AMERICAN DYNAMICS™

DigiMux™

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, DigiAlert remote event/alarm notification, and one DigiRemote™ infrared (IR) remote control. This is a multifaceted product that integrates key elements into a single 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, or via a dial-up modem‡. DigiRemote provides control of DigiMux, including basic dome control. Three USB ports enable video export to compatible external USB devices such as CD-RWs, hard drives, modems‡ or ThumbDrives.® Exported video may be easily viewed in Windows Media Player. Two IEEE-1394 (FireWire®) ports enable external storage expansion supporting up to two Extended Storage Modules (ESMs).*

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

- Playback exported DigiMux files with time date stamp on a standard PC using DigiPlayer

- Playback exported or downloaded AVI files using Windows Media Player

- Export video and audio as AVI files via the USB port to compatible USB devices such as CD-RWs, hard drives and ThumbDrives*

- DigiRemote, a fully functional infrared (IR) remote control, includes dome control

- Flexible internal storage: 80, 160 and 320 GB

- Expandable database capacity via IEEE-1394 (FireWire®) using up to two ESMs* provides over 1 TB of storage

- Networkable via Ethernet (TCP/IP) or dial-up modem‡

- Easy-to-use DigiClient, browser-based remote viewing and configuration software

- Remote central monitoring via DigiAlert remote event/alarm notification software

- Covert camera operation provides enhanced security and administrator control

- Motion detection with configurable sensitivity levels

- Remote alarm notification includes DigiClient, DigiAlert 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

- Daisy-chain up to ten DigiMux units to create a scalable system

- Control a variety of domes directly from DigiMux, DigiRemote or DigiClient

- Individual camera settings for key functions

- Update software via USB ThumbDrive*

*Available separately

‡ Modem not available in Europe

tyco / Safety Products

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, PAL

Accessories

ADACTD01128U	Accessory, USB ThumbDrive Smart 128 MB
ADACUSBCVT1	Accessory, USB to serial RS-232, converter
ADACRJ45CVT1	Accessory, RJ45 to RJ11, converter
ADCCACPSN	Keyboard accessory, remote kit, power supply and interface kit, 120 VAC
ADCCACPSP	Keyboard accessory, remote kit, power supply and interface kit, 230 VAC
ADDGRC20	DigiMux, DigiRemote, infrared remote control, additional
ESM480	Extended storage module, 480 GB, rack mountable
ESM640	Extended storage module, 640 GB, rack mountable

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 with configurable sensitivity levels
Alarm Notification	Front panel, buzzer, main monitor alarm icon, DigiClient software, DigiAlert software, e-mail, pager*‡ or phone†‡
Pre-Alarm Video	.5 seconds 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) or dial-up modem‡
Call Monitor Sequencing	Establish programmable call monitor sequences
Dome Control Protocols	RS-422 (AD422), and certain competitor protocols
Domes Supported	American Dynamics' SpeedDome® Series and others
Basic Dome Control	Built-in control via front panel controls, DigiClient software or DigiRemote
Remote Control	Includes a DigiRemote infrared (IR) remote control with dome control
Export Video Clip	Via USB devices such as CD-RW, hard drive or ThumbDrive
Preset Configuration	Best Quality, Standard, Extended Record or Custom
Processor	Multimedia digital signal processor
Operating System	Embedded
Languages	English, French, German, Italian and Spanish

Video

Signal Format	NTSC or PAL
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	Aggregate live video displayed up to 90 ips (NTSC), 75 ips (PAL)
Active Window	User-selectable window (or cameo) that displays video in real time up to 30 ips NTSC (25 ips PAL)
Display Options	Full, 2x2, 3x3, 4x4, PIP, sequence
Video Authentication	Digital signature on video export

Alarms

Alarm Input	4, 9, 16 TTL compatibleᐃ
Alarm Output	Three dry contactsᐃ
Alarm Reset Input	One TTL compatibleᐃ
Alarm Set Input	One TTL compatibleᐃ
Day/Night Switch	One TTL compatibleᐃ

* Requires external modem connected to DigiMux.
† Requires external modem connected to DigiMux and Caller ID service for the receiving phone number.
ᐃ Via I/O connector board, included.
‡ Modem not available in Europe.

