CameraServer

CSB-3101

User's Manual

IV&C

Industrial Video and Control

Before You Use

Surveillance devices may be prohibited by law in your country. Though CameraServer is not only a high performance surveillance system but also a networked video server, ensure that the operation of such devices are legal before installing this unit for surveillance.

It is important to carefully check the contents with the "Package Contents" section after opening the package. Understanding the physical description can prevent damage caused by abnormal usage and reduce most problems during installation.

Basically CameraServer is a network device and should be easy to use for those who already have basic network knowledge. If there is a system error and it does not recover easily due to erroneous configuration, check the section "Auxiliary buttons" to restore factory default settings and run installation again.

Those paragraphs preceding by  should be fully understood and cautioned. Ignoring the warnings may result in serious hazards.

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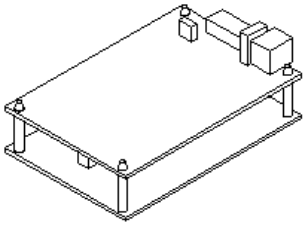
Package Contents

CameraServer CSB-3101

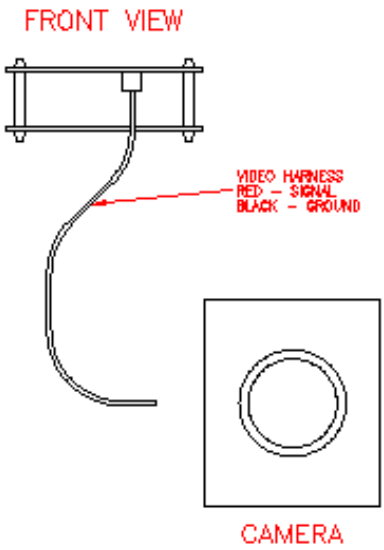


Power adapter

I/O terminal block connector

Physical Description

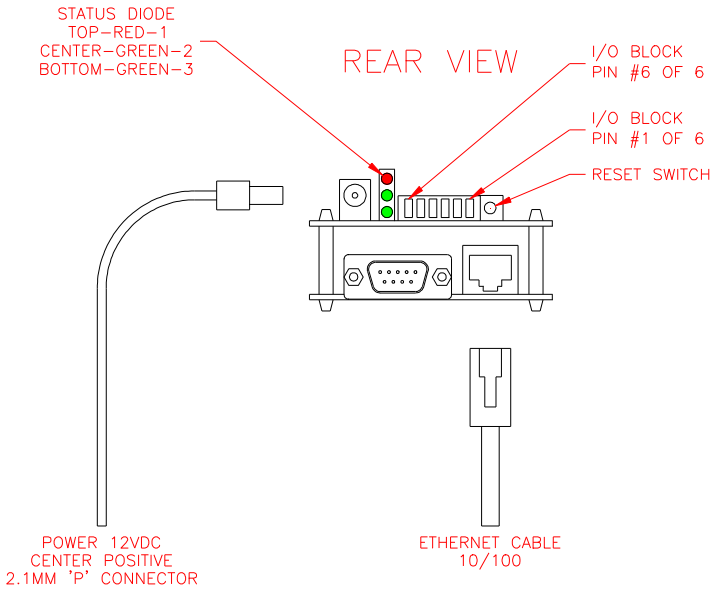
Front Panel



BNC video input

75Ohms resistance video port for connecting an external camera. To ensure video modulation type being correctly detected, **CAMERAS SHOULD BE ATTACHED AND POWERED ON BEFORE THE CAMERASERVER IS POWERED ON.**

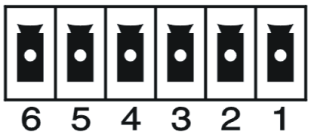
Rear Panel



Ethernet 10/100 socket

Connect to Ethernet network with a UTP category 5 cable that cannot exceed 100 meters. Once the Ethernet cable is connected without error, CameraServer will utilize Ethernet interface regardless of modem connection.

General I/O terminal block



1	←	DI+	INPUT	(Max. 50mA, 12VDC)
2	←	DI-	INPUT	
3	←	SW_COMMON	OUTPUT	(short with NC at initial state)
4	←	SW_NOPEN	OUTPUT	(Max. 1A, 24VDC or 0.5A, 125VAC)
5	←	RS485 B		(inverting)
6	←	RS485 A		(non-inverting)

CameraServer provides a very flexible general I/O interface to combine with the user's security devices such as sensors, alarms, lighting or door locks. The general I/O terminal block has six pins for device control. These pins can be divided into two categories based on their functions, including RS485 and digital inputs and outputs.

