removed or obliterated. The warranty also does not apply to any product sold by a reseller to an end user outside of the country where the reseller is located unless (i) Christie has an office in the country where the end user is located or (ii) the required international warranty fee has been paid.

The warranty does not obligate Christie to provide any on site warranty service at the product site location.

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Please see the Maintenance section for specific maintenance items as they relate to your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.


REGULATORY

The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

CAN ICES-3 (A) / NMB-3 (A)

이 기기는 업무용(A급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며, 가정 외의 지역에서 사용하는 것을 목적으로 합니다.

ENVIRONMENTAL

The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol  means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

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Boxer 2K status system

This guide contains information about the values and fault conditions that can be reported by the status system on Boxer 2K 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.



The device presents the information contained in this document in the language selected by the operator.

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.

Alarm Group (SST+ALRM?)

Displays any status items in the warning or error state. This group contains a dynamic number of status items. If everything in the projector is OK, this group is empty.

Configuration Group (SST+CONF?)

The Configuration Group provides values and fault conditions for configuration-related items in Boxer 2K.

#	Status	State	Value	Description
0	Projector Model		Boxer 2K30, Boxer 2K25, Boxer 2K20	Displays the model for the Boxer 2K projector.

#	Status	State	Value	Description
		<input type="checkbox"/>	Unknown	Could not retrieve the model information.
		<input checked="" type="checkbox"/>	Jig Mode	Reserved for engineering use.
1	Projector S/N	<input type="checkbox"/>	<serial number>	Displays the serial number of the projector.
		<input type="checkbox"/>	Unknown	The storage device containing the information is inaccessible or the data on the device is corrupted.
2	Output Resolution	<input type="checkbox"/>	<horizontal>x<vertical>	Provides the native output resolution of the projector.
3	Projector Build Date	<input type="checkbox"/>	<YYYY>/<MM>/<DD>	Displays the build date of the projector.
		<input type="checkbox"/>	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 Boxer 2K.










































Some of the lamp driver and memory module statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.


#	Status	State	Value	Description
0	Projector Hours	<input type="checkbox"/>	<hours>:<minutes>	Displays the total amount of time that the projector has been on (including warm up and cool down times).
		<input checked="" type="checkbox"/>	N/A	Could not retrieve or update the value.
1	Pitch/Roll	<input type="checkbox"/>	<pitch value>/<roll value>	Provides the physical orientation of the projector: <ul style="list-style-type: none"> • 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.
		<input type="checkbox"/>	Communication Fault	Information is not available due to a hardware fault.
5	Lens Motor Horizontal-Axis	<input type="checkbox"/>	Calibrating	The lens motor is currently being calibrated.
6	Lens Motor Vertical-Axis	<input type="checkbox"/>		



#	Status	State	Value	Description
7 8	Lens Motor Zoom- Axis Lens Motor Focus- Axis		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.
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.
			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.
12	Keypad Display		Auto Detect	The projector is attempting to detect the presence of the IKB and PDS.
			Programming	Programming the device with the correct firmware.
			OK	The device has been properly detected and initialized.

#	Status	State	Value	Description
			Detection Fault	Cannot detect the IKB and PDS.
			Unexpected Behavior	The device is not responding correctly.
			Upgrade Failed	The device failed to upgrade properly.
13	Power Supply		OK	The power supply has been properly detected and initialized.
			Unknown	The status of the power supply is unknown due to an upstream communication fault.
			Limited Mode	The power supply is running in limited power mode.
			Fan Problem	One or more of the power supply fans is not performing to specification.
			Overtemperature	The power supply is reporting an overtemperature event even though all fans are operational.
			Overtemperature/Fan Problem	The power supply is reporting an overtemperature event and a fan problem.
			Communication Fault	Communication either timed out or an error occurred in the transmission/reception of data.
			Upgrade Failed	The power supply failed to upgrade or downgrade to the correct firmware version.
14	Lamp A1 Driver		OK	The device has been properly detected and initialized.
15	Lamp A2 Driver			
16	Lamp A3 Driver		Unknown	The status of the device is unknown.
17	Lamp B1 Driver			
18	Lamp B2 Driver		Communication Fault	A problem occurred communicating with the device.
19	Lamp B3 Driver		General Fault	The device is not behaving as expected.
			Upgrade Failed	Failed to upgrade the lamp driver to the correct firmware version.
			Overheat Protection	The lamp driver is overheating.
			Low Voltage	The lamp driver is not providing enough voltage to the lamp.

