TELESTE

Product Family Overview – Suite 6.0

Teleste VMX products

Teleste VMX – High Quality Video Surveillance system

Teleste's VMX Video Management system is a powerful video surveillance solution for seamless management of video, audio and data over IP networks.

The ingeniously designed architecture supports installations from single site low camera count systems to distributed nationwide systems comprising of thousands of cameras.

The intuitive graphical user interface allows CCTV operators effortlessly to drag and drop video to decoding tiles, start and stop recordings, control PTZ cameras, and monitor system alarms. This and more is available via different type of VMX Clients.

The strength of the system is in the support for open standards, which allows the operator to choose preferred components from open market while allowing at the same time integration towards complementary systems such as access control, fire alarm and telematics.

Security and high availability are virtues of the VMX system and thus makes it a natural choice for airports, railways, roads, prisons, police, industrial facilities and government institutes and departments.

The VMX product family is a full suite of system products covering all major features needed in a modern management system for networked video. Based on distributed server/client architecture VMX is capable of controlling, streaming, switching and recording video and related data as well as seamlessly operating 3rd party system components. Any type of network topology from basic single server operation to complex server mesh can be designed, implemented and supported.

An ultimate user experience is fulfilled by the graphical user interface of the Client station that can be tailored individually to meet each operator's expectations on how to efficiently use and control CCTV cameras, video recorders and related equipment. The maximum uptime needed in a business critical operation is provided by intelligent fail safe operation of the software combined with hardware redundancy.

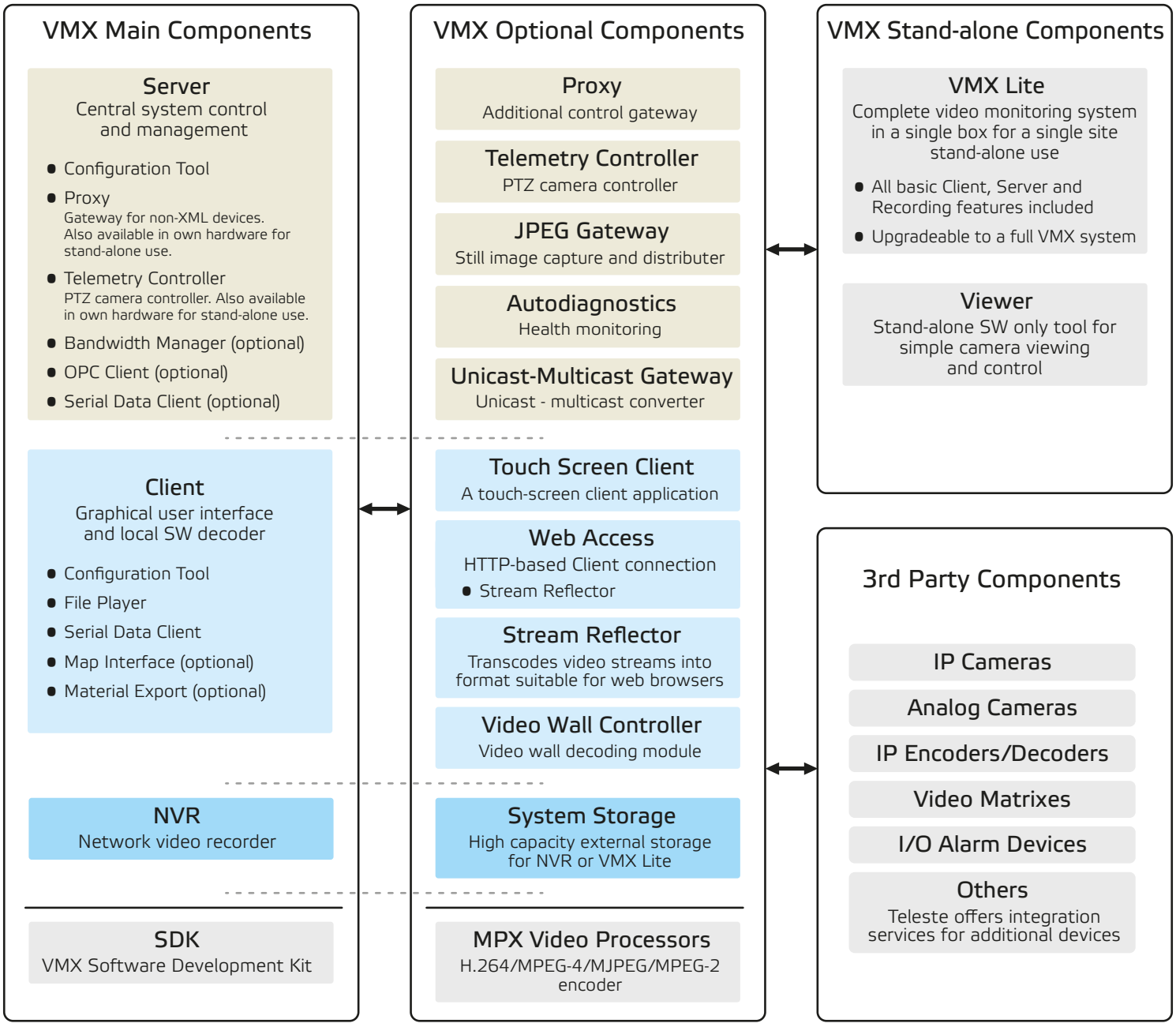
The system security is brought onboard by the dynamic resource arbitration and versatile system user management which both are imperative features in a multi-site and multi-user environment.
The stringent requirements for integrity of the content to be used in court of law can be secured and guaranteed for every piece of evidence exported from the system.

