# DMI Surveillance Solution

This document introduces the Digifort, MOBOTIX, and Infortrend integrated surveillance solution.

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# Summary

Video surveillance solutions have never been more critical to businesses and organizations around the world than they are today. A reliable, high performance video surveillance solution can help government fighting crime, or help organization reducing losses. Digifort, MOBOTIX, and Infortrend are experts in their own fields. Now, we provide you a surveillance solution integrated with these 3 vendors' products. This integrated surveillance solution is very cost-effective, reliable, and also provides high performance.

# Audience

This guide is intended for the Infortrend partners, customers, and employees who are proposing and configuring the Infortrend EonServ/EonStor DS Family with Digifort and MOBOTIX.

# Terminology

- Digifort – Video management software vendor
- MOBOTIX – IP camera vendor
- Infortrend – Storage vendor
- EonServ (EV) – EonServ is an integrated storage server solution exclusively designed for enterprises, including EonServ 5000/5000ML and 7000.
- EonStor DS – EonStor DS Family is SAN storage which can provide excellent performance and reliability.
- EonOne Lite – Management software for EV 5000
- SANWatch – Management software for EV 7000/EonStor DS

# Introduction

## Digifort

### Moving Forward as One

Through collaboration and mutual respect, Digifort delivers a cutting-edge solution by working with other technology partners like Infortrend and MOBOTIX. Such strategic partnership is important to ensure the smooth functioning of deployed systems (via validation tests), a key point in the infrastructure of network security systems, especially storage.

Founded in 2002, Digifort is an award-winning software development company that specializes in video surveillance software and video monitoring intelligence. Digifort's intelligent video monitoring software utilizes the highest levels of available technology, providing the best performance to suit any requirement. Digifort is represented in 100+ countries through our Distributors, and our platform is translated into 19 languages.

Enterprise solutions are very complex and resource-hungry. Digifort stands out because we make it easy to use and configure while demanding very little in hardware and other related resources, hence, making it the most cost-effective integrated solution on the market today.



*Digifort*

# MOBOTIX

MOBOTIX develops and produces intelligent IP video systems known for their high level of security and uncompromising reliability. All based on German engineering and processing, which is appreciated as particularly innovative and high quality. Each product of MOBOTIX line is carefully constructed with the most advanced assurance technologies. MOBOTIX uses only high-quality sensors and develops image processing software, which enables MOBOTIX IP-cameras to produce exceptionally sharp, clean images. The ONVIF industry standard is included in MOBOTIX products and facilitates using them within third-party video management systems and integrating more easily in projects.

The MOBOTIX devices are continually perfected in MOBOTIX laboratories in Germany. As a video surveillance solution provider, MOBOTIX is the right choice for everyone who seeks intelligent cybersecurity systems to enhance daily business and security.
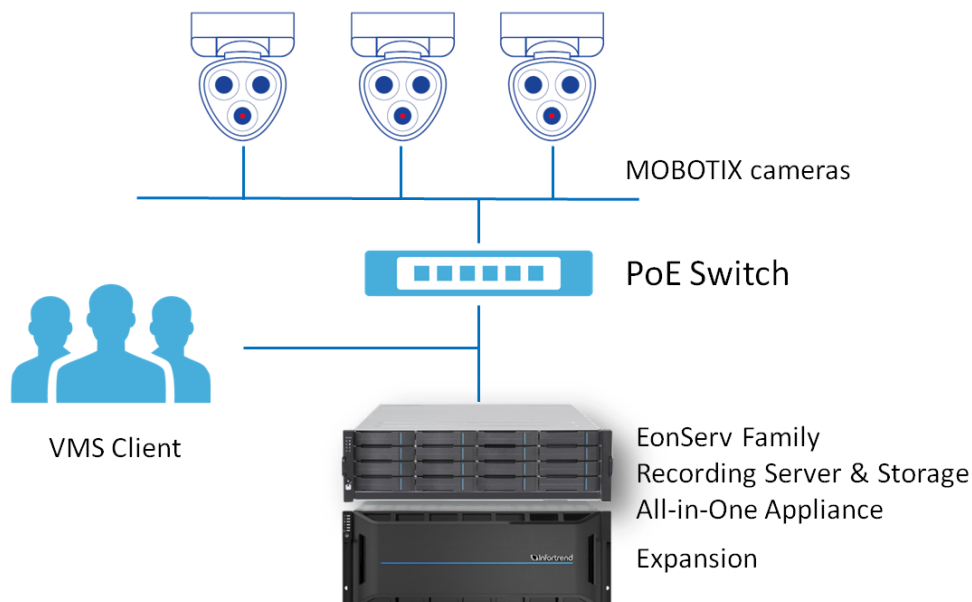


*MOBOTIX*

# Infortrend

Infortrend Technology is a pure-play Enterprise Data Storage solution provider with over 25 years of history. In order to deliver the highest quality products and services, Infortrend integrated product development, design, manufacturing, technical consulting/support to deliver a comprehensive solution to our customers and successfully deployed more than 600,000 redundant rack-mounted systems worldwide.

