Ness 104-443 HD-SDI camera

User's Manual

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1. Overview

HD-CCTV standard offers a new opportunity for traditional CCTV surveillance industry. It makes CCTV Camera transmit high definition image through coaxial cable. Combing SDI standard with high quality SONY CMOS sensor, the SDI Box Camera provides 1920x1080 resolution high quality image as well as easy and low-cost installation. With innovative WDR function and digital noise reduction technology, the SDI Box Camera can offer close-up images with exceptional details even at night time.

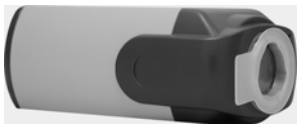
1.1 Features

- Progressive Scan CMOS Sensor
- Full HD 1080P @ 30fps/60fps
- HD 720P @ 30fps/60fps
- Wide Dynamic Range
- Digital Noise Reduction
- Intuitive OSD Operation
- BNC output support
- DC12V Support
- AC24V Support*
- RS-485 Support*
- Alarm I/O Support*

(*) Optional

1.2 Package Contents

Please check the box contains the items listed here. If any item is missing or has defects, DO NOT install or operate the product and contact your dealer for assistance.

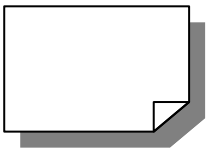


SDI Box Camera

Back focus adjuster

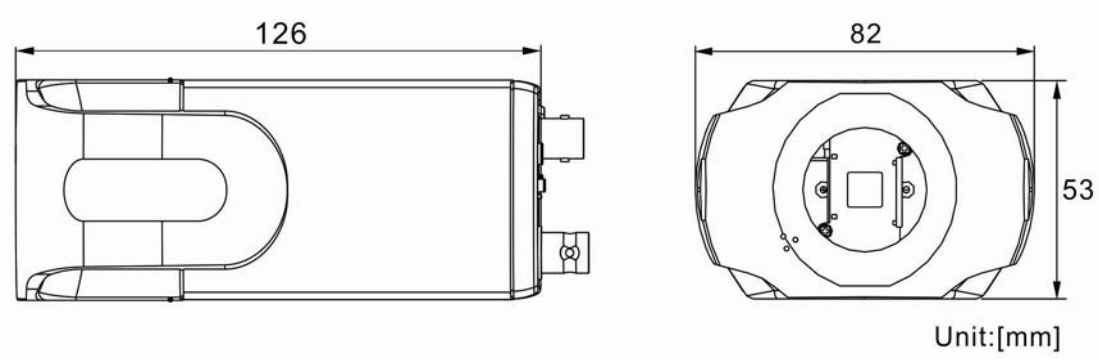
CD

(bundled software and documentation)



Quick Guide

1.3 Dimensions

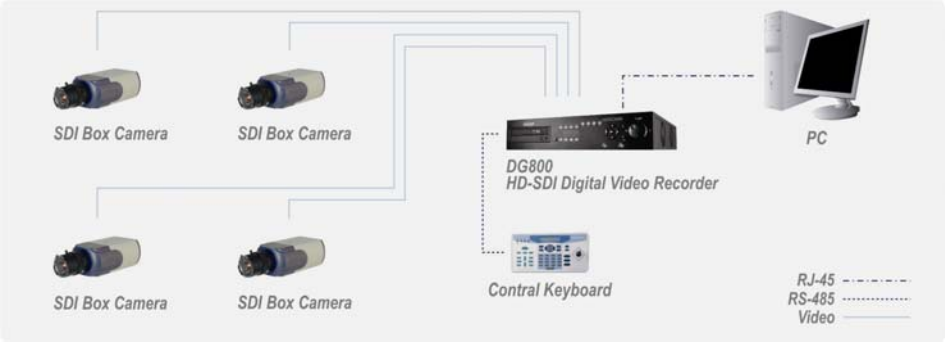


2. Camera Cabling

Please follow the instructions below to complete SDI Box Camera cable connections.

2.1 Product Application

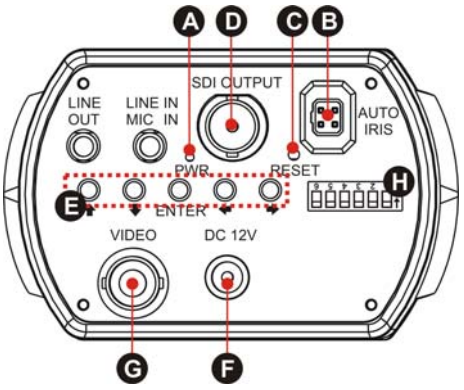
Connect the SDI Box Camera to other devices as shown in the diagram to complete a video surveillance solution.



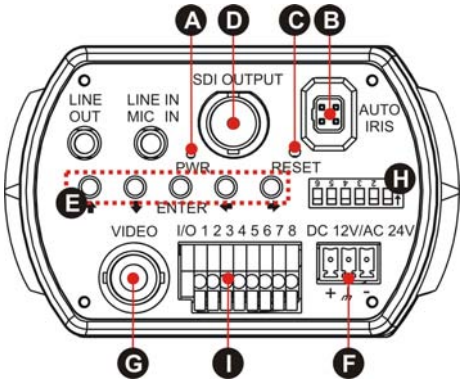
2.2 Connectors

The diagram below shows the IP Camera's reset button and various connectors. Definition for each connector will be given as follows.

