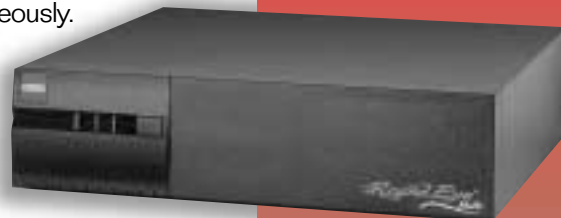# RapidEye™ Multi

Rapid Eye Multi version 3 (v3) is a highly secure and flexible, enterprise-wide digital video storage system. Consisting of three major components—the Remote Video Unit, VIEW operator software and ADMIN setup software —Multi combines digital recording, multiplexing, remote viewing, alarm/event detection, PTZ control and more. The Remote Video Unit gives users the unique ability to record video, transmit live video and transmit recorded video (video retrieval) simultaneously.

Rapid Eye Multi's long-term video storage and remote access functions provide users with both "as it happens" and "after the fact" assessment capabilities. One VIEW operator or multiple VIEW operators can independently visit live and/or retrieve recorded video from the same site simultaneously. And because everything is stored digitally, there is no need to change and store tapes. Through Multi's comprehensive RapidSearch™ feature, users gain instant access to high quality, digitally recorded video and data.

Multi's advanced, user-programmable features allow the customization and management of video data based on specific application requirements. Multi can be placed on a TCP/IP network, is easily upgraded (typically remotely), and can be integrated with existing equipment—making it the most highly flexible, cost effective solution for both new and existing systems.

Enterprise-wide Long-term Digital Video Storage System

FEATURES:

Long Term Digital Video Storage System with Remote Access

- Long-term digital storage of video
- Remote live monitoring and surveillance of multiple locations simultaneously
- Multiple users can simultaneously access the same site for live and/or recorded video
- Quick and easy playback of recorded video
- RapidSearch by time/date for the following events: camera, session, system, maintenance, input, output, video-loss, motion detection and recorded data.
- User-selectable automatic reporting of events to multiple sites
- Automatic changeover to monochrome in low light applications (when using color/mono changeover cameras)

- Automated remote site touring
- Upgradable architecture
- Authenticated proprietary file format (REM) for integrity of evidence
- Integrates easily with existing and new CCTV equipment
- Looping inputs with auto termination
- PTZ dome and general purpose output control
- Extremely flexible communication options including PSTN, ISDN, LAN/WAN
- Virtually unlimited number of user- adjustable multiple camera display formats
- User definable encrypted password protection
- User friendly GUI—Windows™ 95/98/NT/2000

Windows is a registered trademark of Microsoft Corporation.

ADEMCO VIDEO

Rapid Eye™ Multi

The Rapid Eye Multi system consists of:
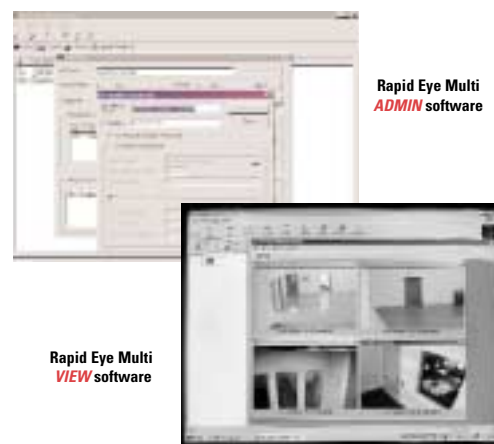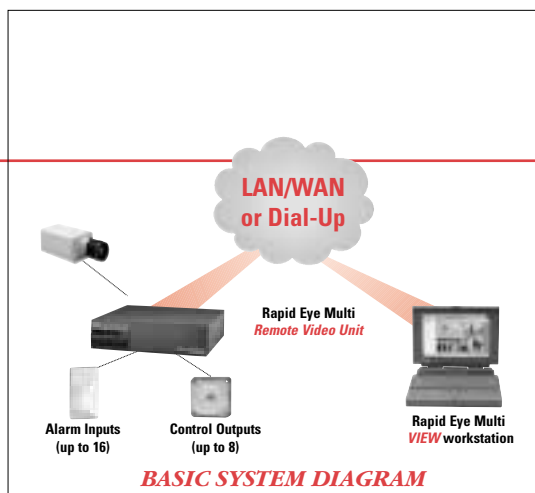
Rapid Eye Multi Remote Video Unit

