**infinique**™

# FortesNVR Professional Series

16 to 128 Channels, Rack Mountable 2U Chassis with Hot Swappable HDD Bays



Infinique offers a wide range of video management solutions for IP based video surveillance that are extremely easy to install, use and maintain. The hardware is optimized for video surveillance by consolidating disparate components into a single chassis which is energy efficient and greatly improves the total cost of ownership. The application software has an open architecture that comply to Onvif and industry standard protocols, making it future proof and providing peace of mind for your investment. From small to very large installations, Infinique's IP based video recorders are an ideal solution for today's high demanding video surveillance needs.

## Maximum Performance

Infinique's FortesNVR Professional Series is designed with server class hardware and is preloaded with Linux operating system and video management software. The performance is boosted by Dual Core 1.8GHz or Higher Processor and high capacity RAM to meet the demands of high security video surveillance with HD video recording and playback operations. The NVRs support recording and playback video streams ranging from 16 to 100 channels and can be easily scaled to support additional channels by automatic bridging of multiple FortesNVRs.

FortesNVR functions as a stand-alone NVR and boasts a total throughput of 580~680 Mbps of recording and network bandwidth. However the total number of cameras supported depends on the desired frame rate, the number of simultaneous client connections, streams played back, and the available bandwidth.

## Reliability

FortesNVRs high reliability is achieved by Linux® operating system and FortesVMS hosted on SSD system drive, as this provides high read-write speeds with no moving parts. It also ensures increased uptime and system response time, compared to systems which have the OS installed on conventional hard disk drives, the storage can also be expanded with external storage through an optional eSATA up to 4 HDDs.

## Product Features

- Appliance NVR with Dual core 1.8GHz Processor, designed for enterprise video surveillance
- Stable Linux OS and X-Windows with 3D GUI by OpenGL.
- Supports 16, 25, 32, 36, 64,100 and 128 Channels
- Simultaneous real time live view, recording and playback of 100 Channels in D1 is supported
- Storage Capacity up to 80TB which can be further expanded using SAN device
- Open architecture ensures support for a large number of ONVIF Compliant IP cameras
- Scalable solution offered by automatic bridging of multiple NVRs, to support additional IP Cameras
- Virtualization of multiple NVRs as a single logical unit is achieved through CMS, which enables centralized monitoring and management up to 4000+ channels from a single location
- Network Health and Event Monitoring
- Supports ONVIF and RTSP video protocols
- Energy efficient, has a very low power consumption
- Easy to install, comes with standard rack mountable chassis.

## FortesVMS (Video Management Software)

FortesVMS brings in the stability and reliability which is essential for a video surveillance system. FortesVMS has all the functionality of an advanced video management system to cater any surveillance application needs. The Linux®-based operating system used utilizes an XFS file system for maintaining the video files and has automated defragmentation routines to keep the database from becoming fragmented. XFS has been widely proved to be a superior and stable file format for the data intensive video surveillance recording applications than the Windows® based recorders which come with their standard NTFS file system.

