



Installation and Setup Guide

020-002066-03

Christie CIC 1DLP Camera



CHRISTIE[®]

NOTICES

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For the most current technical documentation and office contact information, visit www.christiedigital.com.

WARRANTY

Products are warranted under Christie's standard limited warranty, the details of which are available at <https://www.christiedigital.com/help-center/warranties/> or by contacting your Christie dealer or Christie.

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

REGULATORY (if applicable)


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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CAN ICES-003 (A) / NMB-003 (A)

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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.

If printing this document, consider printing only the pages you need and select the double-sided option.

Please help us to conserve the environment we live in!

NOTATION

Learn the hazard and information symbols used in the product documentation.



Danger! If not avoided, the following could result in death or serious injury.



Warning! If not avoided, the following could result in death or serious injury.



Caution! If not avoided, the following could result in minor or moderate injury.



Notice. If not avoided, the following may result in equipment or property damage.

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Introduction

This manual is intended for Christie CIC 1DLP Camera which can be installed in below models:

- DWU880-GS, DWU880A-GS, DWU1100-GS, DWU1100A-GS, DWU1400-GS, DWU1400A-GS
- DWU15-HS, DWU15A-HS, DWU19-HS, DWU19A-GS, DWU23-HS, DWU23A-HS
- 4K13-HS, 4K13A-HS, 4K22-HS, 4K22A-HS
- DWU760-iS, DWU760A-iS, DWU860-iS, DWU960-iS, DWU960ST-iS, 4K860-iS, 4K860A-iS

For complete GS Series, HS Series, and Inspire Series products documentation and technical support, go to www.christiedigital.com.

Safety and warning guidelines

Read all safety and warning guidelines before installing or operating the Christie CIC 1DLP Camera. This product must be operated in an environment that meets the operating range specification.



Warning! If not avoided, the following could result in death or serious injury.

- Do not expose the product to moisture.
- Do not operate the product without all of its covers in place.
- Do not allow anything to rest on the power cord.
- Always provide proper ventilation for the product to prevent overheating.



Caution! If not avoided, the following could result in minor or moderate injury.

- Only Christie qualified technicians are permitted to open product enclosures.
- All procedures must be performed by Christie qualified technicians.
- ELECTRICAL and BURN HAZARD! Use caution when accessing internal components.



Notice. If not avoided, the following may result in equipment or property damage.

- SHOCK HAZARD! Only use the AC power sources recommended by Christie for use with the product.
- Do not insert foreign objects or liquids into the product.
- Do not use chemical cleaners to clean the product.
- Do not drop the product.
- Only use cleaning solutions recommended by Christie. All other cleaning solutions may cause product damage and void the warranty.

Product labels

Learn about the labels that may be used on the product. Labels on your product may be yellow or black and white.

General hazards

Hazard warnings also apply to accessories once they are installed in a Christie product that is connected to power.

Fire and Shock Hazard



To prevent fire or shock hazards, do not expose this product to rain or moisture.
Do not alter the power plug, overload the power outlet, or use it with extension Cords.
Do not remove the product enclosure.
Only Christie qualified technicians are authorized to service the product.

Electrical Hazard



Risk of electric shock.
Do not remove the product enclosure.
Only Christie qualified technicians are authorized to service the product.

Product overview

Christie CIC 1DLP Camera is designed for GS Series and HS Series projection systems. It supports Auto Focus (AF), Auto Wall Color (AC), Auto Color Uniformity (ACU), Auto Color Matching (ACM), and Auto Blend functions.

List of components

The Christie CIC 1DLP Camera comes with all the items listed below. Check to make sure your package is complete.

If anything is missing, contact your dealer.

- Christie CIC 1DLP Camera (quantity 1)
- Bracket (quantity 1)
- 1.3 m (4.2 feet) USB-A to USB-B cable (quantity 1)
- M3L8 screw (quantity 4)
- Cable mount (quantity 6)
- Product information label (quantity 1)

Technical support

Technical support for Christie Enterprise products is available at:

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

Installation and setup

Learn how to install and connect to the projector.