#	Status	State	Value	Description
			High Voltage	The lamp driver is providing too much voltage to the lamp.
			DC Drive Error	The lamp driver stopped due to a DC drive error.
			Low Input Voltage	The lamp driver is not receiving enough power.
			Abnormal Voltage Surge	The lamp driver received an abnormal surge of power.
20	Lamp A1 Memory Module		OK	The device has been properly detected and initialized.
21	Lamp A2 Memory Module		Unknown	The status of the device is unknown because the communication path to the memory module is non-functional.
22	Lamp A3 Memory Module		Unknown	The status of the device is unknown because the communication path to the memory module is non-functional.
23	Lamp B1 Memory Module		Unknown	The status of the device is unknown because the communication path to the memory module is non-functional.
24	Lamp B2 Memory Module		Unknown	The status of the device is unknown because the communication path to the memory module is non-functional.
25	Lamp B3 Memory Module		Communication Fault	Cannot communicate with the device.
			Invalid Data	The information on the device is missing or corrupted.
26	Lamp Door		Closed	The lamp door is closed.
			Unknown	The lamp door status is unknown because the housekeeping board cannot be communicated with. See the Housekeeping Board status item for details about the failure.
			Open	The lamp door is open.
27	Power Supply Input Voltage		<voltage>V	The incoming AC voltage into the power supply is OK.
			Unknown	The status of this output is unknown because the power supply cannot be communicated with.
			<voltage>V	The incoming AC voltage is out of range.
28	Spare Interlock		Closed	The interlock is closed.
			Unknown	The spare interlock status is unknown because the housekeeping board cannot be communicated with. See the Housekeeping Board status item for details about the failure.
			Open	The interlock is open.




#	Status	State	Value	Description
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	The lens could not be detected.
30	Main Control Board		OK	The IMXB FPGA has been initialized at least once and is known to be OK.
			Unknown	The IMXB FPGA status is unknown because it has not been powered up yet.
			Initialization Fault	The IMXB FPGA failed to be programmed successfully.
32	Power Supply Output A1		OK	The device has been properly detected and initialized.
33	Power Supply Output A2		Unknown	The status of this output is unknown because the power supply cannot be communicated with.
34	Power Supply Output A3			
35	Power Supply Output B1			
36	Power Supply Output B2			
37	Power Supply Output B3		Overcurrent Detected	The lamp driver/lamp on this output rail was drawing too much power.
38	Lamp Cartridge A		Detected	The lamp cartridge has been successfully detected.
39	Lamp Cartridge B		Unknown	The status of the lamp cartridge is unknown because a problem exists with the housekeeping board.
			Not Detected	The lamp cartridge became undetected while the lamps were on.
			Not Detected	The lamp cartridge is undetected while the lamps are off.
40	Lamp A1 Memory Module Reader		OK	The device has been properly detected and initialized.
41	Lamp A2 Memory Module Reader		Unknown	The status of the device is unknown.
42	Lamp A3 Memory Module Reader			
43	Lamp B1 Memory Module Reader			
44	Lamp B2 Memory Module Reader		Communication Fault	Cannot communicate with the device.
45	Lamp B3 Memory Module Reader			
46	Status LED Board		OK	The status of the status LED board is OK.
			Unknown	The status of the status LED board cannot be determined because the backplane is nonfunctional.
			Communication Fault	Cannot communicate with the status LED board.