Infortrend EonServ Family integrates NVR server and SAN storage in one box which can provide the easiest deployment and the most cost-effective solution in the surveillance field. EonServ can provide high performance and high reliability which are the most important criteria of your 24/7 non-stopping surveillance recording. EonServ is also a proven solution for various VMS providers, such as Digifort.

# Solution Architecture

**Server & Storage All-in-One Recording Server Appliance**

Reliability, performance, and cost are the main criteria of the surveillance solution. Digifort, MOBOTIX, and Infortrend (DMI) integrated surveillance solution provides high performance, high reliability and, meanwhile, cost-effective. With Infortrend EonServ Family, a server and storage in one box solution, DMI solution not only simplifies the deployment of surveillance infrastructure but also reduces the total cost. Meanwhile, DMI solution still provides excellent performance and reliability.
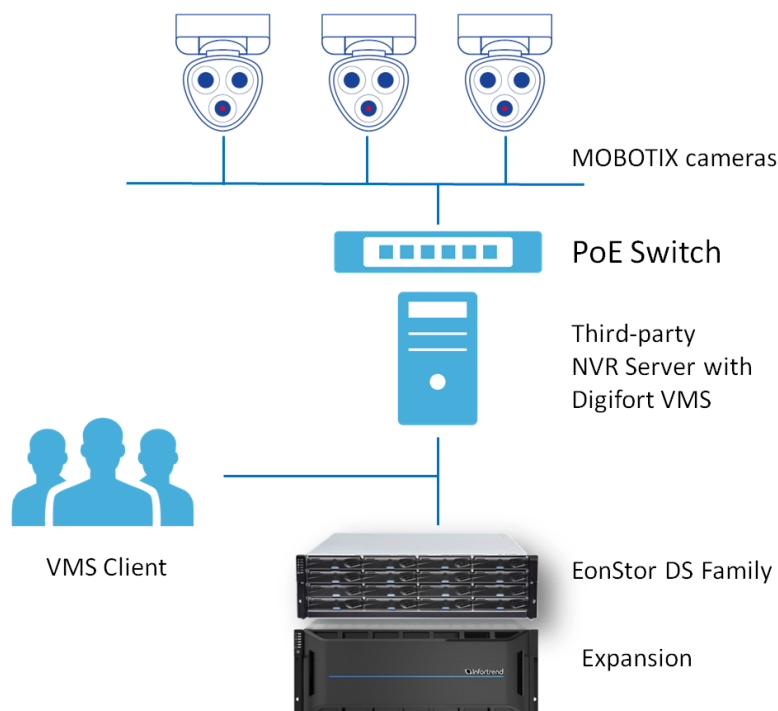


*DMI Solution Architecture with EonServ Family*

In the medium to large-scale surveillance applications, there will be hundreds of cameras deployed in the environment. With centralized Digifort VMS, you can easily see all the videos and manage all the cameras. Infortrend EonServ Family is a server and storage all-in-one box solution that can eliminate the requirement for an additional server to help you save the budget, and provide excellent performance to store surveillance recording without data dropping. Not just performance, EonServ Family also has excellent scalability. With expansion enclosure, EV 5000 series can support up to over 300 drives, and EV 7000 series can support up

to over 400 drives. You will not need to worry about the capacity for the recordings. MOBOTIX camera provides high resolution, and it can also reduce the video bandwidth to transfer the data efficiently. MOBOTIX cameras' recordings remain clear even in a dark environment. MOBOTIX has certified its products with Digifort and Infortrend to deliver an integrated storage and video management solution that has been extensively tested to ensure interoperability.

**Large-Scale Surveillance Solution**

In large-scale surveillance deployment, there could be over a thousand cameras deployed in the environment. The performance requirement of the system will be tremendous. In this case, adopting a third-party server and SAN storage is a better choice, since they can provide higher and more stable performance.



*DMI Solution Architecture with EonStor DS Family*

A third-party server installed Digifort VMS as a recording server connected to Infortrend EonStor DS Family can be an excellent solution for large-scale surveillance scenarios. EonStor DS Family provides various

series, from 1000 to 4000, for different performance requirements. The performance of the DS Family can range from 6,000/2,000 MBps (Read/Write) to 11,000/5,500 MBps (Read/Write) to meet most of the performance requirements in the surveillance scenarios. Meanwhile, DS Family has an excellent capability of expanding. DS Family can support over 400 drives with expansion enclosure, so the capacity will not be an issue. DS also supports 4U 60-bay high-density form factor expansion enclosure for you to save the limited rack space. All the components in DS Family are redundant and modular design making DS highly reliable and easy-to-maintain.