Single Board



Dual Board



Item	Definition		Remark			
A	PWR		Power connection indication (green light)			
B	AUTO IRIS Connector		Auto Iris Lens connector			
C	RESET		Reset			
D	SDI OUTPUT		SDI signal output			
E	↑ / ↓ / ← / → / ENTER		OSD control key			
F	Single Board	DC12V	Power connector			
	Dual Board	DC12V/AC24V	＋	AC 24V: AC_IN 1	DC 12V: DC12V	
			⏚	AC 24V: GND	DC 12V: GND	
			－	AC 24V: AC_IN 2	DC 12V: DC12V	
G	VIDEO		BNC output			
H	DIP Switch		TV system/ Resolution/ Frame Rate Setup/ BNC			
I	Alarm I/O		1	ALARM_GND	5	T-
			2	ALARM_IN+	6	T+
			3	ALARM_OUT-	7	R-
			4	ALARM_OUT+	8	R+

2.3 TV System/Resolution/Frame Rate Setup

Please refer to the illustrations below to set up the Camera TV system, resolution and frame rate.

Pin	Definition	Setting	
		ON	OFF
1	TV System	NTSC	PAL
2	Resolution	720P	1080P
3	Frame Rate	50/60	25/30
4	Reserved	-	-
5	Reserved	-	-
6	BNC	ON	OFF

Please kindly notice that while BNC output is on, there will be no SDI signal.

2.4 Lens Mounting

If use C-Mount lens, after removing the camera's plastic cover, users need to mount the C/CS mount adapter to the camera. Then attach the lens onto the C/CS mount adapter, as the illustrations shown below.

	
C/CS Mount Adapter	**Completion**

Appendix A: Technical Specifications

Camera		
Sensor		1/2.8” Sony Progressive CMOS
Total Pixel		2144 (H) x 1588 (V), 3.4M
Shutter Speed		1/30 ~ 1/10000 sec.
A/D Converter		10 /12 bit
Lens		
C/CS Mount Lens		Fixed / Vari-focal
Operation		
Video Streaming		1080P / 720P
Frame Rate		30/60 fps, 25/50 fps @1080P
		30/60 fps, 25/50 fps @ 720P
Image Setting	**AE Mode**	Auto / Shutter / IRIS / Manual
	Back Light Compensation	On / Off
	White Balance	Auto / Indoor / Outdoor / ATW / Manual
	Digital Noise Reduction	On / Off
	Wide Dynamic Range	On / Off
	IR Function	Auto / On / Off
	Aperture	1 ~ 16
	Privacy Mask	16
Mechanical		
Lens Mounting		C / CS Mount
Video Output	**SDI**	75 Ω
	BNC	1.0 Vp-p / 75 Ω
Connectors	**Remote Control***	Up to 2 sets RS-485
	DIP Switch	6 pin
	TACT Switch	5 pin (OSD Control)
	Auto Iris	DC Drive
	Alarm In/Out*	Up to 2 sets
General		
Dimension		125 x 82 x 52 mm (L x W x H) (w/o Lens)
Weight		330 g (0.73 lbs)
Power Source		DC 12V±10% / AC 24V*±10%
Power Consumption		Max 5W
Regulatory		CE, FCC, RoHS

(*) Optional

Appendix B: Back Focus Adjustment

When to adjust back focus

Back Focus refers to the distance from the rear lens element to the camera focal plane. In most cases, it is required to adjust back focus only when the camera's lens cannot hold focus throughout its zoom range.

What requirements

Tools required when carrying out back focus adjustment include:

1. Back focus adjuster (in the IP Camera's package)
2. Test chart / contrasting object

How to adjust back focus

Step 1: Set the camera on a stable mount, with the test chart or object at least 75 feet (23 meters) away (or as far as possible).

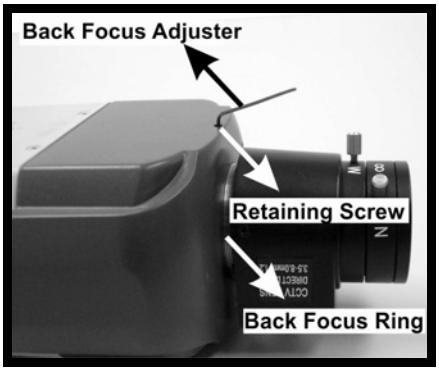
Step 2: Make sure the iris is wide open. Therefore, it is advised to keep the environment in low light condition.

Step 3: Adjust the focus to infinite far (∞).

Step 4: Turn the zoom to the extreme telephoto position, and then focus on the subject.

Step 5: Set the zoom to wide-angle position.

Step 6: Loosen the back focus ring's retaining screw with the supplied adjuster, and adjust the back focus ring for sharp picture.



Step 7: Repeat steps 3 ~ 6 until focus can stay the same throughout the zoom range.

Step 8: Tighten the back focus ring's retaining screw to fix the ring.