The Remote Video Unit is a 16-camera digital video storage unit and remote transmitter. Its high-capacity hard drive storage unit allows for days, weeks, or even months of video to be saved digitally. Rapid Eye Multi operates on VxWorks, a renowned real-time, fault tolerant operating system that ensures secure, consistent operation without fear of losing video. All connections to cameras, pan/tilt units, alarm input devices, auxiliary output devices and communications networks are made directly to the unit.

Rapid Eye Multi ADMIN Software

The Rapid Eye Multi ADMIN software application runs on standard Windows 95/98/NT/2000 based operating systems. Multi ADMIN provides system setup capabilities such as site configurations, user configurations, controlled access parameters, and set-up of common networked databases including Microsoft Access, SQL, MSDE. With Multi ADMIN, a complete multi-site, multi-user, enterprise-wide system can be easily managed, controlled and administered.

Rapid Eye Multi VIEW Software

The Rapid Eye Multi VIEW software application runs on standard Windows 95/98/NT/2000 based operating systems. Multi VIEW allows simultaneous "live" viewing, and search and retrieval of pre-recorded video from multiple sites. Pre-defined configurations of "site tours" enable automatic connection to remote sites.

LAN/WAN or Dial-Up

Rapid Eye Multi
Remote Video Unit

Alarm Inputs
(up to 16)

Control Outputs
(up to 8)

Rapid Eye Multi
VIEW workstation

BASIC SYSTEM DIAGRAM

Rapid Eye Multi
ADMIN software

Rapid Eye Multi
VIEW software

Rapid Eye Multi v3 is a revolutionary assessment tool that fits seamlessly into any existing operation. It's easy to use, saves hours of time and reduces operational costs.

Digital Long-term Storage

Multi records days, weeks, or months of video at sites automatically on its internal high capacity hard drives. Management and storage of tapes is altogether eliminated. There is no degradation of images (no matter how many times copied or distributed) and no maintenance associated with conventional VCRs.

Remote Live Monitoring

Multi allows the user to view cameras from multiple sites from any remote location using a desktop or laptop PC. This allows for timely and informed decisions without geographic constraints.

Easy Management and Cataloging of Incidents

Rapid Eye Multi allows the user to save REM (Rapid Eye Multi) video clips to their local PC hard drive for long term archiving. The user can also save and print standard BMP (bitmap) files or copy/paste or import pictures directly into any e-mail, word processing, presentation or drawing software application.

Uninterrupted Recording

Rapid Eye Multi will continue to record video without interruption while viewing "live" or retrieving "stored" information—allowing the operator to continue working. Information can be accessed as often as needed without the fear of losing data.

No Site Visits

With Multi, instant access to information is only a click away, eliminating costly and time-consuming site visits.

Instant Access to Information

Multi makes digital search and retrieval of mission-critical recorded information quick and easy from a desktop or laptop PC. Scanning through endless reams of videotape is no longer required. RapidSearch by time, day, camera number or event.

Integrity of Evidence

Multi's REM file format is unique. Although the file structure is PC compatible, the original video images cannot be altered or modified, enabling a solid chain of evidence.

Simultaneous Connection to Multiple Sites

The operator can view 'live' and/or 'stored' video from several sites simultaneously.

Flexible Connectivity

Rapid Eye Multi connects to PSTN, ISDN or LAN/WAN's. LAN/WAN units can also support external modems for simultaneous network and dial-up installations.

Bandwidth Throttling

The network administrator can regulate the data rate of each Remote Video Unit to ensure that images and system messages are delivered as quickly as possible within the capability of the network's available bandwidth.

Data Recording

With Multi v3, you can record generic, plain-text data from devices such as POS and ATM systems. Using RapidSearch, the user can quickly search Multi's data base to find video associated with specific transactions (user defined by time, date, text, transaction type, etc.).