#	Status	State	Value	Description
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		Off	The backplane is in standby without any cached errors or warnings.
			OK	The backplane has been properly detected and initialized.
			Detection fault	The backplane hardware information cannot be read.
			Initialization fault	The backplane could not be properly initialized.
			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.
			Detection fault	The image processor hardware information cannot be read.
			Initialization fault	The image processor could not be properly initialized.
			Runtime fault	The image processor experienced an unrecoverable failure during runtime.
50	Formatter-Red		Off	The formatter is in standby without any cached errors or warnings.
51	Formatter-Green		OK	The formatter has been properly detected and initialized.
52	Formatter-Blue		Unknown	The formatter status cannot be determined 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	The formatter hardware cannot be read.
			Initialization fault	The formatter could not be properly initialized.

#	Status	State	Value	Description
			Runtime fault	The formatter experienced an unrecoverable failure during runtime.
54	Option Card 1		Off	The option card is in standby without any cached errors or warnings.
55	Option Card 2		OK	The option card has been properly detected and initialized.
			Not Present	An option card is not installed in this slot.
			Unknown	The option card status cannot be determined due to an upstream issue.
			Detection fault	The option card hardware information cannot be read.
			Initialization fault	The option card could not be properly initialized.
			Runtime fault	The option card experienced an unrecoverable failure during runtime.

Signal Group (SST+SIGN?)

The Signal Group provides values and fault conditions relating to the video signal status for Boxer 2K.

#	Status	State	Value	Description	
11	Card 1 - Input 1		N/A	Either the card is not present or the card does not have a single input port.	
12	Card 1 - Input 2				
13	Card 1 - Input 3			<input type> (No Signal)	No signal is detected.
14	Card 1 - Input 4				Where <input type> : {DP, HDMI, DVI, 3G-SDI}
21	Card 2 - Input 1				
22	Card 2 - Input 2			<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"}
23	Card 2 - Input 3				
24	Card 2 - Input 4				
			<input type> <active window> @ <v-sync rate> (<status>)	Where <input type> : {DP, HDMI, DVI, 3G-SDI}	

#	Status	State	Value	Description
				<active window> : <columns>x<rows> <v-sync rate> : the input frame rate, in Hz (##.##Hz) <status> : {"Unlocked", "Out of phase"}
50	Output Frequency	<input type="checkbox"/>	N/A	No video is being displayed.
		<input type="checkbox"/>	<rate>Hz	Where <rate> : the output frame rate, in Hertz
51	Frame Locked	<input type="checkbox"/>	N/A	No video is being displayed or an internal test pattern is being displayed.
		<input type="checkbox"/>	Locked	The output is locked to the selected input(s).
		<input type="checkbox"/>	Unlocked	The output is not locked to the selected input(s).

Lamp Group (SST+LAMP?)
















The Lamp Group provides values and fault conditions for lamp-related items in Boxer 2K.
























Some of the lamp statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
0	Lamp A1 State	<input type="checkbox"/>	On	The lamp is on.
		<input type="checkbox"/>	Warming Up	The lamp is warming up.
		<input type="checkbox"/>	Off	The lamp is off.
		<input type="checkbox"/>	Cooling Down	The lamp is cooling down.
		<input type="checkbox"/>	Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		<input type="checkbox"/>	Failed to Strike	The lamp failed to strike.
		<input type="checkbox"/>	Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.

















#	Status	Sta Value	Description
		 Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
		 Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
1	Lamp A1 Hours	 <hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
		 Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp A1 Memory Module status item for details of the failure.
		 <hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
3	Lamp A1 Installation Date	 <YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
		 Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp A1 Memory Module status item for details of the failure.
4	Lamp A1 S/N	 <value>	Displays the serial number of the installed lamp.
		 Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp A1 Memory Module status item for details of the failure.
6	Lamp A1 Voltage	 <voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
		 Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp A1 Memory Module status item for details of the failure.
40	Lamp A2 State	 On	The lamp is on.
		 Warming Up	The lamp is warming up.
		 Off	The lamp is off.
		 Cooling Down	The lamp is cooling down.