Physical operating environment

Provides specifications for the operating environment.

- Ambient temperature (operating): 0 to 50°C (32 to 122°F)
- Humidity (non-condensing): 20% to 80% RH

Power connection

Connect the USB cable to the projector and use the cable mount to hold cable securely.

Physical specifications

Learn the dimensions and weight of the Christie CIC 1DLP Camera before installation.

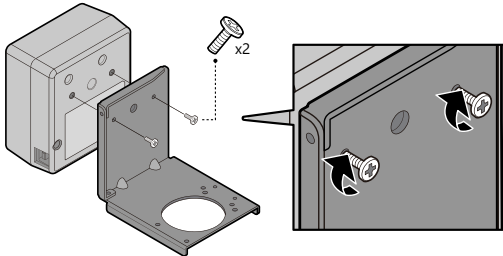
- Christie CIC 1DLP Camera (L x W x H): 93 x 84 x 48.5 mm (3.66 x 3.31 x 1.91 inches)
- Inner Shipping size (L x W x H): 275 x 125 x 100 mm (10.83" x 4.92" x 3.94" inches)
- Outer Shipping size (L x W x H): 425 x 295 x 160 mm (16.73 x 11.61 x 6.3 inches)
- Weight: 0.2 kg (0.44 lbs)
- Inner Shipping weight: 0.5 kg (1.1 lbs)
- Outer Shipping weight: 2.6 kg (5.7 lbs)

Installing Christie CIC 1DLP Camera

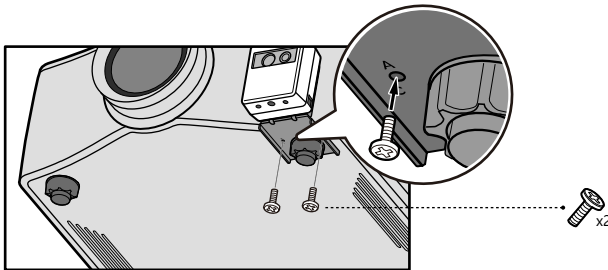
To install and connect the Christie CIC 1DLP Camera to the projector, follow these steps:

For GS Series projector:

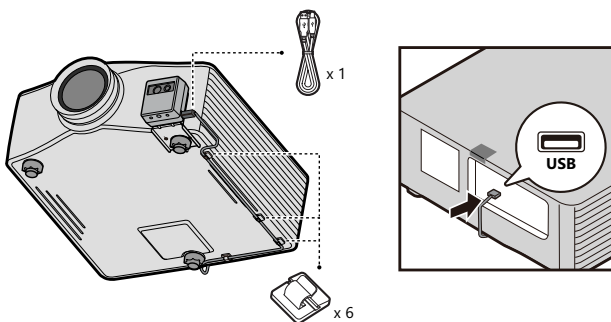
1. Align and secure the bracket to the rear side of the camera with the supplied screws.



2. Align the holes marked A on the camera bracket with the holes on the bottom of the projector and secure the camera to the projector with the four M3L8 screws.

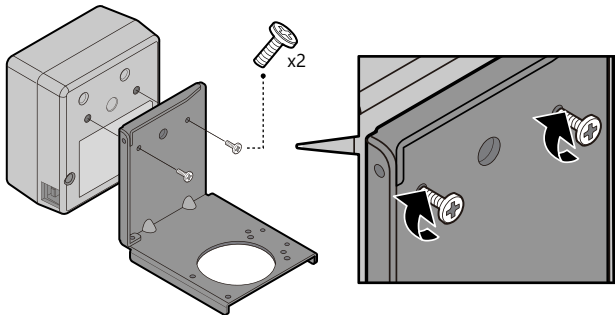


3. Connect the USB-B end of the supplied USB cable to the camera and the USB-A end to the projector.
4. Route and secure the USB cable to the supplied cable mounts.

