

Product Pre-Release Guide



DVMRe Pro



Release Information

Product Range	DVMRe Pro
Product Part Numbers	See Pricing
Product Release Date	August 2, 2004
Product Availability Date	August 3, 2004

Note: Because GE Security is a company of innovation, our products are continually evolving and improving. The specifications contained herein are subject to change without notice.

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Introduction



The DVMRe Pro is the latest member of the DVMRe family of digital video multiplexed recorders with Ethernet. It provides virtually all of the menu features* of the popular DVMRe Triplex plus a CD-RW or optional DVD+RW for easy archiving and evidence transfer.

In its normal Triplex mode, the unit can capture up to 60 pictures per second. When set to Turbo Mode – either manually, from alarm or from event – the DVMRe Pro can record up to 120 pps. This, coupled with DVMRe's record rate flexibility, allows users to capture more pictures of important events than ever before. Depending on the configuration and setup, the DVMRe Pro can store from a few hours to months of color images.

To make operation easier than ever, the DVMRe Pro also features convenient front panel buttons for one-touch printing and archiving (CD or DVD writing).

* DVMRe Pro does not provide external archiving via SCSI or Firewire (IEEE 1394).

At a Glance

- Shares feature set with the DVMRe-CT, while running in Triplex mode
- Simultaneous 60 pps recording, playback, and live multiscreen while in Triplex mode
- Records up to 120 pps while in “Turbo mode”
- Archive video to built-in CD or optional DVD
- Hard disk monitoring and testing features
- Playback and live audio via WaveReader on audio supported models
- Ideal for increasing record speed during activity, event, or alarm conditions
- Uses popular and familiar StoreSafe form factor, allowing use in a lock box
- Audio is standard
- Rack mount is available

New Feature Overview

The DVMRe Pro expands on the success of the DVMRe Triplex with the following new features:

Turbo mode allows recording at 120 pictures per second. The DVMRe will record up to 120 pps in Turbo Mode – twice as fast as the DVMRe Triplex. During Turbo Mode, the DVMRe Pro devotes all its system resources to capturing 120 pps, so Triplex capability to see live or recorded images on the main monitor is temporarily halted – however, WaveReader functionality (live viewing from up to 20 PC monitors) is not affected.

Internal CD or DVD media drive. The DVMRe Pro is the only Triplex unit from GE Security to offer the option of a DVD writer built in. Differences between the CD writer and the DVD writer are that the latter can write to a CDR or DVD+R disc and the DVD+R media holds significantly more data (4.7GB vs. 700MB minus overhead).

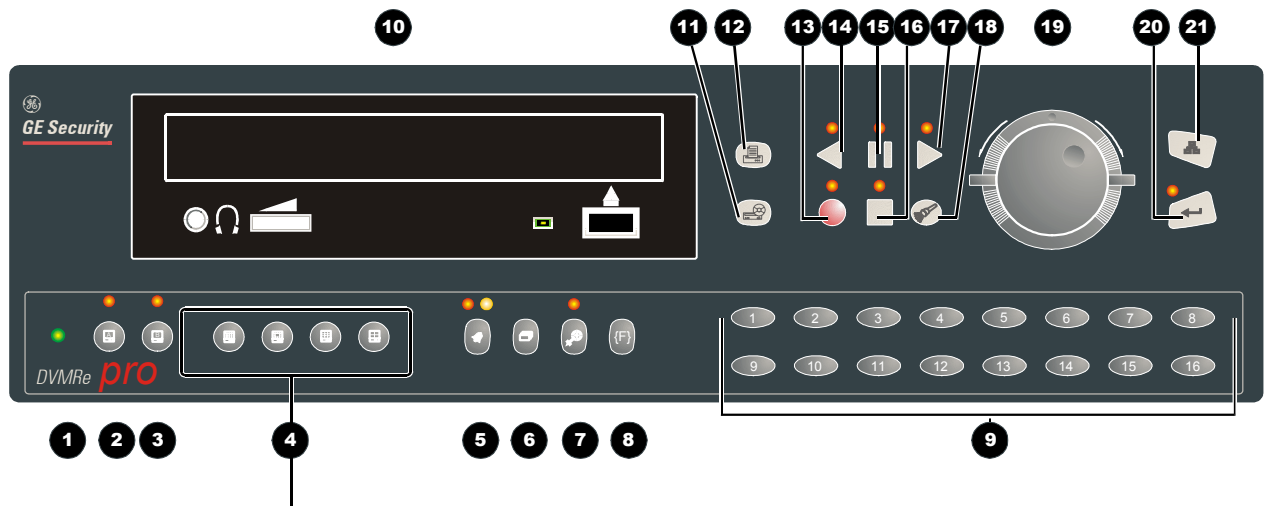
Record CD/DVD button. Create a record of any security incident on CD or DVD for law enforcement or archival purposes by pressing one button. The “QuickWave” application is automatically written to the media, allowing Law Enforcement, or other Investigators to merely insert the media into their PC and begin viewing, without the need to load any applications.