#	Status	State	Value	Description
			Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
			Failed to Strike	The lamp failed to strike.
			Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
			Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
			Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
41	Lamp A2 Hours		<hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
			Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp A2 Memory Module status item for details of the failure.
			<hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
43	Lamp A2 Installation Date		<YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
			Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp A2 Memory Module status item for details of the failure.
44	Lamp A2 S/N		<value>	Displays the serial number of the installed lamp.
			Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp A2 Memory Module status item for details of the failure.
46	Lamp A2 Voltage		<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
			Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp A2 Memory Module status item for details of the failure.
50	Lamp A3 State		On	The lamp is on.

#	Status	Sta Value	Description
		 Warming Up	The lamp is warming up.
		 Off	The lamp is off.
		 Cooling Down	The lamp is cooling down.
		 Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		 Failed to Strike	The lamp failed to strike.
		 Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
		 Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
		 Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
51	Lamp A3 Hours	 <hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
		 Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp A3 Memory Module status item for details of the failure.
		 <hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
53	Lamp A3 Installation Date	 <YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
		 Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp A3 Memory Module status item for details of the failure.
54	Lamp A3 S/N	 <value>	Displays the serial number of the installed lamp.
		 Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp A3 Memory Module status item for details of the failure.
56	Lamp A3 Voltage	 <voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.

#	Status	Sta Value te	Description
		 Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp A3 Memory Module status item for details of the failure.
60	Lamp B1 State	 On	The lamp is on.
		 Warming Up	The lamp is warming up.
		 Off	The lamp is off.
		 Cooling Down	The lamp is cooling down.
		 Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		 Failed to Strike	The lamp failed to strike.
		 Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
		 Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
		 Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
61	Lamp B1 Hours	 <hours> : <minutes> (h:m)	The total amount of time that the lamp has been on.
		 Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp B1 Memory Module status item for details of the failure.
		 <hours> : <minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
63	Lamp B1 Installation Date	 <YYYY> / <MM> / <DD>	Displays the date the lamp was installed.
		 Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp B1 Memory Module status item for details of the failure.
64	Lamp B1 S/N	 <value>	Displays the serial number of the installed lamp.

#	Status	State	Value	Description
		<input type="checkbox"/>	Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp B1 Memory Module status item for details of the failure.
66	Lamp B1 Voltage	<input type="checkbox"/>	<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
		<input type="checkbox"/>	Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp B1 Memory Module status item for details of the failure.
70	Lamp B2 State	<input type="checkbox"/>	On	The lamp is on.
		<input type="checkbox"/>	Warming Up	The lamp is warming up.
		<input type="checkbox"/>	Off	The lamp is off.
		<input type="checkbox"/>	Cooling Down	The lamp is cooling down.
		<input type="checkbox"/>	Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
		<input type="checkbox"/>	Failed to Strike	The lamp failed to strike.
		<input type="checkbox"/>	Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
		<input type="checkbox"/>	Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
71	Lamp B2 Hours	<input type="checkbox"/>	<hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
		<input type="checkbox"/>	Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with. See the Lamp B2 Memory Module status item for details of the failure.
		<input type="checkbox"/>	<hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
73	Lamp B2 Installation Date	<input type="checkbox"/>	<YYYY>/<MM>/<DD>	Displays the date the lamp was installed.

#	Status	State	Value	Description
			Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp B2 Memory Module status item for details of the failure.
74	Lamp B2 S/N		<value>	Displays the serial number of the installed lamp.
			Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp B2 Memory Module status item for details of the failure.
76	Lamp B2 Voltage		<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
			Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp B2 Memory Module status item for details of the failure.
80	Lamp B3 State		On	The lamp is on.
			Warming Up	The lamp is warming up.
			Off	The lamp is off.
			Cooling Down	The lamp is cooling down.
			Waiting to Strike	The lamp is cooling down but will turn on as soon as the cool down is complete.
			Failed to Strike	The lamp failed to strike.
			Lamp Off - Unknown	The lamp was on but extinguished unexpectedly.
			Lamp Off - Interlock	The lamp was on but turned off due to a tripped interlock.
			Lamp Off - Fan Failure	The lamp was on but turned off due to a bulb blower or reflector fan failure.
81	Lamp B3 Hours		<hours>:<minutes> (h:m)	The total amount of time that the lamp has been on.
			Unknown	The lamp hours are unknown because the lamp memory module cannot be communicated with.