TECHNICAL SPECIFICATIONS
System Capacity

Remote Video Unit Hardware Capacity

Connections	Max. number per Remote Video Unit
Cameras	16
Inputs (e.g., alarms)	16
Outputs (TTL)	8

Rapid Eye Multi Software Capacity

Connections	Max. number per Remote Video Unit
Live video connections (all users)	32
Retrieval video connections (all users)	32
Users viewing live video (and activating outputs)	10
Users retrieving video	10
Users accessing alarms	10
Users accessing events	10
Users accessing maintenance module	1

VIEW Requirements
- IBM Compatible PC
- Pentium-class processor
- 64 MB RAM
- 120 MB of free hard disk space, plus adequate storage for video clips
- CD-ROM (for software installation)
- Video card and monitor that supports 800x600 pixels or better
- Mouse or trackball
- For dial-up connections: standard 33.6 kbps modem or better or ISDN terminal adapter
- For LAN connections: Network Interface Card (NIC) configured for TCP/IP

ADMIN Requirements
- IBM Compatible PC
- Pentium-class processor
- 64 MB RAM
- 120 MB of free hard disk space
- CD-ROM (for software installation)
- Video card and monitor that supports 800 x 600 pixels or better
- Mouse or trackball
- For dial-up connections: Standard 33.6 kbps modem or better or ISDN terminal adapter
- For LAN connections: Network Interface Card (NIC) configured for TCP/IP

Remote Video Unit Specifications
- Video Standard: NTSC/EIA or PAL/CCIR
- Record Mode: Continuous (circular)
- Record Format:
  - 320x192 natural resolution REM Proprietary Format
  - 16 million color shades
- Transmission Format: Modified H.261/263 (DCT) optimized for low bandwidth transmission
- Update Rate (total unit capacity): 16 ips (total) selectable from 1 to 15 ips per camera
- Quality Settings: 10-1
  - 10 = highest quality, shortest record duration
  - 1 = lowest quality, longest record duration
- Recording and/or Remote Reporting of Events:
  - Session request
  - Session rejection
  - Session disconnect
  - Run-time failure
  - Self restart
  - Reboot
  - Configuration modification
  - Security modification
  - System files modification
  - Input sensor activation/deactivation
  - Output sensor activation/deactivation
  - Video (video loss/restore)
  - Motion detection
  - Recorded Data (ASCII, Text)
- Front Panel Controls and Indicators:
  - Power Switch
  - Power Indicator
  - HDD Indicator

Rear Panel Connections

- Video Inputs: 16 composite 1V p-p, looping w/auto termination, BNC
- Alarm/Control Inputs: Eurostyle removable terminal block-16 pairs configured as NO (normally open), NC (normally closed) or 2.2 K EOL (end of line) resistor. Alarm control inputs are TTL type

- General Purpose Control Outputs: Eurostyle removable terminal block – eight pairs; Outputs are TTL logic levels 24mA max @ 5VDC
- RS-232 Port 1 (Com 1): Serial DB9-P; external modem or data recording device
- RS-232 Port 2 (Com 2): Serial DB9-P PTZ control or configuration console (e.g.,Hyperterminal). Null modem cable supplied
- Video Mux Out: For future use
- Video Spot Out: For future use
- TELCO: RJ11, PSTN connection
- 10/100 BaseT: RJ45, Ethernet Connection
- Power:
  - Input: One, IEC-320 connector
  - Output: One IEC-320 plug 1.0 A @ 115 VAC or 0.5 A @ 230 VAC
- Power Selection Switch: 115 or 230 VAC

PTZ Dome Control
- ADEMCO Video Orbiter Domes
- ADEMCO Video RapidDome

Also compatible with other manufacturers, including:
- Javelin 308 Series
- Kalatel
- Pelco P&D Codes
- Sensormatic RS422

Electrical
- Power:
  - 120 VAC, 1.0 A, 50/60 Hz, 120 VA
  - 230 VAC, 0.5 A, 50/60 Hz, 120 VA

Mechanical
- Dimensions: 4 1/8"H x 16 5/16"W x 18"D (105 mm x 415mm x 477mm)
- Weights (model dependent)
  - Unit Weight: 20-25 lbs
  - Shipping Weight: 25-30 lbs