## FortesMonitor - Centralized Monitoring

Advanced feature rich FortesMonitor provides centralized monitoring, control and management of multiple servers installed at different locations. A single instance of FortesMonitor installed on a high performance PC can support up to 4000+ cameras. In a single live monitor window up to 32x32 or 1024 live channels from multiple servers can be monitored, and multiple such windows can be managed simultaneously. This easy to use software, helps security professionals manage and interact with high definition video in the most efficient way.
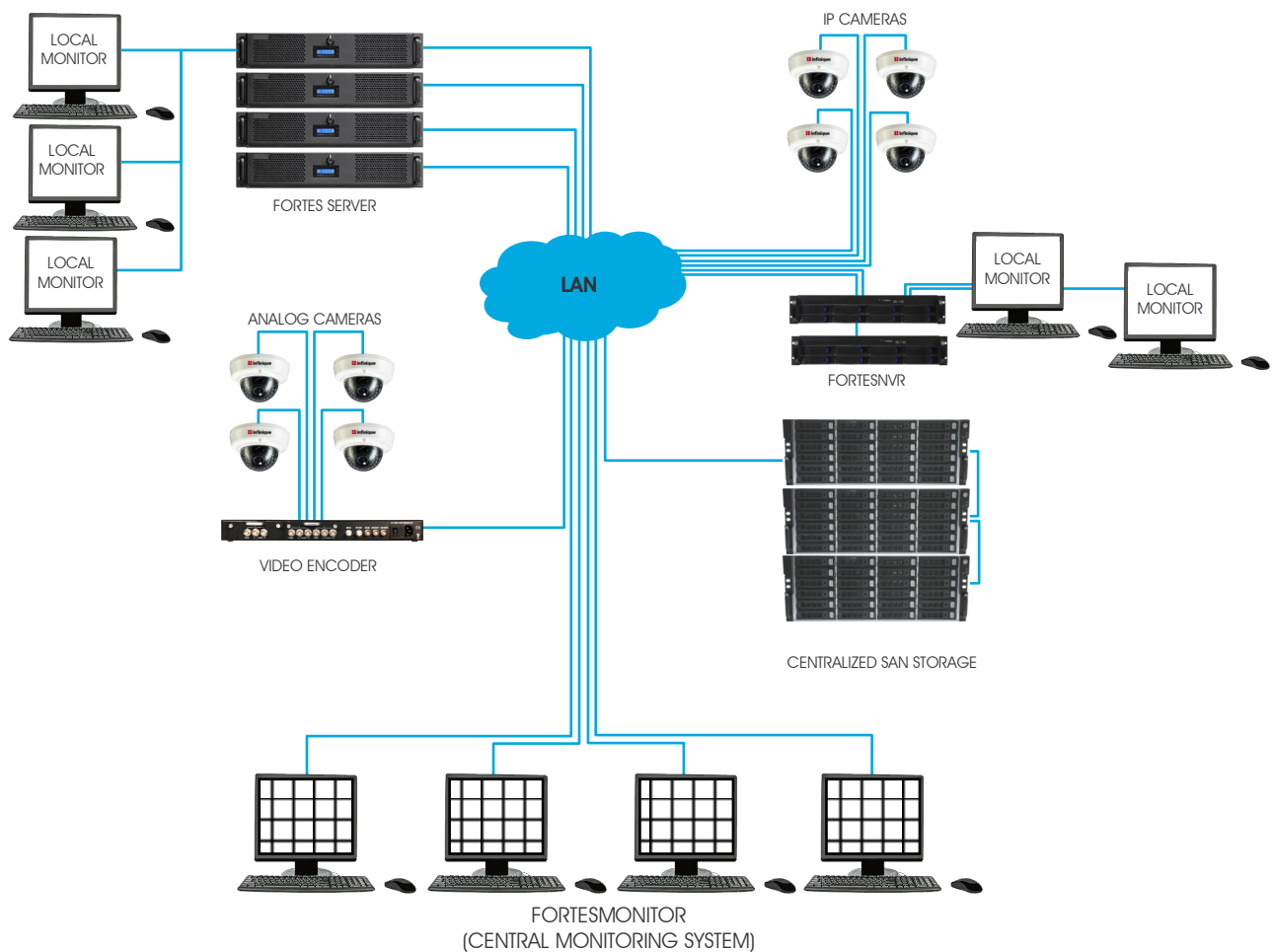
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## Open Architecture

FortesNVR is ONVIF compliant and provides a true open architecture that ensures support for a large number of IP cameras and encoders from various manufacturers. The system is also compatible with different video compression formats such as H.264 and H.265. It is built using industry open standard hardware and operating system which has been integrated for easy commissioning of IP video surveillance. This optimized integrated solution offered by Infinique provides peace of mind and removes the compatibility risks and unavailability of prompt support associated with solutions where VMS software and the hardware are sourced from different vendors. Third party system integration such as access control and building management systems are supported through a comprehensive SDK. All these features combined, makes FortesNVR a truly open architecture platform.

