

Intelligent devices for sensor networks



Network Digital Video Recorder (nDVR)

The new FLIR Network Digital Video Recorder (nDVR) is a fail-safe storage solution that offers continuous recording of up to 25 simultaneous MPEG network video streams from Nexus sensors directly to digital indexed storage.

As part of the Nexus family of network appliances, these servers are fully integrated with other Nexus compatible products, featuring plug & play compatibility and simple configuration. This significantly reduces integration risks.

The hardware platforms currently offered by FLIR are based on high performance Intel servers. They are the result of FLIR Networked Systems' ongoing research to offer reliable, high-quality storage solutions for security & surveillance and other mission critical applications in which FLIR products are integrated. All commercially available spare parts are supported by FLIR. Systems include a one year limited hardware warranty from FLIR as well as first year standard technical support.



System configuration

FLIR nDVRs are offered as compact rackmount servers that can be scaled as building blocks to build more complex configurations. Each unit is sized for 20Mbps effective bandwidth during 15 days continuous recording.

Easy storage capacity calculations can be done using this limit as the multiple of:

- Number of streaming channels to record
- Quality (bandwidth in Mbps) of each channel
- Number of days required for online storage

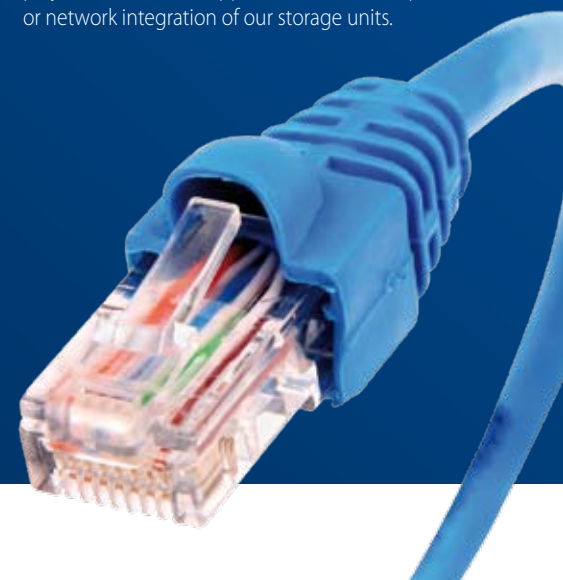
Disk capacity can be dedicated to backups to preserve critical video activity from being cycled. Backups can be transferred between nDVR units and also stored in removable media as offline storage.

Key Benefits

- Real-time recording of MPEG-4 ISO live streams to disk
- Web Interface for system administration
- Open architecture: Nexus interfaces and embedded Linux O.S.
- Distributed end to end IP architecture reduces costs relative to cabling and associated maintenance
- Redundancy and fail safe:
 - Hot swap redundant power supplies
 - RAID1 storage for O.S.
 - RAID5 protection for media storage
- Standard off the shelf parts serviced by FLIR
- Enhanced Intel based hardware configuration
- Programmable tasks managed by Scheduler
- Backup and Transfer service between nDVRs
- Download of Media Player MPEG-4 clips
- Boot drive module and watchdog features

Engineering and Professional Services

FLIR Networked Systems offers Professional Services to help integrators design or deploy their systems. FLIR not only helps to optimize storage sizing for each project, but can also support software development or network integration of our storage units.



Features

- Up to 25 simultaneous MPEG-4 channels
- Fully integrated in Nexus distributed and scalable network architecture, enabling simultaneous live archive, backup and viewing by multiple authorized users
- Linux Operating System
- Full remote control access using Nexus SDK: start and stop recording, create or download clips and backups from the MPEG video stream associated to a given Nexus sensor.
- Web and SDK Interface to access and query stored video by camera, timestamp, user defined recording session id, camera orientation and video settings
- Remote Control Status Monitoring functions in Nexus SDK for the nDVR Device, as for any other Nexus Device (health, BIT) and additional specific functions like recording status, hard disk space, scheduler, etc.
- Relational database for archival of metadata associated to recorded video assets and scheduler sessions
- Nexus compliant product. Upgradeable firmware updates available from FLIR Developers Network website (ns.flir.com)
- Support for standard RTP and RTSP Video Clients (e.g. VLC Videolan) with playback controls (fast forward, rewind, stop, pause, play)
- Ready for integration with third party security systems and management information systems using FLIR's Nexus SDK

Storage and Security

- Up to 90Mbps total storage throughput
- Embedded Linux O.S. allows total remote configuration via TCP/IP or serial port, optional remote maintenance services and remote firmware upgrading
- Total 6TBytes bulk storage capacity for media, in a hardware based RAID 5 configuration to ensure data protection and avoid any possible data loss (Additional UPS usage is highly recommended)
- Hot-swappable hard disks and power supplies
- Gigabit interfaces for maximum performance



FLIR's Nexus SDK and Sensors Manager offer comprehensive interfaces for end-users to manage stored content.



Back view of the FLIR nDVR

Technical specifications

| Power / Mechanical / Environmental | |
|------------------------------------|--|
| Power input range | 100 to 240Vrms (50 to 60Hz) (Max 263Vrms) |
| Power Consumption | 850W |
| Dimensions | 8.8cm x 44.7cm x 70.6cm |
| Enclosure | 2U rack-mount chassis, support for low-profile PCI add-in cards SES compliant enclosure management Firmware |
| Weight | 30Kg (approx) |
| Ambient Operating Temp. Range | +10°C to +40°C |
| Storage Temp. Range | -40°C to 70°C |
| Electrical interfaces | |
| Ethernet (System interface) | Dual Gigabit Ethernet |
| Power Receptacle | 2 x IEC AC |
| CPU/Storage Specifications | |
| System memory | 1GB Memory DDR2, 667MHz (expandable to 32GB) |
| CPU | Intel® Xeon® 5110 Dual Core 1.6Ghz LGA771 |
| Hard Disk Drive (HDD) | SATA 500GB 7200rpm x 12 |
| Video Streaming Formats | |
| Max. simultaneous streams | 25 active channels |
| Max. simultaneous clients | 10 |
| Video stream input formats | MPEG-2: ISO13818 VES, 2-6Mbps, 25/30fps., CIF/AGA/FullD1 MPEG-4: ISO14496 Profile 0 (H.263), 1- 25/30fps CIF/4CIF |
| Video multiplexing options | MPEG2: Video Elementary (VES) MPEG4: UDP/RTSP |
| Part Numbers and Options | |
| FNS400.nDVR.6T.RAID5.2RU | Intel nDVR 20Mbps/15d/24h 6TB RAID5 2RU 25ch |
| FNS500.MTSA.nDVR.1YR | Nexus nDVR MTSA Renewal 1 Year (per Media Server) |
| FNS500.TELE.nDVR.1YR | Remote Maintenance Program for nDVR (per Media Server) |

FLIR Networked Systems, s.l.u.

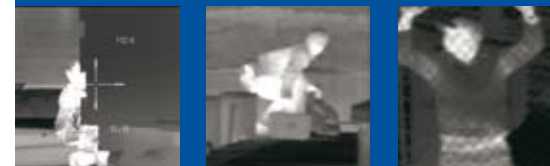
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