Environmental
- Operating Temperature: 40° to 104° F (5° to 40° C)

Regulatory
- Emissions ....FCC15, Class B
  CE: EN55022
- Immunity ....CE: EN50082-1
  CE: EN50130-4
  (w/ use of UPS)
- Safety UL1950, CUL1950
  CE: EN60950
  CSA 22.2 #950
  DEMKO "D"

Rapid Eye™ Multi

SPECIFICATIONS:

TOTAL NUMBER OF IMAGES PER SECOND

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RVU Capacity (Camera Days)	**20**	20	10	6.7	5	4	3.3	2.8	2.5	2.2	2	1.8	1.6	1.5	1.4	1.3	1.25
	250	250	125	83	62	50	41	35	31	27	25	22	20	19	17	16	15
	500	500	250	166	125	100	83	71	62	55	50	45	41	38	35	33	31
	750	750	375	250	187	150	125	107	93	83	75	68	62	57	53	50	46
	1000	1000	500	333	250	200	166	142	125	111	100	90	83	76	71	66	62

Typical Number of Days of Recorded Video

Estimating the number of days a Rapid Eye Multi Remote Video Unit will record:

- Based on your applications need, determine each camera's desired update rate (in images per second). Each camera may be programmed for 1-15 images per second. Sum total of all cameras' ips cannot exceed 16.
- If all cameras are set for the same update rate, simply multiply the update rate times the total number of cameras, (e.g. 2 cameras x 8 ips = 16 total ips)
- If all cameras are *not* set for the same update rate, add each camera's update rate (in images per second) together (e.g. 6 ips for camera one + 10 ips for camera two = 16 ips total)
- Locate your total images per second in the chart above. The column underneath helps you select the appropriate RVU for your application's record duration requirements.
- The above table shows typical durations that assume: a quality setting of 9; securely mounted cameras with wide angle lenses; up to two non-autopanning domes (pre-set operation recommended)
- Record duration, or the quantity of images that can be recorded on Multi's hard drives, can vary from 1/2 to two times the typical results shown in the chart above. These results are dependent on several factors including the amount of activity or change in picture and the overall light level or noise in the video signal.

ORDERING:

Rapid Eye Multi combines high-performance hardware with feature rich software. We recommend customers maximize and protect their investment with free software upgrades.

Part No. NTSC Standard 120 VAC Voltage	Part No. PAL Standard 230 VAC Voltage	Description
ARM3L20		REM Remote Video Unit, 20 camera days storage, LAN & PSTN
	ARM3L20X	REM Remote Video Unit, 20 camera days storage, LAN
ARM3L250		REM Remote Video Unit, 250 camera days storage, LAN & PSTN
	ARM3L250X	REM Remote Video Unit, 250 camera days storage, LAN
ARM3L500		REM Remote Video Unit, 500 camera days storage, LAN & PSTN
	ARM3L500X	REM Remote Video Unit, 500 camera days storage, LAN
ARM3L750		REM Remote Video Unit, 750 camera days storage, LAN & PSTN
	ARM3L750X	REM Remote Video Unit, 750 camera days storage, LAN
ARM3L1000		REM Remote Video Unit,1000 camera days storage, LAN & PSTN
	ARM3L1000X	REM Remote Video Unit,1000 camera days storage, LAN
ARM3ADMIN	ARM3ADMIN	REM ADMIN & VIEW Software CD & User Manual
ARM3VIEW	ARM3VIEW	REM VIEW Software CD and User Manual
ARM3UPADMIN	ARM3UPADMIN	REM ADMIN/VIEW v3 Upgrade Software CD

- *NTSC units supplied with internal modem and internal network interface card (NIC) (10/100 BaseT, full duplex)*
- *PAL units supplied with internal network interface card (NIC) (10/100 BaseT) .*
- *For PAL/230 VAC International PSTN Operation, use LAN version with user-supplied external modem connected to serial port; 33.6 kbps preferred.*

For more information on Rapid Eye Multi or ADEMCO Video products, please contact your sales representative or visit our Web site at www.ademcovideo.com

ADEMCO Group is committed to ongoing product improvement; we therefore reserve the right to change specifications without notice.

Enterprise-wide Long-term Digital Video Storage System

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