The VMX products consist of software and associated hardware for control, processing, viewing, distribution and recording of signals required in CCTV applications. The VMX software is supporting operation with standard based video, audio and data. The hardware assembly built on industry standard servers and workstations is thoroughly tested before deployment.

The final touch is provided with the flexible licensing scheme that allows for an easy approach for later system extensions and upgrades.

As a result the VMX product family is simply said reliable, scalable and future-proof system for all video based security and monitoring system needs.

VMX System Block



VMX System's Main Components

VMX Server – The Heart of the System
VMX Server provides the central control of the system while being responsible for real-time system monitoring and user management with access rights and prioritisations, video connections and integration to other systems (video and non-video) just to mention few of the main tasks.

VMX Client – System graphical user interface and SW decoder
VMX Client is an interactive graphical user interface (GUI) and local SW decoder for operator use. Next to field devices like CCTV cameras operator can deal with other VMX system elements depending on authenticated operator´s user rights.

VMX NVR – Network Video Recorder
VMX NVR (Network Video Recorder) is responsible for recording of video and audio streams within the VMX system. VMX NVR can support both distributed and centralised recording. Distributed model enables an efficient use of network loading while a centralised model may offer the efficient operation in terms of NVR cost. User-defined recording loops together with automated features ensure that all critical events are safely recorded. A specific toolset is provided for searching and handling of all recorded material.

	Server	Client	NVR	VMX Lite
Components in the system	min. 1 (at least 2 recommended)	1 per operator	min. 1 per 64 recorded chs	All-in-one; Server, Client and NVR combined into one HW unit
Function	Core of system	GUI and SW decoding	Storing video	
Mechanics	Rack (1U)	Mini Tower	Rack (1U/2U)	Rack (1U)
Operating system	MS Windows Server® 2008	MS Windows 7®	MS Windows Server® 2008	
System size	Smallest in use has 6 cameras whereas the largest system has thousands of cameras			Up to 32 cameras

The core of the VMX system consist of three main elements; **VMX Server**, **VMX Client** and **VMX NVR** (Network Video Recorder). VMX Lite is a complete video surveillance and monitoring system in a single box and it is upgradeable to a full VMX system.

