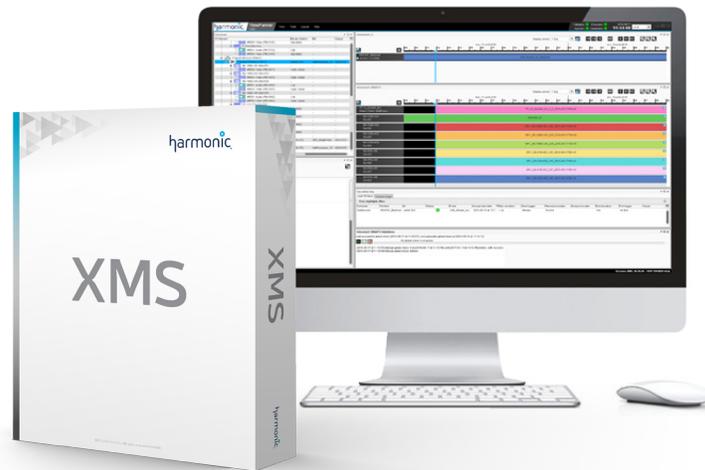


XMS

UNIFIED MANAGEMENT SYSTEM



XMS offers the industry's most comprehensive set of digital content delivery tools for Configuration and control, workflow analysis, and monitoring of content distribution solutions.

The XMS management solution enables digital TV operators to process content for delivery on a variety of platforms, including satellite, terrestrial, cable, IPTV, and OTT. The XMS gives digital TV operators unique capabilities for monitoring, configuring, and dynamically controlling their channel lineups.

Fault-tolerant Architecture

Customers benefit from our extensive experience in management system design and global end-to-end deployment with XMS – a complete, reliable and easy-to-use solution. The XMS consists of a server and a set of client applications that streamline management and supervision of services across the video delivery infrastructure.

The XMS system supervises key Harmonic's products, including the Electra VS, Electra XT, ViBE, Spectrum XE, and NetProcessor digital content delivery platforms, as well as numerous third-party systems. The robust XMS system architecture offers much more than regular management capabilities. It also provides advanced user rights administration and resource sharing to accommodate a wide range of access profiles for different users and from different locations.

Unified Operations

By combining the NetworkOperation (NetOp) supervision application with the resources allocation, load balancing, and redundancy capabilities of the VOS FLEX, the XMS system ensures unified, resilient, and flexible operations for broadcast and multi-screen services. With redundancy managed at each step of the process, the XMS supports unique fault-tolerant system architecture that ensures 100% service availability.

With its exclusive TimePlanner application, the XMS offers built-in scheduling and profiling capabilities to facilitate management of complex and dynamic service offerings. Features include time-sharing, service regionalization, and black-out or pay-TV transitions management, as well as branding and content customization and compression resources management based on priorities for deployment speed, video quality requirements, and bandwidth optimization.