#	Status	State	Value	Description
				See the Lamp B3 Memory Module status item for details of the failure.
			<hours>:<minutes> (h:m) - Lamp is past expiry	The lamp is running past its maximum number of hours.
83	Lamp B3 Installation Date	<input type="text"/>	<YYYY>/<MM>/<DD>	Displays the date the lamp was installed.
		<input type="text"/>	Unknown	The lamp installation date is unknown because the lamp memory module cannot be communicated with. See the Lamp B3 Memory Module status item for details of the failure.
84	Lamp B3 S/N	<input type="text"/>	<value>	Displays the serial number of the installed lamp.
		<input type="text"/>	Unknown	The lamp serial number is unknown because the lamp memory module cannot be communicated with. See the Lamp B3 Memory Module status item for details of the failure.
86	Lamp B3 Voltage	<input type="text"/>	<voltage>V	Displays the voltage being applied to the lamp as reported by the lamp driver.
		<input type="text"/>	Unknown	The lamp state is unknown because the lamp driver could not be communicated with. See the Lamp B3 Memory Module status item for details of the failure.











Version Group (SST+VERS?)

The Version Group provides values and fault conditions related to software and hardware versions for Boxer 2K.



Some of the lamp driver statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
0	Main Control Board SW Version	<input type="text"/>	<version>	Displays the software version running on the controller board.
			Unknown	Cannot determine the software version information.
1	Main Control Board HW Version	<input type="text"/>	<name>.<level>.<mod>	<name> = Short name of the board <level> = Version of the board

#	Status	State	Value	Description
				<mod> = Modification level of the board
			Detection Fault	Failed to 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 is cached information 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 is cached information while the projector is in standby.
			N/A	The image processor board has never been turned on or initialized.
4	Formatter-Red HW Version		<name>.<level>.<mod>	<name> = Short name of the board <level> = Version of the board <mod> = Modification level of the board This is cached information while the projector is in standby.
5	Formatter-Green HW Version			
6	Formatter-Blue HW Version			
			N/A	The formatter failed to be detected or initialized.
7	Option Card 1 HW Version		<name>.<level>.<mod>	<name> = Short name of the board <level> = Version of the board <mod> = Modification level of the board This is cached information while the projector is in standby.
8	Option Card 2 HW Version			
			N/A	The option card has never been turned on or initialized.
17	Power Supply HW Version		<hardware version>.<boot version>.<main version>	<hardware version> = Hardware version of power supply

#	Status	State	Value	Description
				<boot version> = Version of power supply bootloader <main version> = Version of power supply main firmware
		<input type="checkbox"/>	Unknown	The hardware version could not be retrieved.
18	Housekeeping Board HW Version	<input type="checkbox"/>	<name>.<level>.<mod>	<name> = Name of the board (such as HKBA) <level> = Hardware version of the board <mod> = Modification level of the board
		<input type="checkbox"/>	Unknown	The hardware version could not be retrieved.
19	Keypad Display HW Version	<input type="checkbox"/>	<name>.<level>.<mod>	<name> = Name of the board (such as IKB) <level> = Hardware version of the board <mod> = Modification level of the board
		<input type="checkbox"/>	Unknown	The board is not ready yet so the hardware version has not been retrieved.
20	Lamp A1 Driver HW Version	<input type="checkbox"/>	<version>	Displays lamp driver information.
21	Lamp A2 Driver HW Version	<input type="checkbox"/>		
22	Lamp A3 Driver HW Version	<input type="checkbox"/>	Unknown	The hardware version of the lamp driver could not be retrieved.
23	Lamp B1 Driver HW Version	<input type="checkbox"/>		
24	Lamp B2 Driver HW Version	<input type="checkbox"/>		
25	Lamp B3 Driver HW Version	<input type="checkbox"/>		
























Temperature Group (SST+TEMP?)



























