ΛD AMERICAN™ DYNAMICS

Digi**Mux**™

THE DIGITAL SURVEILLANCE SOLUTION

The DigiMux™ DG4000 series digital surveillance system includes a multi-channel Digital Video Recorder (DVR) with 4, 9 or 16 camera inputs, DigiClient™ remote viewing and configuration software, and one DigiRemote™ infrared (IR) remote control. This is a multifaceted product that integrates key elements into a single security CCTV solution. DigiMux triplex operation enables users to simultaneously view live and previously recorded video while continuing to record at the same time. DigiMux essentially replaces two time-lapse VCRs , a multiplexer, and a video server all in one space-saving digital solution.

DigiMux converts analog video signals into digital video images that can be stored on an array of hard disk drives. A key advantage to digital video is that it can be indexed by time or events, and recorded video can be instantly viewed. DigiMux users can access recorded video instantaneously without having to rewind videotapes. At the touch of a button, fast forward, rewind, and pause while avoiding image streaking or tearing that is common with analog VCR technology.

DigiMux can be remotely controlled with DigiClient via Ethernet connection to a LAN, WAN or the Internet. DigiRemote, a full-functional infrared remote control, provides control of DigiMux including dome control. Three USB ports enable video export to compatible external USB devices such as CD-RWs, hard drives or ThumbDrives.® Exported video may be easily viewed in Windows Media Player.

DigiMux offers advanced features not typically found in standard multiplexers, including remote alarm notification, remote access, and real-time Active Window. DigiClient remote viewing and configuration software extends the features, accessibility, and usability of DigiMux. All around, DigiMux is a full-featured integrated digital surveillance solution that can be used in virtually any application.

FEATURES

- Integrated digital video recorder, multiplexer and video server (4, 9 or 16 channels)
- Triplex operation enables users to simultaneously view live and previously recorded video while continuing to record at the same time, using either one or two monitors
- Outstanding picture quality: Live display resolution 720 x 480 (NTSC), 720 x 576 (PAL); Record resolution 720 x 224 (NTSC), 720 x 272 (PAL)
- Records up to 60 ips NTSC, (50 ips PAL) shared across all channels
- Active Window enables live video display up to 30 ips NTSC (25 ips PAL) for one user-selectable window – provides aggregate live display up to 90 ips NTSC (75 ips PAL)
- Record and playback one channel of audio
- DigiRemote, a fully functional infrared remote control, includes dome control
- Flexible internal storage: 80, 160 and 320 GB
- Export video and audio as AVI files via the USB port to compatible USB devices such as CD-RWs, hard drives and ThumbDrives.

- Playback exported or downloaded AVI files using Windows Media Player
- Networkable via Ethernet (TCP/IP)
- Easy-to-use DigiClient, browser-based remote viewing and configuration software
- Covert camera operation provides enhanced security and administrator control
- Motion detection with configurable sensitivity levels
- Remote alarm notification includes DigiClient software, e-mail, pager or phone
- Pre-alarm video (up to five minutes)
- Preset Config enables quick and easy setup of record options
- Digital signature verifies authenticity of recorded video
- Control a variety of domes directly from DigiMux, DigiRemote or DigiClient
- Individual camera settings for key functions
- Update software via USB ThumbDrive*

*ThumbDrives available separately.

SPECIFICATIONS

Model Numbers[††]

ADDG4004080N . . . . .DigiMux DG4004, 4 channel, includes DigiClient SW & DigiRemote, 80 GB, NTSC

ADDG4004080P . . . . .DigiMux DG4004, 4 channel, includes DigiClient SW & DigiRemote, 80 GB, PAL

ADDG4004160N . . . . .DigiMux DG4004, 4 channel, includes DigiClient SW & DigiRemote, 160 GB, NTSC

ADDG4004160P . . . . .DigiMux DG4004, 4 channel, includes DigiClient SW & DigiRemote, 160 GB, PAL

ADDG4004320N . . . . .DigiMux DG4004, 4 channel, includes DigiClient SW & DigiRemote, 320 GB, NTSC

ADDG4004320P . . . . .DigiMux DG4004, 4 channel, includes DigiClient SW & DigiRemote, 320 GB, PAL

