

AIDA



GEN3G-200
3G-SDI/HDMI Genlock POV Camera

Operation Guide

Ver. 0.5 / May 2016

**CAUTION**

RISK OF ELECTRIC SHOCK.
DO NOT OPEN.

**CAUTION:**

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

**Warning**

This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

**Precaution**

This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Warning

To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

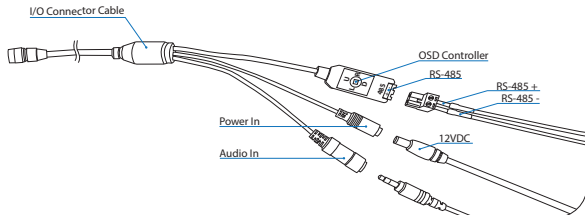
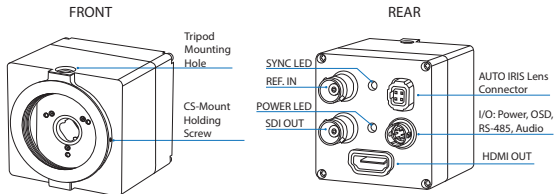
1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause excessive heat or fire.
4. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.

5. When installing the camera, fasten it securely and firmly. A falling camera may cause personal injury.
6. Do not place conductive objects (e.g. screw drivers, coins, metal items, etc.) or containers filled with water on top of the camera. Doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. Immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way.
10. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

Precaution

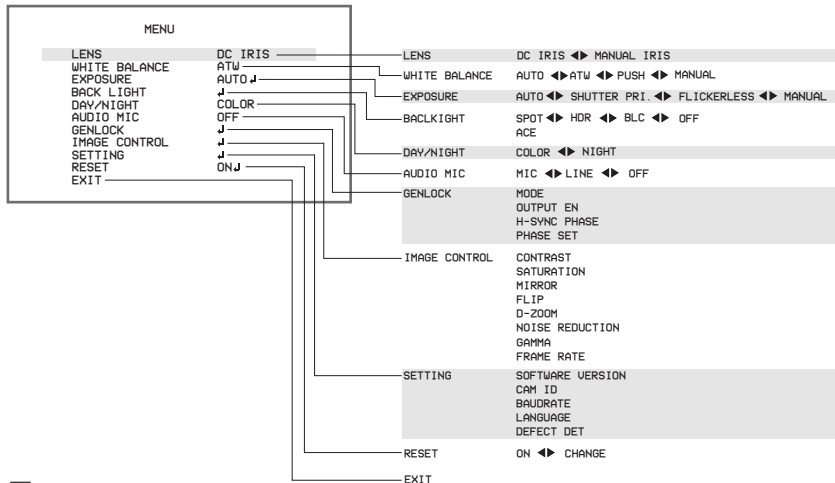
Please read this Operation Guide before installing and using the camera & retain this copy for your reference.

1. Always follow the instructions in the operations guide when applying power. Fire and equipment damage can occur if power is applied incorrectly. For the correct power supply, refer to the specifications page.
2. Do not use camera if fumes, smoke or a strange odor is emitted from the camera, or if it seems not functional correctly. Disconnect the power source immediately and consult with your supplier.
3. Do not use the camera in extreme environments where high temperatures or high humidity exists. Use the camera under conditions where temperatures are between 32°F ~ 104°F, and humidity is below 90%.
4. If installed close to a TV, radio transmitter, magnet, electric motor transformer or audio speakers the magnetic field generated may interfere with or distort the image.
5. Try to avoid fluorescent light reflections, unstable light conditions, direct pointing toward the sun. Use caution when operating the camera in the vicinity of spotlights or other bright lights and light reflecting objects.
6. To prevent damage, do not drop the camera or subject it to strong shock or vibration.



FEATURES

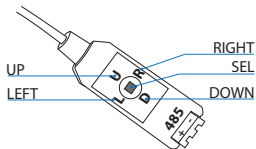
- 2.1 Megapixel CMOS progressive sensor provides superb image quality and excellent color reproduction.
- SMPTE 292M & 424M standard high definition video format including 59.94Hz.
- 'Self-Adaptive' resolution and frame rate feature allows camera to self-adopt to the external reference sync signal.
- Highly compatible with Tri Level reference.
- Versatile, compact and rugged design.
- Built in OSD control button & control via SONY VISCA protocol.
- Embedded audio via SDI & HDMI.
- Wide range of white balance.
- High Dynamic Range & Noise Reduction.
- Simultaneous SDI and HDMI Output.



MENU OPERATION

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	AUTO ↴
BACK LIGHT	↴
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↴
IMAGE CONTROL	↴
SETTING	↴
RESET	ON ↴
EXIT	



❶ Move the Cursor Up/Down to Choose Menu

To move from item to item in the menu, move the joystick to the Up/Down.