The Temperature Group provides values and fault conditions for temperature-related items in Boxer 2K.











Some of the lamp driver statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
2	Air Intake Temperature (Temp 2)	<input type="checkbox"/>	<value> °C	Displays the current temperature of the sensor.
		<input type="checkbox"/>	Unknown	Temperature reading is unavailable.

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

#	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			
			Communication Fault (shutdown)	Failed to retrieve the temperature from sensor.
			<value> °C - High Temperature	Temperature is sitting inside warning band.
			<value> °C - Too Hot (shutdown)	Temperature is exceeding error threshold.
			<value> °C - Low Temperature	Temperature is sitting inside warning band.
			<value> °C - Too Cold (shutdown)	Temperature is below error threshold.
20	Housekeeping Board Temperature		<value> °C	Displays the current temperature of the sensor.
23	Lamp A1 Driver Temperature			
24	Lamp A2 Driver Temperature		Unknown	Temperature reading is unavailable.
25	Lamp A3 Driver Temperature			
26	Lamp B1 Driver Temperature		Communication Fault (shutdown)	Failed to retrieve the temperature from sensor.
27	Lamp B2 Driver Temperature			
28	Lamp B3 Driver Temperature			
			<value> °C - High Temperature	Temperature is sitting inside warning band.
			<value> °C - Too Hot (shutdown)	Temperature is exceeding error threshold.
			<value> °C - Low Temperature	Temperature is sitting inside warning band.
			<value> °C - Too Cold (shutdown)	Temperature is below error threshold.
29	Main Control Board FPGA Temperature		<value> °C	Displays the current temperature of the sensor.
			N/A	Temperature reading is unavailable.
			Communication Fault (shutdown)	Failed to retrieve the temperature from sensor.
			<value> °C - High Temperature	Temperature is sitting inside warning band.
			<value> °C - Too Hot (shutdown)	Temperature is exceeding error threshold.
			<value> °C - Low Temperature	Temperature is sitting inside warning band.








#	Status	State	Value	Description
			<value> °C - Too Cold (shutdown)	Temperature is below error threshold.
34	Power Supply Heat Sink 2 Temperature		<value> °C	Displays the current temperature of the sensor.
35	Power Supply Heat Sink 3 Temperature		Unknown	Temperature reading is unavailable.
36	Power Supply Heat Sink 5 Temperature		Communication Fault (shutdown)	Failed to retrieve the temperature from sensor.
			<value> °C - High Temperature	Temperature is sitting inside warning band.
			<value> °C - Too Hot (shutdown)	Temperature is exceeding error threshold.
			<value> °C - Low Temperature	Temperature is sitting inside warning band.
			<value> °C - Too Cold (shutdown)	Temperature is below error threshold.















Cooling Group (SST+COOL?)

The Cooling Group provides values and fault conditions related to cooling and fans for Boxer 2K.



Some of the lamp and bulb blower statuses listed below may not be applicable for your installation as the model of projector determines the number of lamps in the projector.

#	Status	State	Value	Description
0	Intake A (Fan 19)		<tach> RPM	Displays the current tachometer reading.
1	Intake B (Fan 20)		Off	Fan is off.
3	Formatter-Green (Fan 23)		Unknown	The tachometer reading is unavailable.
4	LAD Blower A (Fan 26)		<tach> RPM - Low RPM	Fan tachometer reading is lower than the minimum recommended speed.
5	Card Cage Intake (Fan 18)		Off - Overridden	Fan is off. The fan speed has been changed from its default recommended value.
10	Card Cage Exhaust (Fan 31)		<tach> RPM - Overridden	Fan is on. The fan speed has been changed from its default recommended value.
12	Liquid Cooling Flow Meter		<value> L/min	Displays the amount of liquid flowing past the sensor.