VMX System's Optional Components

- **VMX SDK** – VMX Software Development Kit
  Allows developers to create the client interface software to control the VMX system.
- **VMX Proxy** – Additional Control Gateway for non-XML Devices
  Translates the commands into suitable format for 3rd party devices.
- **VMX Telemetry** – PTZ Camera Controller
  Provides multi-vendor interface for PTZ control protocols.
- **VMX JPEG Gateway** – Still Image Capture and Distributer
  Produces and stores JPEG images from video streams of various frame rates and resolutions.
- **VMX Autodiagnostics** – Health Monitoring
  Health check for image quality and video stream continuity. Makes the background scanning of video images in order to detect cameratampering such as moved camera, out of focus, covering of camera etc.
- **Unicast-Multicast Gateway** – Unicast - Multicast Converter.
  Converts incoming unicast video traffic into multicast video traffic.
- **VMX Touch Screen Client** – VMX Client for Touch Screen Devices
  Client application dedicated for operators using touch screen devices. It eliminates the use of a mouse or a keyboard.
- **VMX Web Access** – Http Based VMX Client
  Web-browser based user-interface for VMX.
- **VMX Stream Reflector** – Stream Transcoding for Web Based Solutions.
  Transcodes video streams into web browser compliant stream of JPEG pictures.
- **VMX Video Wall** – Video Wall Controller
  Cost efficient alternative for video wall systems. VMX Video Wall is a stand-alone node providing a video wall decoding functionality. (= SW video decoder with 2 or 4 monitor outputs).
- **VMX System Storage** – Storage Capacity Expansion
  External storage unit to increase storage capacity. The unit is based on SAS array featuring reliable high capacity 6.0 Gbps SAS interfaces.
- **MPX Video Processors** – Video Encoders
  H.264/MPEG-4/MJPEG/MPEG-2 temperature hardened encoders. 1, 2, 4 and 8 video channels.
- **VMX Lite** – Stand-alone Video Surveillance System
  A complete stand-alone video surveillance and monitoring system.
- **VMX Viewer** – Tool for Viewing and Controlling of Multiple Cameras.
  Simple stand-alone application providing interface for viewing and controlling multiple cameras.

System Benefits

- **Scalable**: From only a few cameras up to a network of thousands of video streams.
- **Investment-proof**: System expansions and upgrading are well-supported.
- **Reliable**: System redundancy, resource arbitration, bandwidth management and intelligent server operations.
- **Ergonomic**: Easy to use. Operator can use personal settings for operation. Special video tools are available for fluent work flow.
- **Adaptive**: Integration capability with most common analogue video matrixes, easy upgrade path to an IP-based video system.
- **Excellent video processing**: Low latency processing and selectable video parameters.
- **Recording**: Various recording functions to ensure capturing of all events, fast searching and uploading of video evidence. Encryption protection when exporting video to external devices.
- **Integration friendly**: Supports both analog and IP cameras, 3rd party device support over proxy operation as well as integration to non-video systems such as access control, fire alarm and telematics systems.
- **Flexible licensing**: "Pay as you grow" type licensing provides a cost-efficient way for various system sizes.

GUI (graphical user interface) example view from Client.

VMX Hardware

All VMX components are available as ready assembled and tested packages of application specific VMX software and IT friendly rack server.

The most commonly used PC platform for VMX components is based on 1U high rack server.

2U high rack server is used for VMX NVR installations. The unit supports up to 12 hot swap 3.5" hard drives.

The hardware is based on high performance server platform with Intel® Xeon series processor and 8GB of memory.

A redundant power supply can be selected as an option to all business critical assemblies.

Mini PC tower is available for graphical user interface and video wall controller.

19" wide and 2U high rack mount server.

19" wide and 1U high rack mount server.

Mini tower chassis.

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TELESTE
www.teleste.com
Info.vn@teleste.com

TELESTE CORPORATION
P.O. Box 323, FI-20101 Turku, Finland
Phone +358-2-2605 611, Fax +358-2-2605 880