IP Security Camera and Accessories
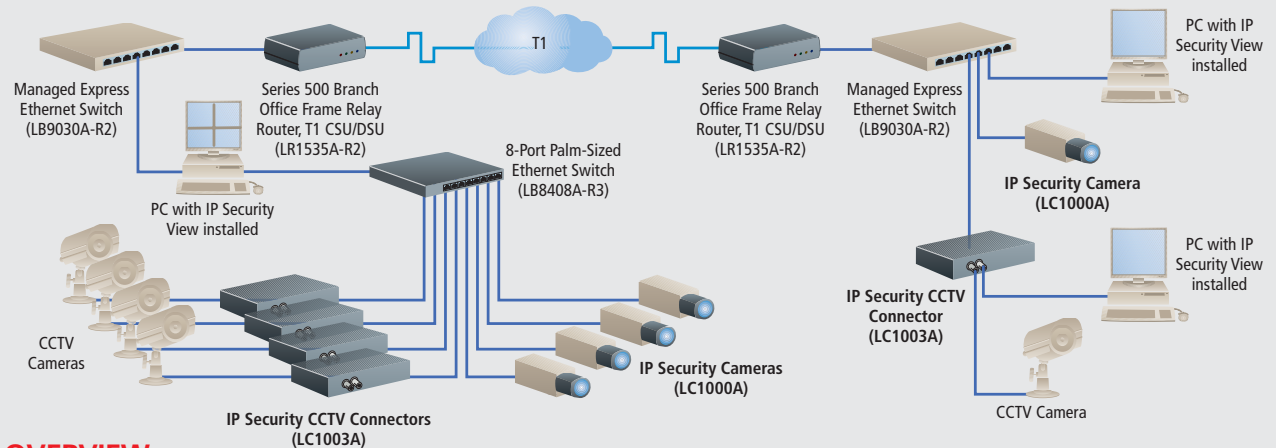

Get LAN/WAN security with this TCP/IP-addressable digital video camera and its accessories.

FEATURES

- **Use camera and coax-video devices over your network or the Web for security purposes.**
- **Components work with each other and inexpensive CAT5 cable.**
- **Adjustable bandwidth consumption and frame rates.**
- **Add analog closed-circuit cameras using connector device.**
- **Optional software for recording and viewing up to 16 video streams at the same time.**
- **Mounting bracket for camera available.**

How the IP Security Camera components work together.

Managed Express Ethernet Switch (LB9030A-R2)

Series 500 Branch Office Frame Relay Router, T1 CSU/DSU (LR1535A-R2)

T1

Series 500 Branch Office Frame Relay Router, T1 CSU/DSU (LR1535A-R2)

Managed Express Ethernet Switch (LB9030A-R2)

PC with IP Security View installed

8-Port Palm-Sized Ethernet Switch (LB8408A-R3)

PC with IP Security View installed

IP Security Camera (LC1000A)

CCTV Cameras

IP Security Cameras (LC1000A)

IP Security CCTV Connector (LC1003A)

PC with IP Security View installed

IP Security CCTV Connectors (LC1003A)

CCTV Camera

OVERVIEW

Looking to deploy enterprise-wide LAN/WAN-based security that can be managed remotely? For sophisticated yet economical video-surveillance capabilities, you can't go wrong with these compatible components.

These field-tested, IP-ready devices can be used over Ethernet—local, remote, or Internet-based—for a variety of security applications. For example, use them to remotely monitor and record video from a central location.

Start with the IP Security Camera (LC1000A), which enables you to view the IP camera image either remotely from an Ethernet-attached Windows® PC or locally. If you want to expand your system to include a "generic" closed-circuit TV (CCTV) device that's already installed in your application, order the IP Security CCTV Connector (LC1003A). It has two coax connectors: one for input and one for output.

You can add advanced video recording functions to your system, too. Order the IP Security Digital Recorder (LC1004A), which is software that records up to 16 TCP/IP video streams at the same time! You can also view any or all of the 16 streams in real time.

For single-user, multi-session viewing of up to 16 camera feeds, use IP Security View software (LC1005A).

IP Security Camera

The IP Security Camera is a color CCD digital TCP/IP-addressable digital video camera. Because it uses its own TCP/IP connection, integrating it into an existing network is easy. You need only to assign the camera its own IP address using the software shipped with it.

The camera has a built-in 10/100BASE-T Ethernet LAN interface for connecting Category 5 cable. It also has a BNC analog output connection for simultaneous video transmission over coax.

Connect the camera to your existing CCTV equipment for recording images to a VCR or displaying on video monitors.

With advanced video-compression technology that improves the performance of video when transmitted, the IP Security Camera provides frame rates that are among the fastest in the industry. The camera also clarifies and filters video data, reducing unwanted blemishes that occur when video is compressed during the codec process.

What you get in return is clear video that typically uses no more bandwidth than a serial device on your network. Want even more bandwidth? Simply adjust the camera's dynamic throttle. With this helpful function, you can set bandwidth consumption as low as 9.6 kbps per average usage.