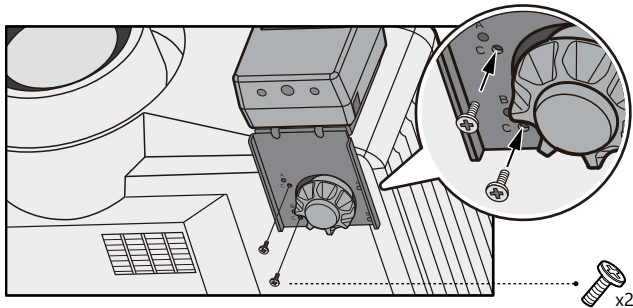


For Inspire Series projector:

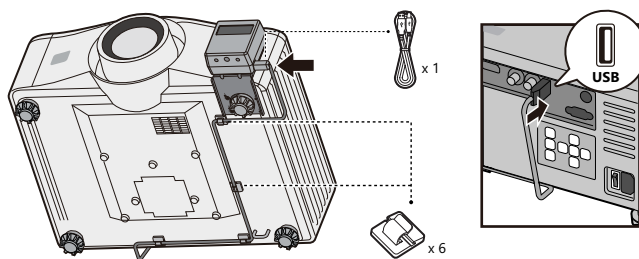
1. Align and secure the bracket to the rear side of the camera with the supplied screws.



2. Align the holes on the camera bracket with the holes on the bottom of the projector and secure the camera to the projector with the two M3L8 screws.

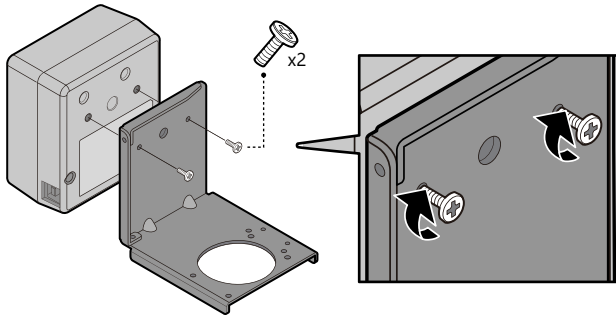


3. Connect the USB-B end of the supplied USB cable to the camera and the USB-A end to the projector.
4. Route and secure the USB cable to the supplied cable mounts.

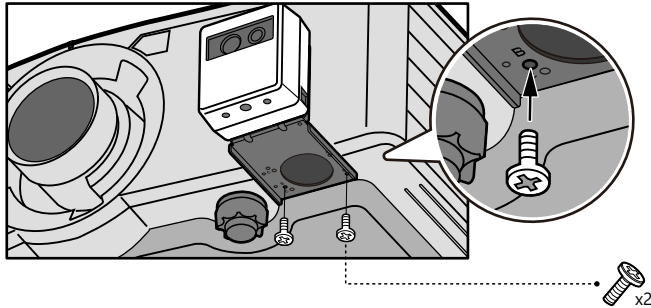


For HS Series projector:

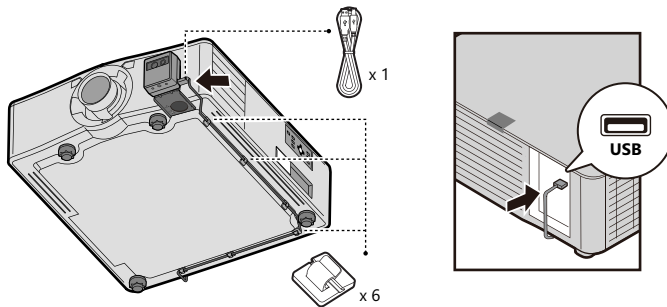
1. Align and secure the bracket to the rear side of the camera with the supplied screws.



2. Align the holes on the camera bracket with the holes on the bottom of the projector and secure the camera to the projector with the two M3L8 screws.