❷ Change the Value

To change the value of the selected item, move the joystick to the Left/Right.

❸ Shift to the Sub Menu of the Chosen Menu

To go into sub menu, press SEL key.

The menu items with ↴ always have its sub menu.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	AUTO ↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↓
EXIT	

LENS

DC IRIS

Select "DC IRIS" when using the DC Iris lens (CS/C Mount).

Iris will be controlled by the camera.

MANUAL IRIS

Select "MANUAL IRIS" when using the manual iris lens (CS/C Mount).

Iris needs to be manually set from the lens.

WHITE BALANCE

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	AUTO ↵
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↵
EXIT	

WHITE BALANCE

COLOR TEMP	5000K
RED GAIN	32 ▨▨▨▨▨▨▨▨
BLUE GAIN	32 ▨▨▨▨▨▨▨▨
RETURN	↓

WHITE BALANCE

Camera provides a wide range of white balance options.
Check your color temperature before adjusting this mode.

AUTO

Camera will automatically adjust the white balance if the color temperature falls within 3,000°K ~ 8,000°K.

ATW

Wider range of color temperature than "AUTO" mode. Camera will automatically adjust the white balance if the color temperature falls within 1,900°K ~ 11,000°K.

PUSH

Push mode is used if "AUTO" or "ATW" cannot produce the proper white balance. Place a white paper in front of the camera when using the "PUSH" mode to self-adapt.

MANUAL

Manual mode has "COLOR TEMP", "RED GAIN", and "BLUE GAIN" options for user preferred settings.

Adjust white balance using "AUTO" and "ATW" modes before using "PUSH" or "MANUAL" modes.

White balance may not work properly if the camera is facing toward a light source.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	AUTO ↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↓
EXIT	

EXPOSURE

EXP. COMPENSATION	10 []
GAIN	AUTO
AGC LIMIT	13 []
SHUTTER	AUTO ↓
SENS-UP	OFF
RETURN	↓

EXPOSURE

Camera exposure level can be adjusted using four different modes.

AUTO

*Auto mode will adjust the exposure level automatically.
Detailed fine tuning options are available under this menu.*

➤EXP. COMPENSATION : 0~20

Exposure level can be adjusted by the light meter.

➤GAIN : AUTO, -3dB ~ +30dB

Electronic brightness can be adjusted by "GAIN" control.

➤AGC LIMIT : 0~20

"AGC LIMIT" sets the maximum gain value to control the video noise caused by Auto Gain Control.

➤SHUTTER : OUTDOOR, INDOOR, DEBLUR

Shutter speed is automatically controlled by the camera.

Select "OUTDOOR" when camera is used in outdoor environment.

Select "INDOOR" when camera is used in indoor environment.

Select "DEBLUR" when camera is used in indoor environment.

Shutter value is increased and Iris is opened more than "INDOOR" mode.

➤AGC LIMIT : OFF, x2, x4, x8, x16, x32, x64

"SENS-UP" mode controls the digital slow shutter to allow extra light into the camera and adjust the picture quality.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	SHUTTER PRI ↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↓
EXIT	

EXPOSURE

EXP. COMPENSATION	10 []
GAIN	AUTO
AGC LIMIT	13 []
SHUTTER	1/90
RETURN	↓

EXPOSURE

SHUTTER PRI.

*Shutter priority mode provides more detailed shutter speed option.
All other controls are tuned for the selected shutter speed.*

➤ EXP. COMPENSATION : 0~20

Exposure level can be adjusted by the light meter.

➤ GAIN : AUTO, -3dB ~ +30dB

Electronic brightness can be adjusted by "GAIN" control.

➤ AGC LIMIT : 0~20

"AGC LIMIT" sets the maximum gain value to control the video noise caused by Auto Gain Control.

➤ SHUTTER : 1/2 ~ 1/40,000

Shutter speed can be set from this menu.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	FLICKERLESS↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON↓
EXIT	

EXPOSURE

EXP. COMPENSATION	10 []
GAIN	AUTO
AGC LIMIT	13 []
SHUTTER	AUTO↓
RETURN	↓

EXPOSURE

FLICKERLESS

Flickerless mode provides a proper image sensor frequency to match the power frequency in order to minimize video flicker.

➤EXP. COMPENSATION : 0~20

Exposure level can be adjusted by the light meter.

➤GAIN : AUTO, -3dB ~ +30dB

Electronic brightness can be adjusted by "GAIN" control.

➤AGC LIMIT : 0~20

"AGC LIMIT" sets the maximum gain value to control the video noise caused by Auto Gain Control.