#	Status	State	Value	Description
			Off	Liquid cooling is off.
			Unknown	The tachometer reading is unavailable.
			<value> L/min - Flow Impeded	The flow reading is lower than the minimum recommended threshold.
13	Liquid Cooling Pump		<tach> RPM	Displays the current tachometer reading.
			Off	Fan is off.
			Unknown	The tachometer reading is unavailable.
			<tach> RPM - Low RPM	Fan tachometer reading is lower than the minimum recommended speed.
16	Lamp Driver Exhaust (Fan 22)		<tach> RPM	Displays the current tachometer reading.
17	Lamp Driver Intake (Fan 21)			
18	Bulb Blower A1 (Fan 6)		Off	Fan is off.
19	Bulb Blower A2 (Fan 5)			
20	Bulb Blower A3 (Fan 4)		Unknown	The tachometer reading is unavailable.
21	Bulb Blower B1 (Fan 3)			
22	Bulb Blower B2 (Fan 2)		<tach> RPM - Low RPM	Fan tachometer reading is lower than the minimum recommended speed.
23	Bulb Blower B3 (Fan 1)			
24	Lamp Fan A1 (Fan 12)			
25	Lamp Fan A2 (Fan 10)		Off - Overridden	Fan is off. The fan speed has been changed from its default recommended value.
26	Lamp Fan A3 (Fan 8)			
27	Lamp Fan B1 (Fan 11)			
28	Lamp Fan B2 (Fan 9)		<tach> RPM - Overridden	Fan is on. The fan speed has been changed from its default recommended value.
29	Lamp Fan B3 (Fan 7)			
31	Formatter-Red (Fan 24)			
33	Radiator Fan A (Fan 13)			
34	Radiator Fan B (Fan 14)			
35	Radiator Fan C (Fan 15)			
36	Radiator Fan D (Fan 16)			
37	LAD Blower B (Fan 27)			
43	Formatter-Blue (Fan 25)			
	Lamp Door Fan 1 (Fan 28)			
	Lamp Door Fan 2 (Fan 29)			
45	Power Supply Fan 1		<tach> RPM	Displays the current tachometer reading.
46	Power Supply Fan 2			

#	Status	State	Value	Description
47	Power Supply Fan 3		Unknown	The status of this output is unknown because the power supply cannot be communicated with.

Serial Group (SST+SERI?)

The Serial Group provides values and fault conditions related to hardware serial numbers for Boxer 2K.

#	Status	State	Value	Description
0	Main Control Board S/N		<serial number>	Displays the electronic serial number of the board.
			Missing S/N	Failed to retrieve the value because the serial number was not programmed into the board correctly.
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).
			Missing S/N	Failed to 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).
			Missing S/N	Failed to retrieve the value because the serial number was not programmed into the board correctly
3	Formatter-Red S/N		<serial number>	Displays the electronic serial number of the formatter.
4	Formatter-Green S/N		N/A	The information is not currently available (card not present or not powered).
5	Formatter-Blue S/N		Missing S/N	Failed to retrieve the value because the serial number was not programmed into the board correctly

#	Status	State	Value	Description
6	Option Card 1 S/N		<serial number>	Displays the electronic serial number of the option card.
7	Option Card 2 S/N		N/A	The information is not currently available (card not present or not powered).
			Missing S/N	Failed to retrieve the value because the serial number was not programmed into the board correctly
14	Housekeeping Board S/N		<serial number>	Displays the electronic serial number of the board.
15	Keypad Display S/N		Unknown	The serial number is unavailable because the board is not ready.
			Missing Serial Number	Failed to retrieve the value because the serial number was not programmed into the board correctly.

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