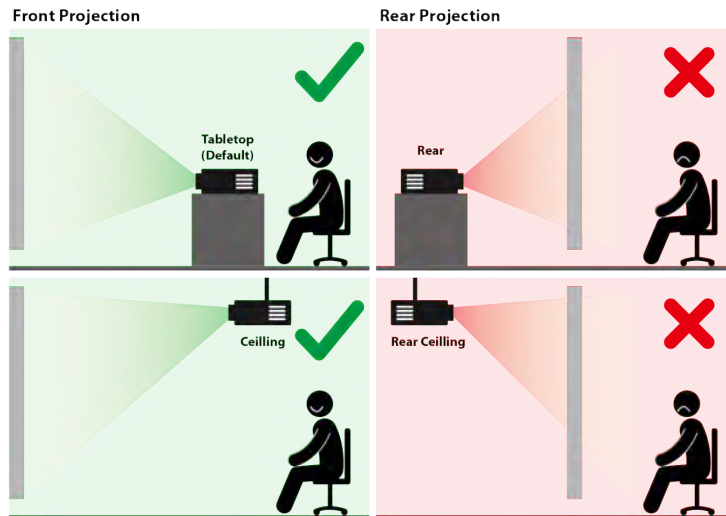
3. Connect the USB-B end of the supplied USB cable to the camera and the USB-A end to the projector.
4. Route and secure the USB cable to the supplied cable mounts.



Setup conditions

Note the following conditions before using the camera function:

- Each projector requires a CIC 1DLP camera.
- Camera function is supported only at the front and ceiling projections as illustrated below:



- Camera functions are available for the projection sizes from 304.8 to 762 cm (120 to 300 inches), except for 4K22-HS and 4K22A-HS the available projection sizes are from 381 to 762 cm (150 to 300 inches).
- Avoid any obstructions between the camera view and the projected image.
- Avoid using reflective surface and strong light between the camera view and the projected image.
- Camera function is not supported in 3D, 2D high speed, or high frame rate mode.
- When using the auto focus function, zoom size changes for 140-107109-XX (2.90-5.50 zoom GS Series), 140-111104-XX (2.0-4.0:1 zoom HS Series), and 140-116109-XX (4.0-7.2:1 zoom HS Series) lenses.
- 140-133108-XX (GS Series ultra short throw 0.36:1 fixed), 140-142108-XX (HS Series ultra short throw 0.38:1), and 140-153100-XX (0.37-0.4:1 zero offset GS Series) lenses do not support the camera function.

Troubleshooting

Follow these procedures to help to solve issues with the Christie CIC 1DLP Camera.

Error message	Action
Auto focus function errors:	
Please connect the camera	Ensure the CIC camera is connected to the projector. Do not disconnect the CIC camera from the projector during calibration.
Calibration failed	<ul style="list-style-type: none"> • Ensure the CIC camera is connected to the projector. Do not disconnect the CIC camera during calibration. • CIC camera search ROI failure. Ensure no obstructions between the CIC camera and the projection image. • Projection size is between 304.8 to 762 cm (120 to 300 inches), except for 4K22-HS and 4K22A-HS are from 381 to 762 cm (150 to 300 inches). • Perform the calibration in a dark environment (auto tune).
Camera does not support this color wheel speed	CIC camera features do not support 3D, 2D high speed, or high frame rate mode.
Image recognition error	<p>Ensure the following:</p> <ul style="list-style-type: none"> • CIC camera is connected to the projector. • No obstructions and strong light between the CIC camera and the projection image. • Projection size is between 304.8 to 762 cm (120 to 300 inches), except for 4K22-HS and 4K22A-HS are from 381 to 762 cm (150 to 300 inches). • If the error still persists, the auto focus peak value detection may have failed. Check the lens and motor status.
Image is overexposed	Lower the projector power level or ensure the projection size is above 304.8 cm (120 inches) or above 381 cm (150 inches) for 4K22-HS and 4K22A-HS.
Image is underexposed	Increase the projector power level or ensure the projection size is below 762 cm (300 inches).
Image capture error	Ensure the CIC camera is connected to the projector.
Camera is busy	Confirm if any other applications are using the CIC camera.
Operation does not support lens lock	Ensure the CIC camera is connected to the projector and do not disconnect the CIC camera during calibration.
Auto wall color errors:	
Please connect the camera	Ensure the CIC camera is connected to the projector.
Camera does not support this color wheel speed	CIC camera features do not support 3D, 2D high speed, or high frame rate mode.