➤SHUTTER : AUTO

Shutter speed is automatically controlled by the camera.

"FLICKERLESS" mode may not be suitable if camera is used in extreme bright environment.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	MANUAL ↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↓
EXIT	

EXPOSURE

GAIN	2 []
SHUTTER	1/90
RETURN	↓

EXPOSURE

MANUAL

Manual mode will only allow "GAIN" and "SHUTTER" speed adjustments.

➤ **GAIN** : AUTO, -3dB ~ +30dB

Electronic brightness can be adjusted by "GAIN" control.

➤ **SHUTTER** : 1/2 ~ 1/40,000

Shutter speed can be set from this menu.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	FLICKERLESS ▾
BACK LIGHT	▾
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	▾
IMAGE CONTROL	▾
SETTING	▾
RESET	ON ▾
EXIT	

BACK LIGHT

BACK LIGHT	SPOT ▾
ACE	OFF
RETURN	▾

BACK LIGHT

Camera provides multiple options for BACKLIGHT requirements.

SPOT

"SPOT" is spot metering feature. It will evaluate the light around the focus point. Focus point can be adjusted by the following menu.

- AE HOR POS
- AE VER POS
- AE WIDTH
- AE HEIGHT

HDR : LOW, MIDDLE, HIGH

"HDR" reproduces a greater dynamic range for clear view of both bright and dark areas.

BLC : LOW, MIDDLE, HIGH

"BLC" mode will express darker area brighter.

Enabling "BLC" may cause overexposure in bright area.

ACE : LOW, MIDDLE, HIGH

"ACE" feature is digital HDR mode.

It utilizes "GAMMA" and "CONTRAST" to adjust both bright and dark image areas.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	MANUAL ↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↓
EXIT	

DAY/NIGHT

COLOR

Select "COLOR" mode to stay in color at all time.

NIGHT

Select "NIGHT" mode to stay in black and white mode.

"COLOR" mode will not detect infrared light whereas "NIGHT" will detect infrared light for better visibility during extreme low light conditions.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	FLICKERLESS J
BACK LIGHT	J
DAY/NIGHT	COLOR
AUDIO MIC	MIC
GENLOCK	J
IMAGE CONTROL	J
SETTING	J
RESET	ONJ
EXIT	

AUDIO MIC

AUDIO LEVEL	+20 dB
MIC ATTENUATION	OFF
SAMPLE RATE	24 RATE
RETURN	J

AUDIO

Camera supports external analog audio input (3.5mm).

Audio will be embedded to both SDI and HDMI outputs.

MIC

Camera will receive MIC level audio input by selecting "MIC" mode.

➤ **AUDIO LEVEL** : -12dB ~ +59dB

Audio level can be manually adjusted from this menu.

➤ **MIC ATTENUATION** : ON, OFF

Audio input attenuation can be controlled from this menu to minimize the audio noise level.

➤ **SAMPLE RATE** : 16, 20, 24, 32

Audio sample bit rate can be adjusted from this menu.

LINE

Camera will receive Line level audio input by selecting "LINE" mode.

➤ **AUDIO LEVEL** : -12dB ~ +59dB

Audio level can be manually adjusted from this menu.

➤ **MIC ATTENUATION** : ON, OFF

Audio input attenuation can be controlled from this menu to minimize the audio noise level.

➤ **SAMPLE RATE** : 16, 20, 24, 32

Audio sample bit rate can be adjusted from this menu.

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	MANUAL ↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↓
EXIT	

GENLOCK

MODE	ON
OUTPUT EN	ON
H-SYNC PHASE	0
PHASE SET	ON ↓
RETURN	↓

GENLOCK

Camera is equipped with an external Tri-Level reference signal input for seamless switching. Up to 3G-SDI reference signal can be accepted and camera will self-adjust to both resolution and frame rate based on the reference signal.

MODE

Enable or Disable the external reference signal.

OUTPUT EN

Enable or Disable the reference signal loop out.

H-SYNC PHASE

Adjust H-Sync pixel offset for a fine tuning.

PHASE SET

Enable "PHASE SET" to apply the changes made from "H-SYNC PHASE".

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	FLICKERLESS ↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	MIC
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↓
EXIT	

IMAGE CONTROL

CONTRAST	32	[]
SATURATION	15	[]
SHARPNESS	10	[]
MIRROR	OFF	
FLIP	OFF	
D. ZOOM	1.0X	
NOISE REDUCTION	LOW	
GAMMA	STANDARD	
FRAME RATE	HD1080P60	
RETURN	↓	

IMAGE CONTROL

Camera provides multiple options to adjust image quality.