The camera comes with viewing software for setup and basic viewing applications. This CD-based application includes a point-and-click graphical user interface (GUI) that has a control panel for setting frame rates and bandwidth throttle, and for switching from color to black and white. For more advanced viewing capabilities, however, you'll need IP Security View software.

The camera is only 6" (15.2-cm) long, so you can install it in a tight corner or an inconspicuous location. To mount the device, be sure to order a Mounting Bracket (LC1002B).

You'll need to choose from the following iris lenses for your camera (the IP Security Camera does not come with lens pre-installed):

- 4-mm auto iris lens
- 3–8-mm manual iris lens
- 3–8-mm auto iris lens

NOTE: Auto-iris lenses are DC-driven and include a built-in DC power cable that connects to the DC receptor on the IP Security Camera.

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2 of 5

IP Security CCTV Connector

Use this bandwidth-efficient digital video transmitter to connect just about any standard analog CCTV camera to your corporate network or the Internet.

Through this economical connection, you can tap into live streaming video from previously installed closed-circuit cameras, such as those used for security purposes. Because the IP Security CCTV Connector uses your existing LAN/WAN infrastructure for transmission and has an integrated DHCP server, you can reduce the costs of connecting equipment within an enterprise-wide system.

TCP/IP addressable, the IP Security CCTV Connector allows simultaneous access by two receivers. These receivers can be two viewing stations, two IP Security Digital Recorders, or one viewing station and one IP Security Digital Recorder.

The LAN interface is autosensing 10/100BASE-T. For composite video input, there's a 75-ohm BNC analog video interface. The CCTV Connector also has control ports (an RS-232 DB9 passthrough port and an RS-422/485 RJ-11 connector) for accessing the CCTV Connector remotely. A CCTV video loop function enables you to add additional CCTV Connectors to your setup or to output to other CCTV devices.

With the included GUI-based software utility (which is identical to that shipped with the IP Security Camera), you can limit the amount of bandwidth used by the IP Security CCTV Connector. This is done using the software's throttling function. You're also given two display modes. You can switch on the fly between standard color video display or mono-chrome display for up to 30% more video throughput.

What's more, the device's proprietary codec algorithms result in faster frames per second and lower bandwidth usage. This level of digital video compression frees bandwidth space for other network applications and allows you to install more cameras on your network.

IP Security Digital Recorder

Compared to traditional time-lapse recording, digital video recording can be a time and money saver while providing you with greater flexibility and the means to automate the recording process. The IP Security Digital Recorder, however, takes digital video recording a step further—it's a network-based digital video recorder!

Why rely on an expensive centralized storage system to store digital video when you can make use of the distributed storage capacity of your network? This software-based recorder enables you to convert any Pentium® II class PC on your network to a digital video recorder. Video can be played back as a standard .avi file on any authorized Windows computer anywhere in the world.

Network-based digital video recording offers increased efficiency at a reduced cost. Camera images captured at multiple facilities can be recorded at a central location. Or you can set up the IP Security Digital Recorder so recorded clips link automatically to your other database records. Digital video recording also eliminates the administrative cost of handling tapes and cleaning VCR heads.

The network-based nature of the system also allows both the IP Security Digital Recorder and its video sources to be connected to your existing LAN cabling, with no need to pull expensive coax to support the connection.

And this is no ordinary recorder that's only able to capture one camera shot at a time. The IP Security Digital Recorder can record up to 16 camera feeds simultaneously and at frame rates up to 30 fps (frames per second)—rates that are unattainable with ordinary VCR/multiplexor combos. Specifically, the software can record 30 fps of digital video frames on a single stream basis and up to 4 fps with multiple video streams.

It's able to do this by using the network as its video multiplexor, and this process is aided by sophisticated codec technology that compresses the data for recording. You also get efficient video-transmission capabilities for reduced bandwidth consumption and extended recording time.

The IP Security Digital Recorder software enables you to also view images while they're being recorded by a remote camera (or any other video device, for that matter). So it's essentially a recorder that's also a real-time observation platform. You can play back all recorded views in a 4 x 4 (16-image), split-screen format, or play back any individual stream.

And finding the images you've recorded is easy—no more fiddling with an analog multiplexor and a VCR to track down a camera shot. The viewer software provided with the IP Security Digital Recorder offers reduced search time, making it simple to retrieve recorded video clips to play back over your LAN, WAN, or Virtual Private Network (VPN). The powerful search engine locates images by time, date, and location. Using a calendar-based time and date search engine, you can view recorded video from any location, instantly locating and viewing the minute an event took place.

With the software's powerful, user-friendly GUI, you can easily navigate within the application with standard mouse and keyboard techniques. The software also includes an ODBC-compliant driver for setting up recording schedules and logging events, alarms, and location ID. Snapshots can be stored on an event basis.

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3 of 5
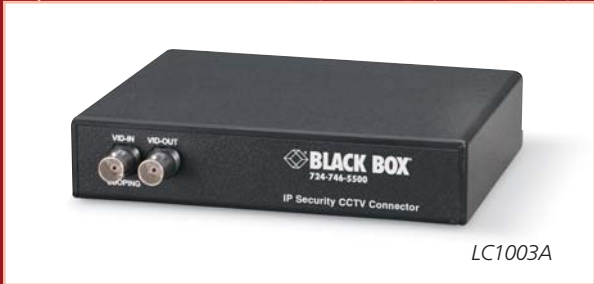
You're also given setup controls for selecting your video device and setting your recording frame rate. For example, you can use slower frame rates for smaller video files.