## Conceptual Overview



LOCAL MONITOR

LOCAL MONITOR

LOCAL MONITOR

FORTES SERVER

ANALOG CAMERAS

VIDEO ENCODER

LAN

IP CAMERAS

LOCAL MONITOR

LOCAL MONITOR

FORTESNVR

CENTRALIZED SAN STORAGE

FORTESMONITOR
(CENTRAL MONITORING SYSTEM)

NOTE. The above network configuration is a conceptual overview only and is not intended to show a detailed network topology. The actual network requirements for your installation will differ based on the configuration, requiring changes or perhaps additional network equipment. Please contact Infinique representative to discuss your specific requirements.

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ONVIF

## SYSTEM

| | |
|---|---|
| Processor | Intel® XEON™ Dual Core 1.8GHz |
| Operating System | Linux and X-Windows with OpenGL |
| OS Device | 4GB mSATA or DiskOnModule |
| Memory | DDR3 SDRAM 8GB to 16GB based on the NVR model |
| User Interface | Fortes VMS (GUI direct from NVR) |
| Camera Channels | 16 to 128 Channels |
| Hot Swappable HDD | 8x SAS/SATA HDDs, Max 80TB |
| USB Interface | 6x Ports - 2 Front and 4 Rear |
| PTZ Controller | USB Serial Port |
| Alarm Ports | 8x Digital Inputs, 8x Digital Outputs |
| Ethernet Interface | Gigabit Ethernet Ports 1000Base-T |
| RAID | Optional RAID5 / RAID6 Controller Card |
| Cameras Supported | Infinque, ONVIF Compliant Cameras and Native Integration for major camera brands |

### Client Modules

| | |
|---|---|
| FortesMonitor | Centralized Management and Monitoring |
| FortesMobile | Smart Phone App to watch live video |
| Web Client | Control and Watch Live from remote PC |
| VNC/SSH Client | NVR Remote Setup and Configuration |

## VIDEO AND AUDIO

| | |
|---|---|
| Video System | NVidia 1GB Low Profile |
| Maximum Resolution | 1920 x 1200 DVI, HDMI, VGA |
| Video Outputs | 1x VGA, 1x HDMI Ports |
| Video Standards | NTSC 60 Hz, PAL 75 Hz |
| Video Decoding | MJPEG, MPEG4, H.264 and H.265 |
| Audio Codec | G.711 |
| Two way Audio | Yes, if supported by camera |
| Audio Port | 1x Audio In, 1x Audio Out |

## FUNCTIONS SUPPORTED

| | |
|---|---|
| Recording | Continuous, Scheduled and Event |
| Security | HTTPS, SRTP, IP Filtering |
| Events | Motion Detection, Sensor, Alarm, Video Loss, Video Recovery, Disk Failure, RAID Status Change |
| Event Handlers | Warning Message, Popup, Border Blink, Alarm, PTZ Link, Recording |
| Video Backup | AVI, JPG, BMP File Format |
| Digital Zoom | Up to 10X |
| Display | Triple Display: Clone or Expand, Sequence (Spot) |
| Miscellaneous | Free DDNS, Built-in NTP Server, HDD Health Monitoring using SMART |

## MECHANICAL

| | |
|---|---|
| Form Factor | Industrial Grade 2U Rack Mount Chassis |
| Construction | Steel Cabinet with Metallic Black Finishing |
| Dimensions (mm) | 430(w) x 89(h) x 480(d) |
| Weight (kg) | 11 |

## ELECTRICAL

| | |
|---|---|
| Power Input | 100-240VAC, 50/60hz, Auto Switching |
| Power Supply | Internal |
| Power Consumption | Max 4.74A @ DC 19V |