ADDG4009080N . . . . .DigiMux DG4009, 9 channel, includes DigiClient SW & DigiRemote, 80 GB, NTSC

ADDG4009080P . . . . .DigiMux DG4009, 9 channel, includes DigiClient SW & DigiRemote, 80 GB, PAL

ADDG4009160N . . . . .DigiMux DG4009, 9 channel, includes DigiClient SW & DigiRemote, 160 GB, NTSC

ADDG4009160P . . . . .DigiMux DG4009, 9 channel, includes DigiClient SW & DigiRemote, 160 GB, PAL

ADDG4009320N . . . . .DigiMux DG4009, 9 channel, includes DigiClient SW & DigiRemote, 320 GB, NTSC

ADDG4009320P . . . . .DigiMux DG4009, 9 channel, includes DigiClient SW & DigiRemote, 320 GB, PAL

ADDG4016080N . . . . .DigiMux DG4016, 16 channel, includes DigiClient SW & DigiRemote, 80 GB, NTSC

ADDG4016080P . . . . .DigiMux DG4016, 16 channel, includes DigiClient SW & DigiRemote, 80 GB, PAL

ADDG4016160N . . . . .DigiMux DG4016, 16 channel, includes DigiClient SW & DigiRemote, 160 GB, NTSC

ADDG4016160P . . . . .DigiMux DG4016, 16 channel, includes DigiClient SW & DigiRemote, 160 GB, PAL

ADDG4016320N . . . . .DigiMux DG4016, 16 channel, includes DigiClient SW & DigiRemote, 320 GB, NTSC

ADDG4016320P . . . . .DigiMux DG4016, 16 channel, includes DigiClient SW & DigiRemote, 320 GB,

[††]DG4004 & DG4009 series as well as DG4016 PAL models only, available Fall 2003.

Accessories

ADACTD01128U . . . . .USB ThumbDrive Smart 128 MB

ADDGRC20 . . . . .DigiMux, DigiRemote, infrared remote control, additional

Visit www.americandynamics.net for monitors, cameras and other accessories.

General

Passcode Protection . . . . .Administrator or user

Motion Alarm Generation . . . . .Two motion detection conditions per camera

Alarm Notification . . . . .Front panel, buzzer, main monitor alarm icon, DigiClient software, e-mail, pager* or phone*

Pre-Alarm Images . . . . .Up to 5 minutes per camera

Camera Auto Detect . . . . .Automatically begins recording new camera inputs

Search Options . . . . .Event, camera, time and date

Scheduling . . . . .Set day, night or weekend schedules

Network Connectivity . . . . .10/100 Mbps Ethernet (TCP/IP)

Call Monitor Sequencing . . . . . .Establish programmable call monitor sequences

Dome Control Protocols . . . . . .AD422, Pelco P and Pelco D

Domes Supported . . . . .American Dynamics SpeedDome Series and others

Dome Control . . . . .Built-in control via front panel controls, DigiClient software or DigiRemote

Remote Control . . . . .Includes a DigiRemote infrared (IR) remote control

Export Video Clip . . . . .Via USB devices such as CD-RW or ThumbDrive

Processor .Multimedia digital signal processor

Operating System . . . . .Embedded

Languages . . . . .English, (French, German, Italian and Spanish)[†]

Video

Signal Format . . . . .NTSC or PAL (internal switch)

Video Inputs . . . . .4, 9 or 16 looping composite inputs (1 Vp-p, 75 Ω with individual software termination)

Monitor Outputs . . . . .Two composite outputs (1 Vp-p, 75 Ω), One S-video output

Video Display Resolution . . . . .720 x 480 (NTSC), 720 x 576 (PAL)

Record Resolution . . . . .720 x 224 (NTSC), 720 x 272 (PAL)

Playback/Record Speed . . . . . . .Up to 60 ips (NTSC), 50 ips (PAL)

Live Video Refresh . . . . .Live video displayed up to 90 ips (NTSC), 75 ips (PAL)

Active Window . . . . .User-selectable window (or cameo) that displays video in real time

Display Options . . . . .Full, 2x2, 3x3, 4x4, PIP, sequence

Video Authentication . . . . .Digital signature on video export

Alarm

Alarm Input . . . . .4, 9, 16 TTL compatible[A]

Alarm Output . . . . .Three dry contacts[A]

Alarm Reset Input . . . . .One TTL compatible[A]

Alarm Set Input . . . . .One TTL compatible[A]

Day/Night Switch . . . . .One TTL compatible[A]

* Requires Caller ID function.
† French, German, Italian and Spanish available Fall 2003.
[A] Via I/O connector board, included.