Print button. Pressing the “Print Image” button will print the currently displayed image. If a four-way multiscreen is the display mode, the DVMRe Pro will switch to a single image display of the last selected fullscreen camera, freeze the image, and send to the default network printer.

Form Factor: The DVMRe-PRO uses the popular StoreSafe form factor, which allows it to be physically secured within a lock box.



Chassis Form Factor and Controls

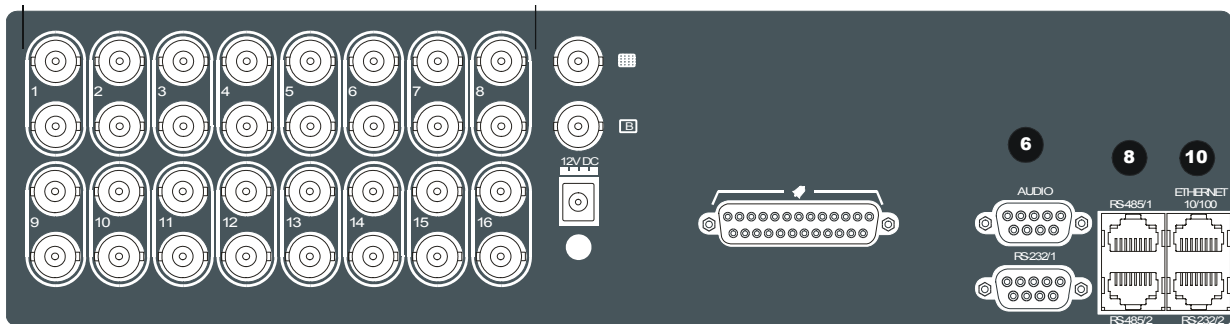


The DVMRe Pro has a different form factor than DVMRe-CT, which allows it to be secured within a lock box. Additionally, the controls are different than the CT and are shown above with their numbered legend descriptions shown below:

1. **Power Indicator:** Indicates power on/off condition.
2. **Monitor Selection Button:** Monitor A.
3. **Monitor Selection Button:** Monitor B.
4. **Multiscreen Selection Buttons:** Various multiscreen buttons depending on the model.
5. **Alarm Button:** Allows user to acknowledge and silence alarms.
6. **Sequence Button:** Sequences camera views.
7. **Zoom Button:** Provides a 2X digital zoom.
8. **Function Button:** Used in conjunction with camera buttons to run macros.
9. **Camera Selection Number Buttons:** Camera numbers 1 through 16.
10. **CD Writer or DVD Writer:** For recording data to a CDR or DVD+R.
11. **Record CD or DVD Button:** One-touch archiving on to built-in CD or DVD writer.
12. **Print Image Button:** One-touch printing of displayed image.
13. **Record Button:** Used to start and stop recording.
14. **Reverse Play Button:** Playback in reverse.