To run the recorder software, you'll need a PC system with Windows 95/98, Windows 2000, or Windows NT® 4.0; an Intel® Pentium processor; 128 MB of RAM; 1 GB of available disk space; and a screen capable of displaying 16 bits of color or higher.

IP Security View

You may have an application in which you require enhanced video-viewing capabilities. This is where you would need our IP Security View software, which provides single users with sophisticated view-only functions of local and remote camera feeds.

How does this software differ from that shipped with the IP Security Camera? The camera's included software allows you to view a single image captured by a single camera. The IP Security View software, however, enables you to view up to 16 TCP/IP video streams within a single computer screen.

These streams—displayed in a 4 x 4, split-screen format on your computer—originate from connections made via your LAN/WAN or the Internet to up to 16 IP Security Cameras or IP Security CCTV Connectors (or a combination of the two).

The software features a user-friendly GUI that can be navigated with ordinary mouse and keyboard techniques. Adding the LC1000A cameras or LC1003A units to the IP Security View database can be done quickly and involves entering an IP address and assigning a port address. You can even change your video settings from color to black and white to increase frame refresh rates and modify bandwidth used to improve video speed.

With its activity log, the IP Security View stores logged activities in a database, from which you can export with filtering capabilities to text files.

For the software, you'll need a PC running Windows 95/98, Windows 2000, Windows NT, or Windows XP with a screen capable of displaying 16 bits of color or higher. A 17" or larger monitor is recommended.

LC1003A

TECH SPECS

IP Security Camera:

Camera Sensor:
Gamma Correction — 0.45
Geometry — Zero geometric distortion
Imager — ⅓ NTSC color CCD
Iris — Manual models: CCD iris; Auto models: Video-driving auto iris
NTSC Video Output Level — Composite, 1 Vp-p
Picture Elements — 512 horizontal x 492 vertical
Pixel Size — 9.6 x 7.5
Scanning System — 2:1 interlaced NTSC
Scene Illumination (Minimum) — 2 lux @ F1.4
Signal-to-Noise Ratio — +46 dB
Sync System — Internal sync
White Balance — Auto

Connectors:
Auto Iris Lens — (1) 4-pin square (QQQ)
Composite Video — (1) BNC, 75-ohm, analog
LAN Interface — (1) RJ-45 Category 5
Power — (1) 2-pin screw terminal

Mounts:
Camera — Top or bottom mount, ¼-20 threaded; use included mini bracket
Lens — CS/C mount, adapter included

Performance:
Compression Rate (Maximum) — 30 fps
Nominal Frame Refresh — Color mode: Up to 15 fps; Monochrome mode: Up to 30 fps
Resolution — 330 TV (H) 350 TVLL (V)
Video Latency — ⅟₃₀ of a second

Power:
Power Requirements — 12-VDC, 1.5-A regulated supply

IP Security CCTV Connector:

Connectors:
Composite Video — (1) BNC, 75-ohm, analog
Control Ports — RS-232: (1) DB9 passthrough port; RS-422/RS-485: (1) RJ-11
LAN Output — (1) RJ-45 Category 5
Relay/Alarm Extender Port — (1) DB9
Power — (1) 2-pin screw terminal

Performance:
Compression Rate (Maximum) — 30 fps
Nominal Frame Refresh: At 128 kbps: Up to 15 fps; At 256 kbps: Up to 30 fps
Video Latency — ⅟₃₀ of a second

Power:
Power Requirements — 5-VDC, 500-mA regulated supply

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4 of 5

WHAT'S INCLUDED

IP Security Camera:
✦ IP Security Camera
✦ Installation/viewer software
✦ 120-VAC power supply
✦ Lens adapter
✦ Iris connector
✦ Allen wrench
✦ Installation guide

IP Security CCTV Connector:
✦ IP Security CCTV Connector
✦ Installation/viewer software
✦ 120-VAC power supply
✦ Installation guide

LC1000A

Item	Code
IP Security Camera	**LC1000A**
You'll also need one of the following…	
Iris Lenses	
Manual 3–8-mm	**LC1001M-8mm**
Auto 4-mm	**LC1001A-4mm**
3–8-mm	**LC1001A-8mm**
To mount your IP Security Camera, order…	
Mounting Bracket	**LC1002B**
To complete your system, you may also need…	
IP Security CCTV Connector	**LC1003A**
IP Security Digital Recorder	
(Windows Compatible Software)	**LC1004A**
IP Security View	
(Windows Compatible Software)	**LC1005A**

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Recognize any of these situations?

• **You wait more than 30 minutes to get through to a vendor's tech support.**

• **The so-called "tech" can't help you or gives you the wrong answer.**

• **You don't have a purchase order number and the tech refuses to help you.**

• **It's 9 p. m. and you need help, but your vendor's tech support line is closed.**

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

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