## ENVIRONMENTAL

| | |
|---|---|
| Operating Temperature (C) | 10 to 35 (50° to 95°F) |
| Storage Temperature (C) | -40 to 70 (-40° to 158°F) |
| Operating Humidity | 8% to 90% RH, non-condensing |
| Non-Operating Humidity | 5% to 95%, non-condensing |
| Operating Altitude (m) | -16m to 3048 (-50ft to 10,000ft) |

Note: The server room temperature can be affected by air conditioning system, floor layout, rack configuration, etc. The NVR air intake temperature, can be significantly higher than the room temperature. To prevent system and hard drive failure, make sure the air intake temperature of the Server is always within the operating temperature range.

## ACCESSORIES SUPPLIED

| | |
|---|---|
| Rack Mount Kit | Brackets, rails and connecting hardware |
| Power Cord | Based on country; 3 prong molded connector, 1.8 m (6 ft) Cord Length |
| USB Mouse | 1 nos |
| Documentation | CMS Software CD, NVR Manual. |

## FORTESMONITOR CLIENT PC REQUIREMENTS

| | |
|---|---|
| Web Browser | Microsoft® Internet Explorer® 6.x or later |
| Processor | 2nd Generation Intel® Core™ i7 3.4 GHz or higher |
| Memory | 4 GB DDR3 or higher |
| Video Card | PCI Express, DirectX 9.0c compliant with 128 MB RAM (Intel® GMA 900, NVIDIA® 6600, ATI X1300 or higher) |
| Network Interface | 100 Mbps (minimum) 1 Gbps (recommended) |
| Graphics Card | 512MB or more dedicated memory |

## STANDARDS COMPLIANCE

| | |
|---|---|
| Emissions | FCC Part 15 Subpart B Class B EN 55022:2010 IC ICES-003 Class B |
| Immunity | EN 55024:2010 |
| Safety | UL 609501, EU: 2001/95/EC GPSD |

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ONVIF

## MODELS COMPARISON CHART

| Part Number | Description | Network Bandwidth | Live, Playback and Record Frame Rate |
|---|---|---|---|
| INR16-48F8E-2 | Professional 16 Channel NVR | 2 x 500 Mbps | Full HD, HD, D1 @480fps |
| INR25-75F8E-2 | Professional 25 Channel NVR | 2 x 500 Mbps | Full HD, HD, D1 @1080fps |
| INR36-108F8E-2 | Professional 36 Channel NVR | 2 x 500 Mbps | Full HD, HD, D1 @1080fps |
| INR64-192H8E-2 | Professional 64 Channel NVR | 2 x 500 Mbps | Full HD @1080fps, HD, D1 @1920fps |
| INR100-300D8E-2 | Professional 100 Channel NVR | 2 x 500 Mbps | Full HD @1920fps, HD, D1 @3000fps |
| INR128-384D8E-2 | Professional 128 Channel NVR | 2 x 500 Mbps | Full HD @1920fps, HD, D1 @3840fps |