15. **Freeze Button (Pause):** Freezes camera on-screen in live mode, pauses playback.
16. **Stop Button:** Stops playback and returns to live mode.
17. **Play Forward Button:** Begins playback.
18. **Search Button:** Access to stored video data.
19. **Jog/Shuttle:** Controls playback speed and menu selections.
20. **Menu Button:** Provides access to onscreen menus.
21. **Enter Button:** Confirms selection in menus

The back panel of the DVMRe Pro is also different from the DVMRe-CT.



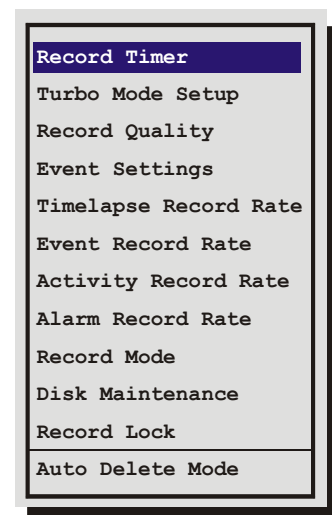
Note in the above back panel layout that the DVMRe Pro does not have SCSI or Firewire for archiving as it contains a built in CD or optional DVD writer for archiving or evidence transfer. Also, all monitor outputs are composite video.

Feature: Turbo Mode

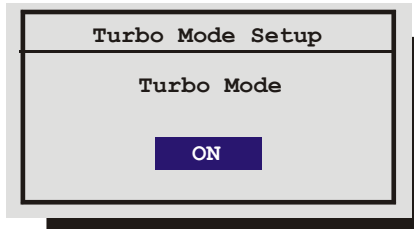
The system defaults to normal Triplex Operation. To set up Turbo Mode go to the *Record* submenu (see right).

Use the Jog Shuttle to scroll down to **Turbo Mode Setup**.

Click on **Turbo Mode Setup**.



Main Menu → Record → Turbo Mode Setup



Use the *Turbo Mode Setup* submenu to turn Turbo Mode **On** or **Off**.

Turbo Record Mode captures images at up to 120 pps. Like most industry recorders, when loaded with three or more cameras, the global record rate drops to 96 and the max record speed per camera is $96/n$, where n is the number of cameras (example: $96/16 = 6$ pps per camera). While in Turbo Record Mode the

DVMRe Pro devotes all system resources to capturing the images at up to 120 pps. Monitor A stops displaying live images and displays the background color only.

Once set to Turbo Mode and recording in Turbo Mode, the unit will display Turbo Mode on the Monitor A display and direct all viewing or sequencing to Monitor B. Simultaneously, the following activities are blocked when recording in Turbo Mode:

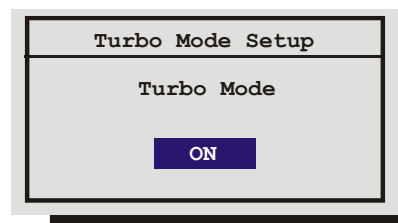
- Macro Record
- Setup Active Zones
- Camera AGC
- Camera Scope
- Motion Search
- Search Filter & Search Results
- Disk Maintenance
- Menu access
- Search for previously recorded video

Although this recorder may be used continuously in Turbo Mode, it is expected that most users will utilize the Turbo Standby Mode, which is enabled by following the directions below:

Turbo Standby Mode

The unit will go to Turbo Standby mode when all 3 conditions below are met:

- Turbo Mode is ON
- Alarm Record Speed, Event Record Speed, or Activity Record Speed of individual camera is set to TURBO speed
- The DVMRe Pro is recording



Once in turbo standby mode, the unit will display **TBO Standby** on the live screen (both quad and full screen).

The following activities are blocked when in Turbo Standby Mode:

- Macro Record
- Setup Active Zones
- Camera AGC
- Camera Scope
- Motion Search
- Search Filter & Search Results
- Disk Maintenance

NOTE: Any TL camera that is set to TURBO record speed will make the unit go to TURBO REC permanently until the user stops the recording.