Error message	Action
Image recognition error	Ensure the following: <ul style="list-style-type: none"> • CIC camera is connected to the projector. • No obstructions and strong light between the CIC camera and the projection image. • Projection size is between 304.8 to 762 cm (120 to 300 inches), except for 4K22-HS and 4K22A-HS are from 381 to 762 cm (150 to 300 inches).
Image capture error	Ensure the CIC camera is connected to the projector.
Camera is busy	Confirm if any other applications are using the CIC camera.
Calibration failed	Ensure the CIC camera is connected to the projector and calibrate again.
Please disable auto source before calibration	Disable the auto source function.
Image is overexposed	Lower the projector power level or ensure the projection size is above 304.8 cm (120 inches) or above 381 cm (150 inches) for 4K22-HS and 4K22A-HS.
Image is underexposed	Increase the projector power level or ensure the projection size is below 762 cm (300 inches).
Auto color uniformity (ACU) errors:	
Operation is not supported	Reset ACU and try again.
Please connect the camera	Ensure the CIC camera is connected to the projector and do not disconnect the CIC camera from the projector during calibration.
System communication error	This error occurs because of the system dbus error. Reboot the projector and calibrate again.
Calibration failed	Ensure the CIC camera is connected to the projector and calibrate again.
Image recognition error	Ensure the following: <ul style="list-style-type: none"> • CIC camera is connected to the projector. • CIC Camera search ROI failure. No obstructions and strong light between the CIC camera and the projection image. • Projection size is between 304.8 to 762 cm (120 to 300 inches), except for 4K22-HS and 4K22A-HS are from 381 to 762 cm (150 to 300 inches). • Avoid projection on the surface with deep color or wall with multiple colors.
Image capture error	Ensure the CIC camera is connected to the projector.
Out of calibration range	Ensure the following: <ul style="list-style-type: none"> • No obstructions between the CIC camera and the projection image. • Avoid projection on the surface with deep color or wall with multiple colors. Project preferably on the white wall in a dark environment. • If the error still persists, contact the service provider.
Camera is busy	Confirm if any other applications are using the CIC camera.
Camera does not support this color wheel speed	CIC camera features do not support 3D, 2D high speed, or high frame rate mode.
Operation does not support this gamma	Ensure the projector gamma is not set to blackboard, DICOM, or HDR.

Error message	Action
Image is overexposed	Lower the projector power level or ensure the projection size is above 304.8 cm (120 inches) or above 381 cm (150 inches) for 4K22-HS and 4K22A-HS.
Image is underexposed	Increase the projector power level or ensure the projection size is below 762 cm (300 inches).
Please enable the function before calibration	Ensure to enable the function before calibration.
Target recognition error	Ensure no obstructions are between the CIC camera and the projection image.
Auto color matching errors:	
Auto function fail	Check the auto color matching function error code.
Projector state is busy	Ensure all projectors are idle.
Projector state is invalid	Ensure the following: <ul style="list-style-type: none"> • All projectors are powered on. • All projectors are idle.
Projector connection fail	Ensure the IP addresses and network connections of all projectors are valid.
Projector remote connection fail	Verify the network connection of all projectors and ensure they are connected to the network.
Projector inner connection fail	Projector system error. Ensure the following: <ul style="list-style-type: none"> • All projectors support auto color matching. • If all projectors support auto color matching, wait for two minutes and try again.
Command timeout	Ensure the IP addresses and network connections of all projectors are valid.
Command parameter error	Ensure JSON command parameters are correct.
Command slave not support	Ensure the following: <ul style="list-style-type: none"> • All projectors support auto color matching. • All projectors are idle.
Function is not running	The master projector is not processing the auto color matching function.
Command not support	Ensure the master projector supports the auto color matching function or any other requested command.
USER_ABORT	User has terminated the auto color matching process.
Result: Fail	Ensure the following: <ul style="list-style-type: none"> • All projectors are the same model. • All projectors are idle.
Tuning over limit	This error indicates out of calibration range. Ensure the following: <ul style="list-style-type: none"> • No obstructions between the CIC camera and the projection image. • Avoid projection on the surface with deep color or wall with multiple colors. Project preferably on the white wall in a dark environment. • If the error still persists, contact the service provider.
Connect camera fail	Ensure the CIC camera is connected to the projector.