CameraServer provides one digital input and one relay switch. Pin 1 and pin 2 can be connected to external sensor and the state of voltage will be monitored according to the programmed scripts in configuration. The relay switch can be used to turn on or off external devices.

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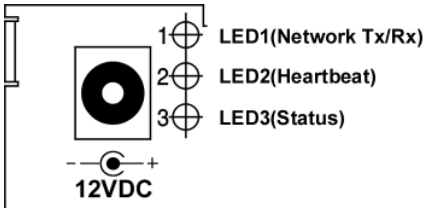
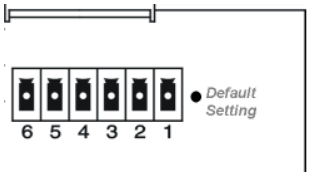
Status LEDs



Each time CameraServer starts, it will perform a Power-On Self Test, abbreviated as POST hereafter, to examine every hardware module. As soon as the administrator plugs in the power adapter, both LEDs under the network LED will flash one by one until the POST is done. If any module fails, both LEDs will indicate to the users the error according to the pattern listed in Appendix A. If the result is good, both LEDs will turn off for a while and then follows the pattern below. Network interface depends on the peripherals including Ethernet UTP cable, modem or null modem cable. If the Ethernet cable between CameraServer and Ethernet hub is good, CameraServer will choose the Ethernet network. If Ethernet is unavailable but a operational modem is connected, the network interface will be PPP with modem. If either of the above is not the case, CameraServer will try the interface of PPP with null modem.

Network Interface	Condition	LED2 (Heartbeat)	LED3 (Status)
Ethernet	before installed	OFF	OFF
	after installed	flash	OFF
	during camera control	flash	Flash
PPP with modem	after POST	flash	ON
PPP with null modem	before connected	ON	ON
	after connected	flash	ON

Restore button



There is a button hidden in the box for restoring the system factory default settings. When the system fails to install or operates abnormally, use a paper clip or other small object and follow the following procedures to reset the system back to its original status.

Poke the clip, which does not need to be pointed just it can fit into the hole to press down on the restore button. Restart the system by unplugging and re-plugging the power jack. While keeping the button pressed, the system will perform POST twice rather than the usual once, which can be observed from the flashing LEDs. After the system flashes the LEDs for the second time, withdraw the pin to release the button. The system will have restored factory default settings at that moment.

Power adapter

Connect the power jack of the included power adapter. Connecting the power adapter should be the last operation while physically installing CameraServer.

How to Install

To easily fit into various environments, CameraServer automatically detects the attached interfaces and configures itself to the best condition. Therefore users need not care whether the connected cameras are either NTSC or PAL, how to select the network between Ethernet and modem, and whether the Ethernet speed is 10Mbps or 100 Mbps. If the connected motorized camera is on the support list, users only need to plug and play without complicated configurations.

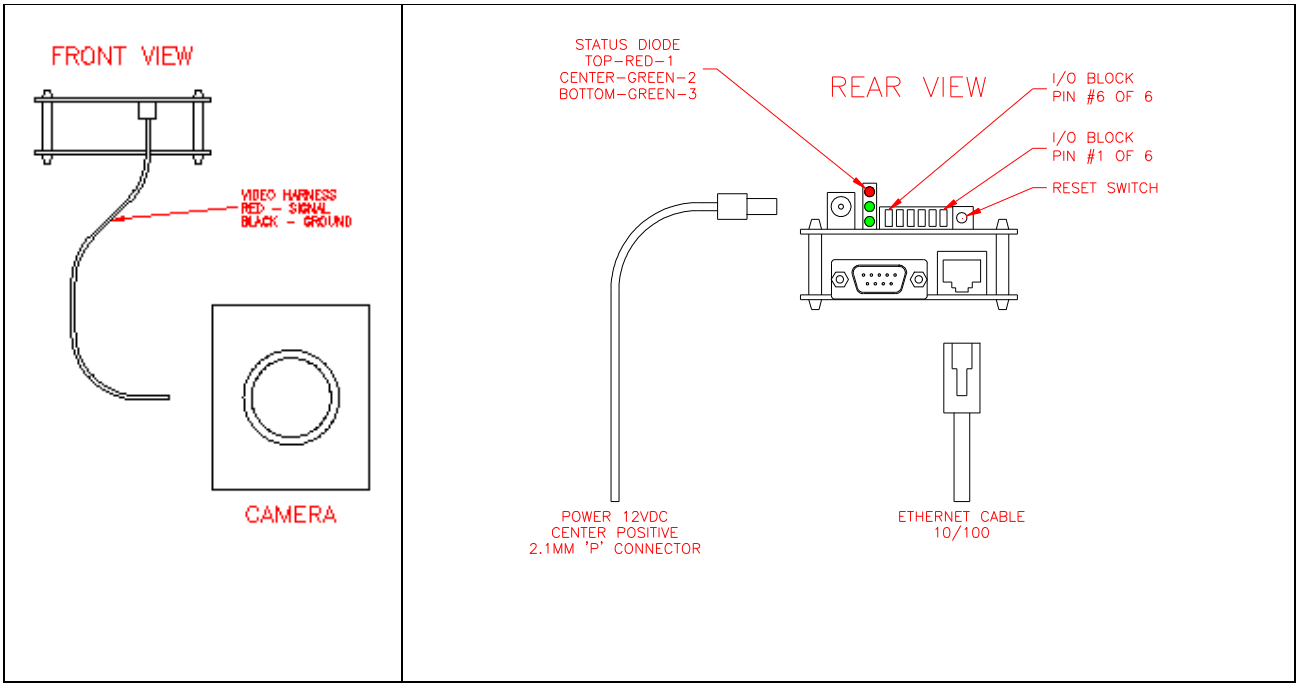
In the following content, "user" refers to those who can access CameraServer and "administrator" means the supervisor who has the root password to configure CameraServer in addition to general access. Administrators should carefully read this manual, especially during installation.