Feature: Disk Test

It is possible for users to test the hard disk drives of the DVMRe Pro.

NOTE: Do not enter Turbo Mode while running Disk Test, or during a time window when Disk Test has been previously scheduled to run.

Disk Test is enabled by executing the following menu commands.

Main Menu → Record → Disk Maintenance

Use the jog to scroll down to **Test**.

Test: Provides access to the *Disk Test Setup* submenu which features disk test and monitoring options.

Disk Test Setup Menu: The *Disk Test Setup* menu provides several testing options including the test time, frequency, and duration.

Disk Test: Options include *Disable*, *Test Now*, and *Test Periodically*. The *Test Periodically* option runs the Disk Test at the specified frequency. The Disk Tests run in the background and will not interfere with normal operations.

Test Frequency in hours: From 0 to 1000 hours between tests.



Test Duration: This option is for the type of test to run – *Fast* or *Thorough*. The Thorough test will test significantly more sectors than the Fast test. The Thorough test is recommended because the Fast test can miss some disk failures.

Use the Jog to move between the menu fields and the Shuttle for the selections within the fields. When satisfied with the selections select **OK** and press the **Enter** button to execute.

Disk Test Setup	
Disk Test:	DISABLE
Test Frequency in hours:	0
Test Duration:	Fast
[CANCEL] [OK]	
Disk Test Result: Disk Failed	
Disk 1: Write Error	
Disk 2: Write Error	

The Disk Test will run in the background and will not interfere with normal operations. Once the disk test is done, a message will appear on the screen indicating the test result.

Disk Test Result
Disk Test Success
[OK]


PASSED

Disk Test Result
Disk Failure
Disk 1:Write Error
Disk 2:Write Error
[OK]

FAILED

Press the **Enter** button to clear from the display.

Should a disk test fail, several actions will performed:

- An icon will be displayed indicating disk failure.  It is displayed on Monitor A on the bottom of the screen in the middle. This icon will only disappear when the disk is replaced.
- If the *Notify Alarm* or *Notify Record* email option is enabled in the *Email Notification Setup* screen, an email will be sent indicating that a disk failure occurred.

Feature: Archiving to CD or DVD

It is possible to archive data from the DVMRe Pro to either a CD-RW or optional DVD+R using the scenarios below. The **Record CD / DVD** Button referenced below is shown as button number 11 on the front panel control legend, seen in the “Chassis Form Factor and Controls” section of this document.

The Record CD Button and Live Viewing

Pressing the **Record CD / DVD** button while viewing live video will cause the *Archive Incident* screen to appear. The unit takes the latest recording as its stop time and fits as much of the previous recording as the CD / DVD will hold.

The Record CD Button and Playback

Pressing the **Record CD / DVD** button while playing recorded video will cause the *Archive Incident* screen to appear. The start and stop times displayed will be determined by when in the video the **Record CD / DVD** button was pushed. The unit will choose an equal (if possible) amount of time before and after the selection.

The Record CD Button and the Disk Analysis Screen

Pressing the **Record CD / DVD** button while the *Disk Analysis* screen is displayed will cause the *Archive Incident* screen to appear. The start and stop times displayed will be determined by when in the video the pointer was when the button was pushed. The unit will choose an equal (if possible) amount of time before and after the selection.

Alarm Information

The DVMRe Pro's primary function is to furnish video multiplexing and recording with a multiscreen display. Although the unit has alarm handling and motion detection functions, these are considered secondary features. **This unit should not be the only alarm device on site.**



Demo Procedure

The DVMRe Pro has new features that when demonstrated correctly can really be impressive, most notably Turbo Mode. Turbo Mode is intended for use during an alarm or event when more video pictures are needed. Even though it can be used all the time, this will limit the Triplex mode of operation.