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 1.1 connector port

Rear Connectors

Video Inputs . . . . .4, 9 or 16 BNC (composite)
Video Outputs . . . . .4, 9 or 16 BNC (composite, looping)
Main Monitor Outputs . . . . . .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
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 Ports . . . . .Two USB 1.1 connector ports
IEEE-1394 Ports . . . . .Two IEEE-1394 (FireWire) ports support up
to two Extended Storage Modules (ESMs)*
RS-485 Ports . . . . .Two RJ-11 connector ports support
DigiMux daisy-chain
Power Input . . . . .DC Jack

Storage

Internal Storage . . . . .80 GB, 160 GB, or 320 GB
Export . . . . .USB (on front and back of unit)
IEEE-1394 (Firewire) . . . . .Support for up to two Extended Storage
Modules (ESMs)*

Electrical

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

*Available separately

‡ Modem not available in Europe

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) to 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 and DigiAlert

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, or dial-up modem
(optional)
Web-Browser . . . . .Microsoft® Internet Explorer 6.0 (or higher)
Media Player Software . . . . . .Microsoft Windows Media Player version 9.0
or higher (optional)
Peripherals . . . . .Mouse and keyboard

DigiClient and DigiAlert Software

Simultaneous Remote Users . .DigiMux supports up to five concurrent

DigiClient users (four Users and one Admin)
Installation . . . . .DigiClient and DigiAlert are installed on a PC
by typing in the IP address of the DigiMux in
Internet Explorer, requires a LAN or
dial-up modem‡ connection
DigiClient Features . . . . .Access DigiMux setup parameters, display live
video, download video, playback video and
receive alarm notification
DigiAlert Features . . . . .Receive event/alarm notification (audible,
flashing icon or dialog box), link to
DigiClient, application icon appears in
system tool tray

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
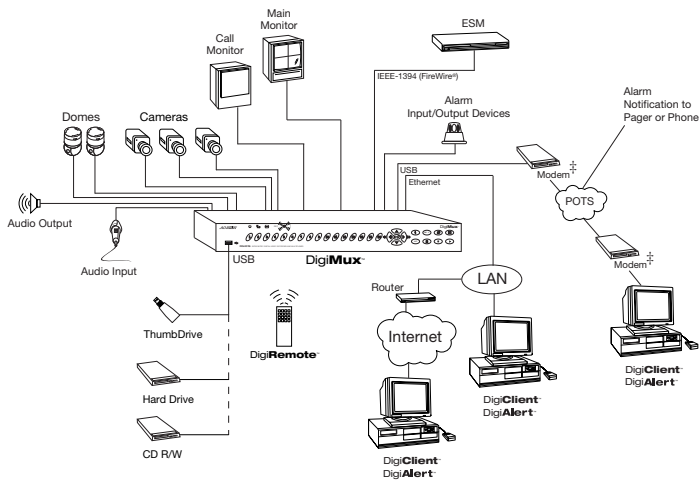
Note: Each DigiMux unit can provide DigiAlert alarm notification to only one specified remote computer.

‡ Modem not available in Europe.

DigiMux™

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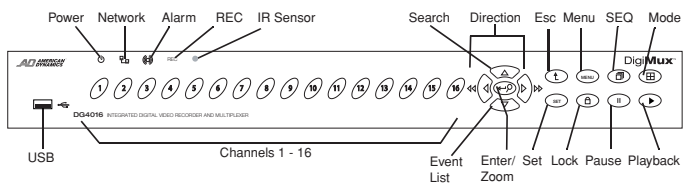
High:
This setting provides acceptable image quality, but is not as good as the Superior setting. Use this setting for satisfactory recorded images and increased record duration. The average file size is 19 KB NTSC (22 KB PAL).

Medium, Standard and Basic:
These settings do not provide a high level of detail in images recorded, but recording duration is increased. Use these settings 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.

DigiMux Front View

Rear View