*Surveillance Video Central management*



*Surveillance Video Central management*

# Test Report

**Digifort VMS with Infortrend EonServ Family**

This report certifies the outstanding performance of Infortrend EonServ 7000 with Digifort enterprise-level video management surveillance system. The result shows that Infortrend EonServ 7000 is very reliable for 24/7 continuous video footage recording. Besides, you can deploy the surveillance system with high-quality cameras provided by MOBOTIX which is also a certified camera provider with Digifort.

EonServ7000, have been tested with Digifort 7.2.1 for 30 days, testing was performed with 720 cameras (1920x1080@30 fps, with 3.75Mbps) in three machines (one for Digifort Recording server, stream generator, and one for the Surveillance client) environment.

Based on the benchmarks and testing with full stress on the storage, we can conclude that EonServ7000 is highly reliable to be used for the surveillance by End users and System Integrators.

**720 Channels, 1920x1080 with 30 fps and 3.75Mbps bitrate on continuous Recording**

| No of Channels | Playback Duration | Buffer | Surveillance Client Utilization | | Retrieval time |
|---|---|---|---|---|---|
| | | | Live view | Live view and playback | |
| 16 | 12 hours | 0.1 | 38 | 38-57% | 2 min 5 sec |
| | 1 day | | | | 3 min 45 sec |
| | 3days | | | | 8 min 55 sec |
| | 1 week | | | | 12 min 5 sec |
| | 2 weeks | | | | 25 min 20 sec |
| 25 | 12 hours | | 62 | 62-86% | 3 min |
| | 1 day | | | | 6 min 10 sec |
| | 3 days | | | | 12 min 25 sec |
| | 2 weeks | | | | 19 min 55 sec |

Based on the test report, Digifort certifies and ensures that the Infortrend EonServ 7000 is highly reliable and recommended to be used by customers for building surveillance infrastructure. Also, MOBOTIX is one of the certified camera providers of Digifort. MOBOTIX is well-known for high quality and intelligent surveillance camera. With Digifort, MOBOTIX, and Infortrend, customers can build a highly intelligent, highly reliable, and high-performance surveillance solution at a reasonable price.

# Conclusion

Certified solution with verified performance certifying EonServ Family NVR server with Digifort VMS and MOBOTIX camera integration offers customers an optimized solution that has been tested to deliver the highest levels of performance and reliability. Extensive documentation of the testing results is available and ensures that customers can fully leverage the performance offered by the integrated EonServ Family and Digifort VMS solution while also reducing deployment and management costs combining VMS and surveillance storage on a single device. DMI solution also offers full technical support. To gain the highest performance out of the EonServ or EonStor system, Infortrend can offer the installation and configuration support. If you need support from Digifort or MOBOTIX, you can also go to their support page to ask for help or advice. The DMI solution is certified to be resilient, affordable, and scalable for systems of any size.
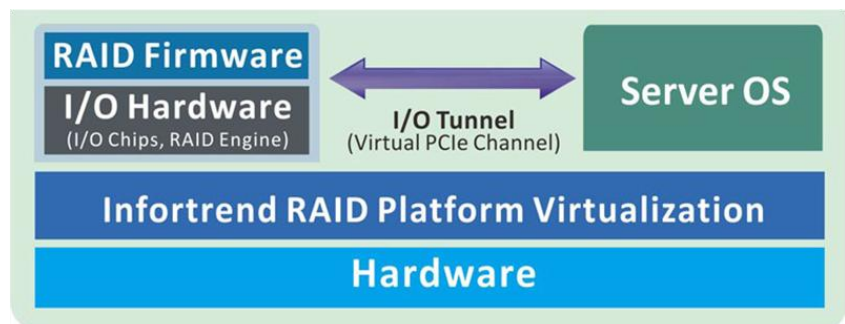
Discover more