Four cameras in virtual real time on a quad display is an impressive demo. To do so:

1. Connect four cameras and turn Turbo Mode to on.
2. Set the Event camera setting to TL+Event.
3. Go to the Time Lapse Record Rate and set to the highest frame rate (24). Turbo will pop up to indicate you are in the Turbo Mode at this frame rate. Go to the Event record rate and do the same.
4. Exit the menus and push the Record button. The unit will go into Turbo mode immediately. Make sure WaveReader is connected. The unit will now be recording all four cameras at 24 pps. You can use WaveReader to do searches and view live while the system is in Turbo Mode.
5. Stop recording by pushing the Record button and then do a playback from the unit. The video being played back will be virtual real time and look beautiful on a NTSC monitor.

Next, demonstrate the real use of Turbo Mode by activating when an alarm is active.

1. Set the global alarm rate to max of 96 pps. Turbo will pop up on this screen reminding you that if an alarm is active it will trip the Turbo Mode.
2. Exit menus and you will notice at the top of the screen it will read TBO Standby.
3. Simulate an alarm by momentarily pushing the alarm silence button simultaneously with the camera number 1 button. This will activate an alarm on camera one. The recorder will go into Turbo Mode and return to regular recording in 11 seconds.
4. Search and playback the alarm to see it in real time.



Comparison Chart

Hardware Features GE Security Triplex Units	DVMRe Pro	DVMRe Triplex	StoreSafe Pro	StoreSafe
Camera Inputs	4-10-16 (Color & B/W)	4-10-16 (Color & B/W)	4-10-16 (Color & B/W)	4-10-16 (Color & B/W)
Maximum Recording Rate (NTSC/PAL)	120 pps (Turbo mode)	60/50 pps	60/50 pps	30/25 pps
Dual Monitor Outputs	Yes	Yes	1 - MultiScreen (Digital) 1 - Spot Monitor (Analog)	1 - MultiScreen (Digital) 1 - Spot Monitor (Analog)
Available Hard Disk Sizes	80/160/320/600GB	80/160/320/600/ 1000GB	40/80/160/320/ 600GB	40/80/160/320/ 600GB
Image Size	720/484 NTSC 720/576 PAL	720/484 NTSC 720/576 PAL	720/484 NTSC 720/576 PAL	720/484 NTSC 720/576 PAL
Audio (Single Channel)	Yes	Optional	Yes	No
Built-In CD-RW Drive	Yes	No	Yes	Yes
Built-In DVD+RW Drive	Available	No	No	No
Alarm Inputs	4, 10, or 16 (programmable NO or NC)	4, 10, or 16 (programmable NO or NC)	4, 10, or 16 (fixed or NO)	4, 10, or 16 (fixed or NO)
Relay Outputs	2 (programmable as NO or NC)	2 (programmable as NO or NC)	2 (Normally Open)	2 (Normally Open)
CD Copy Button (Record CD)	Yes	No	Yes	Yes
Print Button	Yes	No	Yes	Yes
Ethernet Port Built-In	Yes	Yes	Yes	Yes
PSTN (Dial-Up)	Yes (requires modem)	Yes (requires modem)	Yes (requires modem)	Yes (requires modem)
SVHS Monitor Output	No	Yes	No	No
SCSI Port or Firewire	No	Yes	No	No
Rack Mount	Yes	Yes	Yes	Yes
Dimensions	13 in. W x 3.5 in. H x 13.5 in. D	17.4 in. W x 1.75 in. H x 13.5 in. D	13 in. W x 3.5 in. H x 13.5 in. D	13 in. W x 3.5 in. H x 13.5 in. D