Ethernet Environment

Hardware installation

Before installing multiple CameraServers at the well-chosen locations, the administrator should document the serial numbers (MAC ADDRESSES) on the packages respectively for future use.

Cable connection



Shut down all the peripheral devices prior to connection. Connect the supplied cables from CameraServer to related devices according to the following steps. Note that the power adaptor must be kept unplugged until other cables are firmly connected.

Power on

Make sure all cables are correctly and firmly connected before turning on CameraServer. Turn on cameras, sensors, alarm devices, and then attach the power adaptor of CameraServer to the electric power socket.

 Connect the power jack of the power adapter to CameraServer prior to plugging the utility end into the utility power socket. It will reduce accidental electric surge shock.

Appendix

A. POST procedure

After the power has been turned on, CameraServer will perform a self-diagnostic to locate any possible hardware defects. If the power indicator is dim at the beginning, the power fails to proceed further. While the POST is proceeding, the status LED indicators will keep blinking interchanged until finished or any fatal error happens. If either status LED indicator is dim at the beginning, the LED may be broken.

Any possible fatal error has a special pattern shown in the following table. LED2 is the one below the network indicator and LED3 is the lowest one. If the POST is successful, status LED indicators will both shut off for a while and then light depending on the chosen network interface. If Ethernet is available, LED2 will flash like a heartbeat after network installation is done. Otherwise if modem is available, LED2 will flash alike to indicate listening for dial-in connection while LED3 is lit. If the included null modem cable is connected, both LEDs will stay on and then LED2 will start flashing after the connection from the PC is opened for configuration and LED3 stays lit.

LED pattern after POST	**Possible failed component**	**Failed function**
LED2 and LED2 blink at same time	U32(SAA7113)	Video decoder
LED2 ON and LED3 OFF	U1(TM1300)	PCI bridge of TM1300
LED2 OFF and LED3 ON	U6(RTL8139C)	Ethernet controller
LED2 ON and LED3 ON	U6(RTL8139C), U7, U8	Ethernet interface*
LED2 blink and LED3 ON	U22(M5823)	Real-time clock
LED2 ON and LED3 blink	U19(16C1550CJ), P2	COM1 interface

 Ethernet interface failure includes not only components on board but also Ethernet cable and the devices of the opposite end.

C. Technical specifications

Remote Management Configuration can be accessed via Web browser remotely. **Networking Protocols** TCP/IP, HTTP, SMTP, FTP **Physical** 10baseT Ethernet or 100baseT Fast Ethernet **Video Algorithm Supported** MJPEG **Features** Adjustable image size and quality Time stamp **Video Resolution** Up to 30 frames at 352X240 Up to 10 frames at 704X480 **Operating System** Microsoft Windows **Browser** Internet Explorer 4.x or above,	**General I/O** 1 opto-isolated sensor inputs (max. 12VDC 50mA) 1 output relays (max. 24VDC 1A, 125VAC 0.5A) **LED Indicator** Status indicators Network indicator **Power** 12V DC, 1.2A external power supply. 110V AC power supply included.

Electromagnetic Compatibility (EMC)

USA - This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a partial installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the seperation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with emission limits.

Europe CE - This digital equipment fulfills the requirement for radiated emission according to limit B of EN55022/1998, and the requirement for immunity according to EN50082-1/1992.

Liability

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