Audio

Audio Sampling Rate . . . . .8 kHz
Audio Input . . . . .One line in, unbalanced high impedance
Audio Output . . . . .One line out, unbalanced high impedance

Front Panel Controls

Camera Buttons . . . . .DG4004 Series: 1 to 4
            DG4009 Series: 1 to 9
            DG4016 Series: 1 to 16
Dome Control Buttons . . . . . . .Pan, tilt, zoom in, zoom out, focus in, focus out, set presets, go presets
Video Viewing Buttons . . . . .Play, pause, forward, reverse, sequence, mode
Directional Buttons . . . . .Up, down, left and right arrows
Control Buttons . . . . .Enter, escape, lock

Front Panel Indicators

Camera and Control Buttons . .Active buttons indicated via back light
Power . . . . .Indicates power is "on" (green light)
Record . . . . .Indicates data is being recorded (green light)
Alarm . . . . .Indicates an alarm has been triggered and not cleared (flashing red light)
Network .Steady green light indicates network access (flashing green light indicates network traffic)

Front Connectors

USB Port .One USB connector port

Rear Connectors

Video Input . . . . .4, 9 or 16 BNC (composite)
Video Output . . . . .4, 9 or 16 BNC (composite, looping)
Main Monitor Output . . . . .One BNC (composite), one S-video
Call Monitor Output . . . . .One BNC (composite)
Audio In . . . . .RCA connector
Audio Out . . . . .RCA connector
Alarm In . . . . .4, 9 or 16 alarm inputs per channel
Alarm Out . . . . .3 selectable alarm outputs
I/O Connector Board . . . . .Quick connect 44-pin I/O connector board for easy alarm and dome control connections (included)
Ethernet Port . . . . .One RJ-45 LAN port
USB Port .Two USB connector ports
IEEE-1394 .Two IEEE-1394 (FireWire) ports (for future use)
RS-485 Ports . . . . .Two RJ-11 connector ports (for future use)
Power Input . . . . .DC Jack

Storage

Primary Internal Storage . . . . . .EIDE hard disk drive
Secondary Internal Storage . . . .EIDE hard disk drive
Export . . . . .USB (on front and back of unit)

Electrical

Power . . . . .External auto-ranging power supply, 100 to 240 VAC, 500 mA, 50/60 Hz, input power DC 19 V, 3.4 A

Mechanical

Dimensions (W x H x D) . . . . . .432 x 44 x 409 mm
            (17 x 1.7 x 16.1 in)
            Removable feet add 0.4 in (10 mm) in unit height, rack-mountable, one RU
Shipping Dimensions . . . . .565 x 159 x 527 mm
            (22.25 x 6.25 x 20.75 in)
Unit Weight . . . . .5.9 kg (13 lbs)
Shipping weight . . . . .9 kg (20 lbs)
Color . . . . .Black
Case . . . . .Desktop or rack-mountable, includes removable non-marring feet
Rack-Mount Option . . . . .Front rack-mount ears included

Minimum Systems Requirements for DigiClient Software

Operating System . . . . .Windows XP or Windows 2000
Processor . . . . .Pentium III, 600 MHz or faster
Memory . . . . .128 MB RAM
Screen Resolution . . . . .XGA, 1024 x 768 pixels, 16 bit or higher
Connectivity . . . . .10BaseT or 100BaseTX
Web-Browser . . . . .Microsoft® Internet Explorer 6.0 or higher
Peripherals . . . . .CD-RW drive, mouse, keyboard (optional)