Software Features - Recording	DVMRe Pro	DVMRe Triplex	StoreSafe Pro	StoreSafe
Triplex Operation (Simultaneous local playback, record and live viewing)	Yes/not in turbo mode	Yes	Yes	Yes
Mode per-camera of Time-Lapse, Event or TL + Event	Yes	Yes	Yes	Yes
Per Camera setting of Time-Lapse Record Rate	Yes	Yes	Yes	Yes
Per Camera setting of Event Record Rate	Yes	Yes	Yes	Yes
Per Camera setting of Activity Record Rate	Yes	Yes	Yes	Yes
Per Camera setting of Record Quality	Yes	Yes	Yes	Yes
Motion (Activity) Detection Recording	Yes	Yes	Yes	Yes
Software Features - Playback	DVMRe Pro	DVMRe Triplex	StoreSafe Pro	StoreSafe
Go-To Search	Yes	Yes	Yes	Yes
Advanced Search by Time/Date, Event, Alarm and Camera	Yes	Yes	Yes	Yes
Search by POS Transaction Text	Yes	Yes	Yes	No
Disk Analysis Screen	Yes	Yes	Yes	Yes
Motion Search	Yes	Yes	No	No
Software Features - Interfacing	DVMRe Pro	DVMRe Triplex	StoreSafe Pro	StoreSafe
POS Interface (requires separately ordered ProBridge)	Yes	Yes	Yes	No
PTZ Interface (requires separately ordered ProBridge)	Yes	Yes	Yes	No



Software Features – Alarm/Reporting Actions	DVMRe Pro	DVMRe Triplex	StoreSafe Pro	StoreSafe
Email Notification on VideoLoss, Alarm, Record Status and Archive Notification	Yes	Yes	Yes	Yes
Alarm notification over Ethernet	Yes	Yes	No	No
Buzzer	Programmable	Programmable	Global	Global
Pre-Event Recording	Yes	Yes	Yes	No
Pre and Post Alarm Recording	Yes	Yes	Yes	Yes
VideoLoss Relay Action	Yes	Yes	Yes	Yes
Associate multi-camera display upon alarm	Programmable	Programmable	No	No
Software Features - General	DVMRe Pro	DVMRe Triplex	StoreSafe Pro	StoreSafe
Macros (Main Only – No Sub-Macros)	Yes	Yes	Yes	Yes
Sub-Macros	Yes	Yes	No	No
Front Panel Lock (All keys includes CD Copy & Print)	Yes	Yes	Yes	Yes
Sequence Cameras	Yes	Yes	Yes	Yes
Record Overwrite Mode	Programmable	Programmable	Overwrite Only	Overwrite Only
Time Display Mode	12/24-hour	12/24-hour	12-Hour	12-Hour
Master/Slave Mode	Programmable	Programmable	Slave Only	Slave Only



Included Equipment

- DVMRe Pro unit
- Alarm interface circuit board (P/N 0090-0077)
- Accessory PCB (P/N 0900-0127)
- DVMRe Pro user manual (P/N 0150-0294)
- WaveReader software CD (P/N 0151-0005-27W21 or later) with WaveWatch (remote health polling) and SplitWave (camera breakout utility for breaking one camera out of many)
- WaveReader software manual (P/N 0150-0143)
- WaveWatch user manual (P/N 0150-0189)
- Power supply (P/N 4310-0020)
- Power cords (110 VAC ; P/N 4310-0002 and 220 VAC ; P/N 4310-0001)

Associated Equipment

Associated equipment in a typical security system could contain the following items:

- Two monitors
- Printer with printer server connected
- Video cameras: Composite video, 1 volt peak-to-peak
- Alarm input devices: Pressure sensors, motion detectors, etc.
- Alarm output devices: Buzzers, sirens, flashing lights, etc.
- A PC connected via Ethernet cable
- ProBridge translators for text insertion interface

For instructions regarding the connection of the associated security equipment in your system, please consult the instruction manual of the associated equipment.

Associated Literature

The following literature can be found on the web in GE Security's online publication library at www.ge-consultantlink.com.