## ORDERING INFORMATION

| PART NUMBER | DESCRIPTION |
|---|---|
| INR16-48F8E-2 | Infinique FortesNVR Professional Series, 16Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 80Mbps Record Bandwidth, Recording @480fps in Full HD, HD, D1, H.264, 8 Hot Swappable HDD Slots, Optional eSATA up to 4 HDDs 32TB, Dual LAN, Optional RAID5/RAID6, Optional Dual Power, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR25-75F8E-2 | Infinique FortesNVR Professional Series, 25Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 125Mbps Record Bandwidth, Recording @1080fps in Full HD, HD, D1, H.264, 8 Hot Swappable HDD Slots, Optional eSATA up to 4 HDDs 32TB, Dual LAN, Optional RAID5/RAID6, Optional Dual Power, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR36-108F8E-2 | Infinique FortesNVR Professional Series, 36Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 180Mbps Record Bandwidth, Recording @1080fps in Full HD, HD, D1, H.264, 8 Hot Swappable HDD Slots, Optional eSATA up to 4 HDDs 32TB, Dual LAN, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR36-108F8E-2R | Infinique FortesNVR Professional Series, 36Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 180Mbps Record Bandwidth, Recording @1080fps in Full HD, HD, D1, H.264, 8 Hot Swappable HDD Slots, Optional eSATA up to 4 HDDs 32TB, Dual LAN, RAID5/RAID6, Dual Power, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR64-192H8E-2 | Infinique FortesNVR Professional Series, 64Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 160Mbps Record Bandwidth, Recording @1080fps in Full HD, @1920fps in HD, D1, H.264, 8 Hot Swappable HDD Slots, Dual LAN, Optional eSATA up to 4 HDDs 32TB, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR64-192H8E-2R | Infinique FortesNVR Professional Series, 64Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 160Mbps Record Bandwidth, Recording @1080fps in Full HD, @1920fps in HD, D1, H.264, 8 Hot Swappable HDD Slots, Dual LAN, Optional eSATA up to 4 HDDs 32TB, RAID5/RAID6, Dual Power, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR100-300D8E-2 | Infinique FortesNVR Professional Series, 100Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 160Mbps Record Bandwidth, Recording @1920fps in Full HD, @3000fps in HD, D1, H.264, 8 Hot Swappable HDD Slots, Dual LAN, Optional eSATA up to 4 HDDs 32TB, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR100-300D8E-2R | Infinique FortesNVR Professional Series, 100Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 160Mbps Record Bandwidth, Recording @1920fps in Full HD, @3000fps in HD, D1, H.264, 8 Hot Swappable HDD Slots, Dual LAN, Optional eSATA up to 4 HDDs 32TB, RAID5/RAID6, Dual Power, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR128-384D8E-2 | Infinique FortesNVR Professional Series, 128Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 500Mbps Record Bandwidth, Recording @1920fps in Full HD, @3840fps in D1, H.264, H.265, 8 x Hot Swappable HDD Slots, Dual LAN, Optional eSATA up to 4 HDDs 32TB, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR128-384D8E-2R | Infinique FortesNVR Professional Series, 128Ch Realtime Display and Recording, 500Mbps Network Bandwidth, 500Mbps Record Bandwidth, Recording @1920fps in Full HD, @3840fps in D1, H.264, H.265, 8 x Hot Swappable HDD Slots, Dual LAN, Optional eSATA up to 4 HDDs 32TB, RAID5/RAID6, Dual Power, Optional SAN Support, 2U Rack Mountable, Hard Drive not included |
| INR-RAID5/6 | Infinique Fortes NVR Options - RAID5/6 Controller Card |
| INR-D-PWR | Infinique Fortes NVR Options - Dual Power |
| INR-HBA-SAN | Infinique Fortes NVR Options - SAN HBA- Host Bus Adapter Card |
| INR-4HDE1 | Infinique Fortes NVR Options - E-SATA for up to 4 HDDs, Maximum Capacity 16TB |
| INR-8HDE2 | Infinique Fortes NVR Options - Dual E-SATA up to 8 HDDs, Maximum 32TB |
| IFKB-RS232 | Infinique RS-232 Keyboard Controller with RS-232 Gender Cable for PTZ Camera Control |
| IFSD-SC2 | Infinique RS-485 Keyboard Controller for PTZ Camera Control |
| ICMS08 | FortesMonitor License for 128 Cameras and 8 NVR's (Free of cost) |
| ICMS16 | FortesMonitor License for 256 Cameras and 16 NVR's |
| ICMS64 | FortesMonitor License for 1024 Cameras and 64 NVR's |
| ICMS256 | FortesMonitor License for 4096 Cameras and 256 NVR's |

**I**infinique™    Infinique, a Canadian company is a manufacturer of high performing end-to-end solutions in copper, fiber and video surveillance systems. For more information visit our website at www.infinique.com or email us at sales@infinique.com.

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