Error message	Action
Init camera fail	Ensure the CIC camera is connected to the projector.
Camera search ROI fail	Ensure no obstructions between the CIC camera and the projection image.
Color wheel speed not support	CIC camera features do not support 3D, 2D high speed, or high frame rate mode.
Camera is busy	Confirm if any other applications are using the CIC camera.
Camera setting fail	Ensure the CIC camera is connected to the projector and do not disconnect the CIC camera from the projector during calibration.
Camera overexposure	Lower the projector power level or ensure the projection size is above 304.8 cm (120 inches) or above 381 cm (150 inches) for 4K22-HS and 4K22A-HS.
Set camera gain fail	This error occurs when auto tuning the CIC camera fails. Ensure the CIC camera is connected to the projector and try again.
Camera underexposure	Increase the projector power level or ensure the projection size is below 762 cm (300 inches).

RS232 commands

Use the following RS232 commands to control the CIC camera:

Function	Command	Response	Value definition
Get camera status	(CST?)	CST!ab	00 = Camera disconnected
			01 = Camera supported
Do AF	(ATF1)	—	—
Get AF status	(ATF?)	ATF!ab	00 = Processing (recommended time out 330 seconds)
			01 = Adjustment success
			02 to n = Auto Focus error code
Do AC	(ATF1)	—	—
Get AC status	(ATW?)	ATW!ab	00 = Processing (recommended time out 330 seconds)
			01 = Adjustment success
			02 to n = Auto Wall error code
Enable ACU	(ACEa)	—	0 (Off), 1 (On)
Do ACU	(ACC1)	—	—
Select ACU target	(ACTxy)	—	x = 1 to 9
		—	y = 1 to 7
Get ACU status	(ACC?)	ACC!ab	00 = Processing (recommended time out 330 seconds)
			01 = Adjustment success
			02 to n = Auto Color Uniformity error code
Reset ACU	(ACR1)	—	—

Regulatory

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

Electro-magnetic compatibility

Emissions

- FCC CFR Title 47, Part 15, Subpart B, Section 15.107 and 15.109
- ICES-003 Issue 7:2020 Class A
- VCCI-CISPR 32:2016/J55032 (H29) Class A
- EN55032:2015+A11:2020 - Information Technology Equipment Radio Disturbance Characteristics – Limits and Methods of Measurements
- IEC 61000-3-2/ EN61000-3-2 - Limits for Harmonic Current Emissions
- IEC 61000-3-3/ EN61000-3-3 - Limitations of Voltage fluctuations and flicker in low-voltage supply systems.
- KS C 9832:2019 - Electromagnetic interference prevention test for multimedia equipment

Immunity

- EN 55035 : 2017+A11:2020 - EMC Requirements - Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurements
- KS C 9835:2019 - Electromagnetic wave immunity test for multimedia devices

Environmental

- 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 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and the applicable official amendment(s)

- China Ministry of Information Industry Order No.39 (02/2006) on the control of pollution caused by electronic information products, hazardous substances concentration limits (SJ/T11363-2006), and the applicable product marking requirement (SJ/T11364-2006)