- DVMRe Pro user manual (P/N 0150-0294)
- DVMRe Pro A&E specification
- DVMRe Pro product data sheet



Part Numbers and Pricing

Part No.	Description
DVMRe-Pro4-80CDRW	4-channel color Triplex multiplexer-recorder w 80-GB hard drive, CDRW, Ethernet, audio, Pro
DVMRe-Pro4-160CDRW	4-channel color Triplex multiplexer-recorder w 160-GB hard drive, CDRW Ethernet, audio, Pro
DVMRe-Pro4-320CDRW	4-channel color Triplex multiplexer-recorder w 320-GB hard drive, CDRW Ethernet, audio, Pro
DVMRe-Pro4-600CDRW	4-channel color Triplex multiplexer-recorder w 600-GB hard drive, CDRW, Ethernet, audio, Pro
DVMRe-Pro10-80CDRW	10-channel color Triplex multiplexer-recorder w 80-GB hard drive, CDRW, Ethernet, audio, Pro
DVMRe-Pro10-160CDRW	10-channel color Triplex multiplexer-recorder w 160-GB hard drive, CDRW Ethernet, audio, Pro
DVMRe-Pro10-320CDRW	10-channel color Triplex multiplexer-recorder w 320-GB hard drive, CDRW Ethernet, audio, Pro
DVMRe-Pro10-600CDRW	10-channel color Triplex multiplexer-recorder w 600-GB hard drive, CDRW, Ethernet, audio, Pro
DVMRe-Pro16-80CDRW	16-channel color Triplex multiplexer-recorder w 80-GB hard drive, CDRW, Ethernet, audio, Pro
DVMRe-Pro16-160CDRW	16-channel color Triplex multiplexer-recorder w 160-GB hard drive, CDRW Ethernet, audio, Pro
DVMRe-Pro16-320CDRW	16-channel color Triplex multiplexer-recorder w 320-GB hard drive, CDRW Ethernet, audio, Pro
DVMRe-Pro16-600CDRW	16-channel color Triplex multiplexer-recorder w 600-GB hard drive, CDRW, Ethernet, audio, Pro
DVMRe-Pro4-80DVD	4-channel color Triplex multiplexer-recorder w 80-GB hard drive, DVD, Ethernet, audio, Pro
DVMRe-Pro4-160DVD	4-channel color Triplex multiplexer-recorder w 160-GB hard drive, DVD Ethernet, audio, Pro
DVMRe-Pro4-320DVD	4-channel color Triplex multiplexer-recorder w 320-GB hard drive, DVD Ethernet, audio, Pro
DVMRe-Pro4-600DVD	4-channel color Triplex multiplexer-recorder w 600-GB hard drive, DVD, Ethernet, audio, Pro
DVMRe-Pro10-80DVD	10-channel color Triplex multiplexer-recorder w 80-GB hard drive, DVD, Ethernet, audio, Pro
DVMRe-Pro10-160DVD	10-channel color Triplex multiplexer-recorder w 160-GB hard drive, DVD Ethernet, audio, Pro



DVMRe-Pro10-320DVD	10-channel color Triplex multiplexer-recorder w 320-GB hard drive, DVD Ethernet, audio, Pro.
DVMRe-Pro10-600DVD	10-channel color Triplex multiplexer-recorder w 600-GB hard drive, DVD, Ethernet, audio, Pro
DVMRe-Pro16-80DVD	16-channel color Triplex multiplexer-recorder w 80-GB hard drive, DVD, Ethernet, audio, Pro
DVMRe-Pro16-160DVD	16-channel color Triplex multiplexer-recorder w 160-GB hard drive, DVD Ethernet, audio, Pro.
DVMRe-Pro16-320DVD	16-channel color Triplex multiplexer-recorder w 320-GB hard drive, DVD Ethernet, audio, Pro
DVMRe-Pro16-600DVD	16-channel color Triplex multiplexer-recorder w 600-GB hard drive, DVD, Ethernet, audio, Pro
CBR-RKP	Rack-mount kit for DVMRe Triplex Pro Series, all HDD sizes

* At publication time, prices were not confirmed. Please contact your GE Security sales representative or consult the current Dealer Price List for pricing.