HIGHLIGHTS

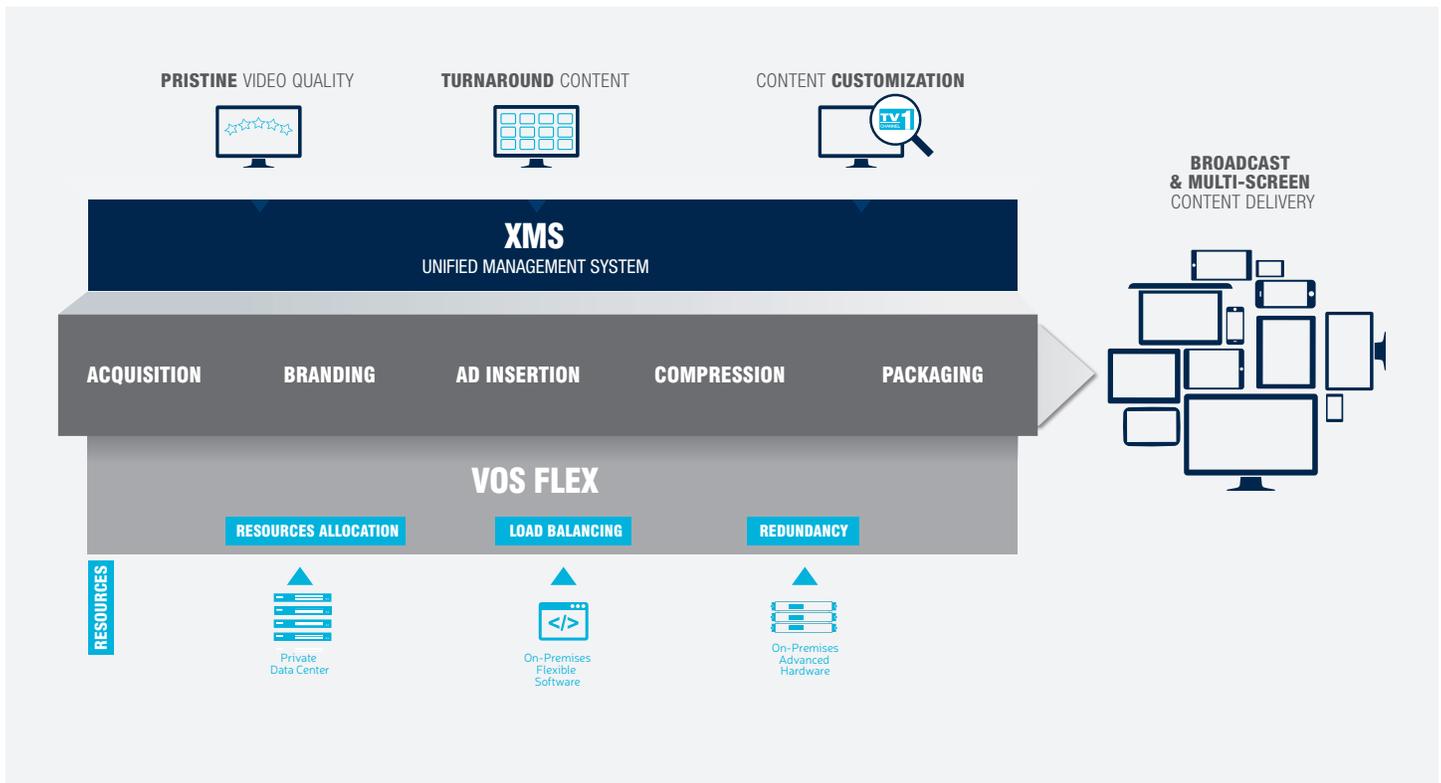
- Unified management system for all digital TV operations
- Controls all Harmonic SD, HD, MPEG-2, AVC and HEVC transmission equipment, including Electra VS, Electra XT, ViBE encoding, Spectrum XE playout systems, and NetProcessor platforms
- Customizable maps and views for easy provisioning and monitoring of devices and services
- High-performance N+P redundancy for maximum availability of services
- Fine-grained user rights management for role-based admission control
- Logging with filters and sorting to facilitate troubleshooting
- TimePlanner scheduler to automate service plan and commercial offer changes
- SNMP agent to provide standard interface with umbrella NMS
- High availability solution for 1+1 XMS redundancy in mission-critical environments
- Umbrella capability allowing a single XMS head server to supervise many XMS systems (including remote ones)
- Supports industry standards to ensure an interoperable and future-proof solution via a smooth migration path
- Applications:
 - Terrestrial
 - Satellite
 - Cable
 - IPTV
 - Multiscreen

Open Design

With its open architecture, the XMS provides interfaces with most conditional access (CA), automation, and traffic systems, as well as with Operational Support Systems (OSS). This capability eases integration with the most demanding DTV operator/service provider environments.

World-Class Service and Support

Harmonic stands behind XMS platform with comprehensive service and support programs, including system design, service deployment, technical support and network maintenance. World-class service plans and a global network of flexible and responsive support professionals help ensure your ability to deliver outstanding "anytime, anywhere, any-device" customer experiences.



XMS Ecosystem

SPECIFICATIONS

Configuration Management	System, device, module, and port provisioning Integrated interface for easy system setup Network inventory Back-up/restore capabilities	Software Management	Download tool for Harmonic supported devices Seamless upgrade policy
Redundancy Management	N+P scheme Manual or automatic switch-over mechanisms with automatic restore capability Real-time alarm processing for switchover triggering Support of IP and ASI architectures Control of L2/L3 Ethernet switches (Cisco) Control of third-party baseband/ASI/RF routers up to 1024 ² matrix size	Standards Supported	SNMP XML and Web services (SOAP) TCP/IP HTTP
Fault Management	Alarm monitoring and display on graphical user interface (views at system, device, and services levels) Alarm administration (severity, wording),masking, and acknowledgment GPI/GPO device monitoring SNMP-based monitoring of third-party devices Service plan monitoring Service path display Event logging	XMS packaging	XMS server comes fully configured with Microsoft Windows Server 2012 R2, back-up utilities, and purchased options and licenses XMS clients can be deployed on any desktop/laptop PC running Windows®OS
Profiling & Scheduling	TimePlanner scheduler for automated service configuration changes Graphical views featuring service timelines Service profiling As-run logging	XMS Platform Characteristics	High-performance 1RU server with dual hot-swappable power supply units and hot-swappable RAID-1 hard drives – CE, UL, and RoHS-compliant Integrated multi-port Gigabit Ethernet network interface card with teaming support 1RU x 19", depth: 70.5 mm (27.75 in.) Weight: max. 12 kg (27 lbs) Rated input voltage: 100 to 240 VAC Rated input frequency: 50 to 60 Hz
Fail-safe Management	Built-in manual or automatic 1+1 XMS server redundancy		
Security Management	Role-based access privileges for reduced scope in actions and/or network inventory Concurrent client access to server data		
CAS Support	Compliant with DVB Simulcrypt Supports most DVB CA systems		