Digitfort: https://www.digifort.com/index.php

MOBOTIX: https://www.mobotix.com/

Infortrend: https://www.infortrend.com/uk/solutions/surveillance
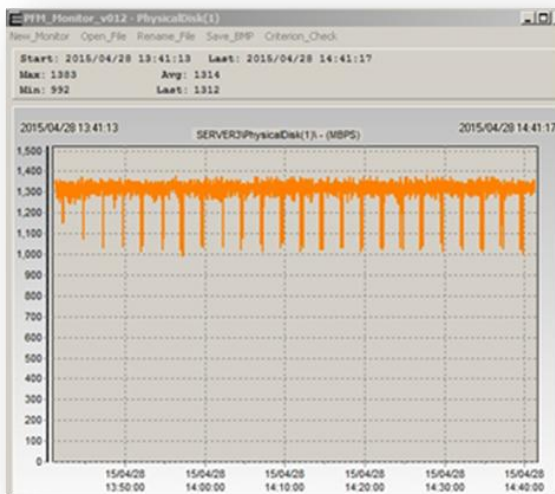
# Appendix

## Infortrend RAID Platform Virtualization (IRPV)

IRPV allows the RAID and server integration into one system. The IRPV technology allows for RAID and server to coexist and operate together by an I/O tunnel constructed by the virtual PCIe channel. IRPV automatically allocates hardware resources such as CPU, memory, and HBA to the OS and the storage firmware, making them able to work simultaneously. This virtualization technology optimized the RAID and server components for maximum efficiency.
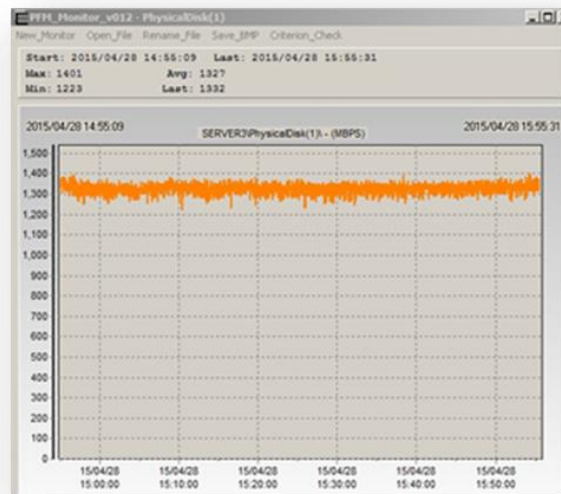
# Intelligent Mechanism to Ensure Stable Performance

Infortrend's patented read/write technology guarantees performance during drive IO delay. Also, the system will isolate the abnormal drive to maintain system stability. By these 2 means, EonServ Family provides constant high and stable performance.



Servers with RAID card
(Without RAID card memory)



Infortrend EonServ

# Intelligent Drive Recovery (IDR) Technology

To prevent data loss, Infortrend provides IDR technology. IDR technology consists of 2 functions: corruption prevention and RAID rebuild prevention. Corruption prevention measurement will scan for bad blocks of disk block(s) and attempts to repair it. If the damaged block is beyond repair, the IDR function takes over isolating the disk and copy the data of the bad block to spare drive which will replace the failing disk before it fails. This prevents complete failure of the RAID drive and helps to avoid going through the rebuild process that would cause an enormous impact on the performance.

**RAID 6 Protection**
RAID 6 systems store two parity and error correction information sets which provide more powerful data protection

Detect and repair damaged disk blocks

**S.M.A.R.T function**

Copy and clone data before a disk fails

# Legal Information

All Infortrend products, including the product/s that customers have purchased from Infortrend, are subject to the latest Standard Warranty Policy available on the Infortrend website:

https://www.infortrend.com/global/Support/terms-conditions

Infortrend may from time to time modify, update or upgrade the software, firmware or any accompanying user documentation without any prior notice. Infortrend will provide access to these new software, firmware, or documentation releases from certain download sections of our website or through our service partners. Customer will be responsible for maintaining updated version of the software, firmware, or other documentation by downloading or obtaining from Infortrend, and installing designated updated code, including but not limited to firmware, microcode, basic input/out system code, utility programs, device drivers, and diagnostics delivered with Infortrend product.

Before installing any software, applications or components provided by a third party, customer should ensure that they are compatible and interoperable with Infortrend product by checking in advance with Infortrend. Customer is solely responsible for ensuring the compatibility and interoperability of the third party's products with Infortrend product.

Customer is further solely responsible for ensuring its systems, software, and data are adequately backed up as a precaution against possible failures, alteration, or loss. For any questions of hardware/ software compatibility, and the update/ upgrade code, customer should contact Infortrend sales representative or technical support for assistance.

To the extent permitted by applicable laws, Infortrend will NOT be responsible for any interoperability or compatibility issues that may arise when (1) products, software, or options not certified and supported by Infortrend are used; (2) configurations not certified and supported by Infortrend are used; (3) parts intended for one system are installed in another system of different make or model.

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# Contact Information

## Website

For more information of Infortrend's products and services, visit:

https://www.infortrend.com/global/Home

## Customer Support

Contact your system vendor or visit the following support site.

http://www.infortrend.com/global/Support/Support