DigiRemote

Functions . . . . .Menu, enter, escape, play, pause, rewind, forward, 1 to 16 camera/channel selection, up, down, left, right directional controls, set, sequence, mode, lock and dome control
IR Distance . . . . .12 ft (4 m)
Battery Type . . . . .Two "AA" 1.5 V, included
Size (DigiRemote) . . . .(47 x 177 x 19 mm)
            1.8 x 7.0 x .75 in
Weight (DigiRemote) . . . . .0.11 kg (0.24 lbs)

Regulatory

Emissions . . . . .FCC Part 15, Subpart B, Class A
Safety . . . . .UL and CUL 1950
            CE

Environmental

Operating Temperature . . . . .5° to 40° C (41° to 104° F)
Storage Temperature . . . .-20° to 70° C (-4° to 158° F)
Humidity . . . . .0% to 90% RH (non-condensing)

BASIC SYSTEM DIAGRAM
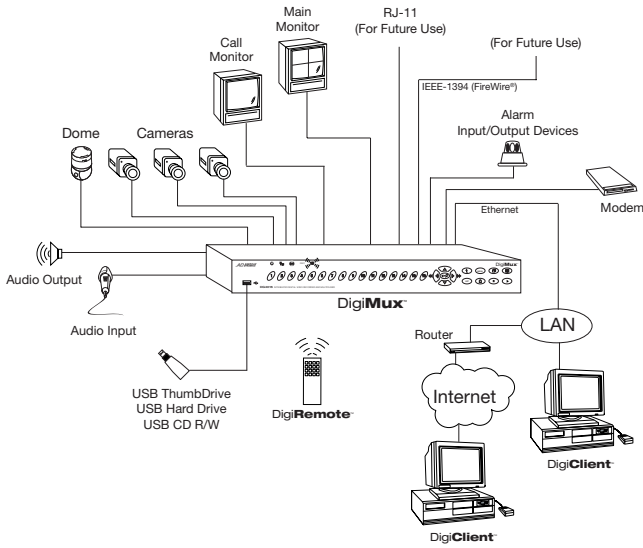
DigiMux™

Number of Days of Recording (without Audio)

Recording Rate			Recording Picture Quality Mode					
			BASIC		MEDIUM		SUPERIOR	
seconds per image	Image/sec NTSC	Image/sec PAL	NTSC (10 KB)	PAL (12 KB)	NTSC (15 KB)	PAL (18 KB)	NTSC (28 KB)	PAL (33 KB)
80 GB Storage								
0.02	60	50	1.5	1.5	1.0	1.0	0.6	0.6
0.03	30	25	3.1	3.1	2.1	2.1	1.1	1.1
0.10	10	10	9.3	7.7	6.3	5.2	3.3	2.8
1.00	1	1	92.6	77.2	62.6	52.3	33.4	28.1
160 GB Storage								
0.02	60	50	3.1	3.1	2.1	2.1	1.1	1.1
0.03	30	25	6.2	6.2	4.2	4.2	2.2	2.2
0.10	10	10	18.5	15.4	12.5	10.5	6.7	5.6
1.00	1	1	185.2	154.3	125.1	104.6	66.9	56.1
320 GB Storage								
0.02	60	50	6.2	6.2	4.2	4.2	2.2	2.2
0.03	30	25	12.3	12.3	8.3	8.4	4.5	4.5
0.10	10	10	37.0	30.9	25.0	20.9	13.4	11.2
1.00	1	1	370.4	308.6	250.3	209.2	133.7	112.2

NOTE: Record duration times are based on actual tests and represent average file sizes. Performance may vary depending on specific installations and use. Audio recording requires 8 KB per second (or 0.7 GB per day) for data storage.

Recording Quality

There are five different record quality settings: Superior, High, Medium, Standard, and Basic.

Superior:
This setting provides the best quality video recording. Use this setting if you are most concerned about details of the images and least concerned about the record duration. The average file size is 28 KB NTSC (33 KB PAL).

High:
This setting provides acceptable image quality, but is not as good as the Superior setting. Use this setting for satisfactory recorded images and increased record duration. The average file size is 19 KB NTSC (22 KB PAL).

Medium, Standard and Basic:
These settings do not provide a high level of detail in images recorded, but recording duration is increased. Use this setting when your concern is primarily extended recording duration, not image detail. Average file sizes range from 10 KB to 15 KB NTSC (12 KB to 18 KB PAL), depending on your selection.