CONTRAST : 0~64

"CONTRAST" controls the range between dark and bright areas.

SATURATION : 0~20

"SATURATION" sets the level of color vividness.

SHARPNESS : 0~20

Image outline or edges will be clearer and pronounced.

MIRROR : ON, OFF

Image is rotated horizontally.

FLIP : ON, OFF

Image is rotated vertically.

D. ZOOM : 1.0X ~ 16.0X

Digitally zoom in to an area up to 16 times.

NOISE REDUCTION : OFF, LOW, MIDDLE, HIGH

Reduce noise level at low ambient light.

GAMMA : LOW, MIDDLE, HIGH, STANDARD, STRAIGHT

Gamma curve can be adjusted from this menu.

FRAME RATE

Camera provides 14 different resolution and frame rate settings.

1080p25 / 29.97 / 30 / 50 / 59.94 / 60

1080i50 / 59.94 / 60

720p25 / 30 / 50 / 59.94 / 60

SETTING

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	MANUAL ↓
BACK LIGHT	↓
DAY/NIGHT	COLOR
AUDIO MIC	OFF
GENLOCK	↓
IMAGE CONTROL	↓
SETTING	↓
RESET	ON ↓
EXIT	

SETTING

SOFTWARE VERSION	G.0.6.0
CAM ID	1
BAUDRATE	9600
LANGUAGE	ENG
DETECT DET	ON ↓
RETURN	↓

SETTING

Camera software and remote control information is under this menu.

You can remotely access the features via RS485.

SOFTWARE VERSION

Camera software version information.

CAM ID : 0~255

Set camera ID for remote camera control access.

Camera supports SONY VISCA and PELCO protocols.

BAUDRATE : 2,400 ~ 115,200

Set baud rate for remote camera control access.

LANGUAGE

Camera menu language can be set to either English or Chinese.

DETECT DET

Camera provides an auto pixel correction.

Please consult with your authorized dealer or factory before using "DEFECT DET".

MENU

LENS	DC IRIS
WHITE BALANCE	ATW
EXPOSURE	FLICKERLESS ↵
BACK LIGHT	↵
DAY/NIGHT	COLOR
AUDIO MIC	MIC
GENLOCK	↵
IMAGE CONTROL	↵
SETTING	↵
RESET	CHANGE ↵
EXIT	

RESET

RESET MODE	FACTORY
SAVE	— — —
RETURN	↵

RESET

Camera setting can be defaulted to the "FACTORY" setting.

User can also save the desired setting as the "USER" setting.

CHANGE

Before defaulting the camera setting, make sure to select the desired setting.

➤FACTORY

Select "FACTORY" if factory default setting is needed.

"FRAME RATE", "CAM ID", "BAUDRATE" will not change.

➤USER

Select "USER" if user saved setting is needed.

➤SAVE

To save a user desired setting, Select "USER" from above menu and "SAVE".

ON

Press the menu button from your controller to set the camera to either "FACTORY" or "USER".

Make sure to select the right mode from "CHANGE" before defaulting the camera.

Image Sensor	1/3 inch Progressive CMOS
Sensor Size	5.346mm x 3.003mm (16:9)
Effective Pixels	Horizontal: 1920, Vertical: 1080
Pixel Size	2.75 μ m x 2.75 μ m
Sync System	Internal Sync.
Resolution	1080p / 1080i: 1920 x 1080 Full HD 720p: 1280 x 720
Minimum Illumination	0.2Lux (Day), 0.05Lux(Night)
Frame Rate	1080 60p / 59.94p / 50p / 30p / 29.97p / 25p 1080 60i / 59.94i / 50i 720 60p / 59.94p / 50p / 30p / 25p
SMPTE Standard	SMPTE 292M, SMPTE 424M
Video Signal Output	3G/HD-SDI HDMI 1.3a
White Balance	Auto & Manual (1,900°K~11,000°K)
Lens Mount	C / CS Mount w/ DC Iris
Synchronization	External Tri-Level Sync Input
Audio Input	3.5mm Analog Audio Input
Audio Sample Rate	16 / 20 / 24 / 32 bits
Color Space	4:2:2(YCbCr) 10bit
Other Features	True Day and Night, Auto Gain Control, Wide Dynamic Range
Camera Control	OSD Control Button / via RS-485
Operation Temperature	15°F ~ 120°F
Dimension & Weight	49 x 49 x 57mm & 150g (Without Lens)
Power Requirements	6W at 12VDC (+9 ~ +15VDC)

Specifications are subject to change without notice

AIDA



Disposal of Old Appliances

1. When this crossed-out wheel bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream in accordance to laws designated by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.



This equipment 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 equipment is operated in a commercial environment.

This equipment 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 this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.