G4-304SD$_{1a}$ AHD Mobile Digital Video IP Recorder

Reliable.
Compact.
Hi-Definition Ready.

Key Features & Benefits

- 4 - Analog High Definition or NTSC Analog channels & 1 IP channel
- Analog High Definition Channels support up to 720p resolution
- NTSC Analog channels support the 960H resolution standard
- Records 30 FPS on all NTSC analog channels simultaneously (120 FPS aggregated)
- Dual SD card slots with can accept up to 128GB SD card in each slot (256GB total)
- H.264 video compression for maximum transmission and storage efficiency
- MIL SPEC 810F compliant for shock and vibration
- Fan-less design, no filters to clean
- Wireless ready - WiFi and/or Cellular
- Dual streaming - record at highest resolution / frame rate and transmit (via cellular) live video at reduced resolution / frame rate
- 8 input sensors
- Integrated lock box

Applications

- School Buses
- Transit
- Transportation Industry
- Law Enforcement
- First Response
- Taxi

The Gatekeeper G4-304SD1 AHD is a 5 channel (4 AHD / NTSC analog, 1 IP) video/audio recorder. The four analog channels can be configured in pairs as either AHD or NTSC channels. When configured for four NTSC analog channels, each channel will record a maximum of 30 FPS simultaneously with independently selectable resolutions and 9 quality levels.

When two channels are configured for AHD, the DVR will support 15 FPS each of the 2 AHD channels and up to 30 FPS on the two NTSC analog channels. Analog High Definition camera utilizes Gatekeepers standard analog cables. This allows vehicles with existing analog compatible cabling to be easily updated to high definition cameras.

The G4-304SD1 AHD DVR supports the AHD-M video standard. When combined with Gatekeeper's S31AHD camera, video resolution is increased from standard D1 (720x480) to 720p (1280x720) high definition resolution. The G4-304SD1 AHD DVR also supports the 960H (928x480) video standard.

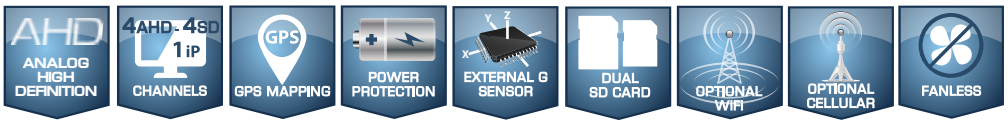
The G4-304SD1 AHD has dual SD card slots and can accept up to 256GB SD card in each slot (512GB total).

Superb Reliability
The G4-304SD1 AHD incorporates many features that dramatically increase the reliability of the DVR and the availability of recorded video. A custom file system is used to record data to the hard drive. This file system has been designed so that video can be recovered under most scenarios.

The G4-304SD1 AHD has a high capacity power supply. The power supply stores energy so that if the DVR loses power (when the engine is started or other high current draw electrical devices are turned on, such as air conditioners or hydraulic lifts), there is enough energy in the power supply to continue to power the internal circuits of the DVR for a short period of time. For example, when power to the DVR is lost the DVR closes the video files correctly and then power down into a safe low power state. This makes the DVR virtually immune to the notorious unreliable power found in vehicles.

The G4-304SD1 AHD has a keyed electrical interlock that prevents users from inadvertently removing the SD card before powering down the DVR. The key must first be turned to unlock a door that covers the SD card before the SD card can be removed. When the key is in the unlocked position, the DVR stops recording and it is safe to remove the SD card. After the SD card is reinserted, the SD card cover is closed, and the key is moved to the locked position, the DVR is once again ready to record.

Built Rugged
The G4-304SD1 AHD DVR passes MIL SPEC 810F (Trucks on Streets) for shock and vibration. In



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addition, Gatekeeper has developed and subjected the Gatekeeper DVRs to custom shock and vibration profiles. These profiles were obtained by placing sensors on vehicles, and recorded the shock and vibration that actual DVRs were subjected to in real world conditions.

Download of Video to a USB Drive
The G4-304SD1 AHD allows users to download video and/or video of marked events to a USB memory stick that can be inserted in the front of the DVR.

WiFi and Auto Wake Ready
The G4-304SD1 AHD is WiFi Ready. Gatekeeper's WiFi system will provide radio coverage in a typical vehicle yard. Utilizing WiFi 802.11ac at 5GHz Gatekeeper offers both a rugged industrial rated access point and a WiFi radio for the vehicle. Through the use of Auto Wake, a user can turn on the DVR and WiFi radio in the vehicle so that video can be accessed.

Dual Streaming and Cellular Ready
The G4-304SD1 AHD is dual streaming. This means a high quality full resolution image can be stored on the SD card while a lower resolution image can be streamed over the optional cellular connection.

Full Complement of Peripherals Available
The following optional peripherals are available:

- GPS
- Rear cable cover
- External G Sensor
- Driver Alert Button with Status LEDs
- Interactive Control Display
- 4 Port Hub

Specifications
G4-304SD1α AHD Mobile Digital Video IP Recorder

Video	
Video Channels (Analog)	4 channels (AHD or NTSC Analog) configured in pairs.
Video Channels IP	1 IP channel
Output	1 channel
Video Compression	H.264
Video Quality	User Configurable (1 to 9)
Resolution	**IP:** Camera Dependent - up to 1080p **AHD**: 720p (1280X720), WD1 (928X480), WHD1 (928X240), WCIF (464X240), D1 (704x480), HD1 (704x240), CIF (352x240) **NTSC**: WD1 (928X480), WHD1 (928X240), WCIF (464X240), D1 (704x480), HD1 (704x240), CIF (352x240) **PAL**: WD1 (928x576), WHD1 (928x288), WCIF (464x288)
Video Resource	MDVR has resources to support up to 480 CIF frames per second where: 1 FPS @ 720p = 8.00 CIF FPS resource 1 FPS @ WD1 = 4.53 CIF FPS resource 1 FPS @ D1 = 4.00 CIF FPS resource 1 FPS @ HD1 = 2.30 CIF FPS resource
On Screen Display	User configurable
Video Streams	Dual Streaming
Audio	
Audio Channels	4 analog channels and 1 via IP
Output	1 channel
Audio Compression	ADPCM
Storage	Supports Dual SD Cards: 32GB, 64GB, 128GB
Recording	
Record Trigger	Schedule, alarms, sensor triggers (includes ignition)
Prerecording	0 to 60 mins
Post Recording	Max 30 mins
File size	15 min of video
Playback	
DVR Video Playback	1 channel local Up to 4 channels using G4 Viewer Plus
Search Method	Date/Time, channel , event
Backup Mode	USB
Network	
Ethernet	RJ 45 port (10/100M) Optional external 3G or 4G cellular module
Cellular	
WiFi	Optional 802.11N 5GHz
GPS	Location, speed, Time Sync
Power	
Input	8 to 36v
Output	5v at 1 amp
Consumption	29w recording - with no cameras or accessories
Standby Current	<1 mA @ 12.6v
Physical	
Dimensions without Cable Cover	6.5" x 6.8" x 2.5" (165mm x 175mm x 64mm)
Dimensions with Cable Cover	11.3" x 6.8" x 2.5" (290mm x 175mm x 64mm)
Weight	2.4 lbs (1.09 kg)
Environmental	
Operating Temperature	-40°F to 158°F (-40°C to + 70°C)
Operating RH	Below 90% non-condensing

Specifications subject to change without notice.

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