Scalable, Automated Media Transcoding

Digital Rapids
Transcode Manager®

Transcoding between differing compression and file formats is a critical workflow component of today's dynamic media environments and multi-platform distribution opportunities. The Digital Rapids Transcode Manager® software family provides centralized management, automation and load balancing for high-volume, high-throughput transcoding workflows, increasing your production volume while reducing the overhead and costs associated with manual management and monitoring. Scalable from small transcoding "farms" to enterprise-level operations, a Transcode Manager server works in conjunction with multiple Transcode Engines, assigning jobs with sophisticated "intelligence" to use them most efficiently.

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Connecting Content to Opportunity
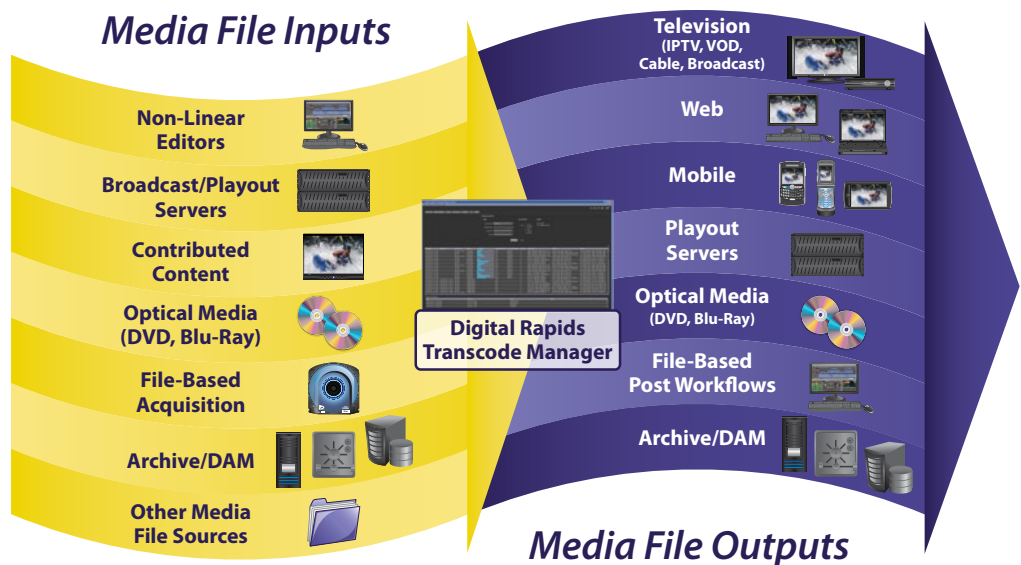
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Highlights

- Centralized management, automation and control for high-volume transcoding workflows

- Scalable from small transcoding "farms" to enterprise level operations

- Broad compression and file format support

- Job-level and server-level failover for exceptional reliability

- High-quality video processing including graphic overlay, adaptive inverse telecine and more

- Integration with leading third-party quality control (QC) tools for automatic output verification

- Intelligent load balancing "learns" performance of nodes to maximize throughput

- Extensive enterprise workflow integration

- Seamless workflow with Digital Rapids ingest and encoding systems

- Easy custom integration with Web Services API and third-party database support

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Scalable, Automated Media Transcoding for Today's Multi-format Workflows

Media professionals are faced with an ever-increasing array of digital media file formats. Transcoding is a key step in almost every video workflow, whether exchanging files between disparate acquisition, production and delivery systems; standardizing digital media contributions for distribution or archive; or re-purposing content assets for multiple platforms such as the web and mobile phones. While many formats can be encoded or transcoded faster than real time, high-volume file format conversion remains a time-consuming task. Digital Rapids Transcode Manager streamlines and automates your transcoding operations, optimizing performance while simplifying management.

Transcode Manager supports a broad range of compression and container formats for any application – IPTV, VOD, web streaming, broadcast, mobile video, post production, archive and more. Its flexible software codec architecture insures against obsolescence, enabling the easy addition of new formats. Transcode Manager also supports the creation of on-demand media for adaptive bit rate delivery technologies including Adobe® Flash® Dynamic Streaming, Apple® iPhone® HTTP Streaming, and Microsoft® IIS Smooth Streaming.

Designed for large studios, facilities and service providers, Transcode Manager FE (Facility Edition) combines its performance, intelligence and reliability benefits with robust enterprise-class features and integration. For smaller studios and workgroups without enterprise requirements, Transcode Manager LE offers the same core functionality in a lower-cost configuration.

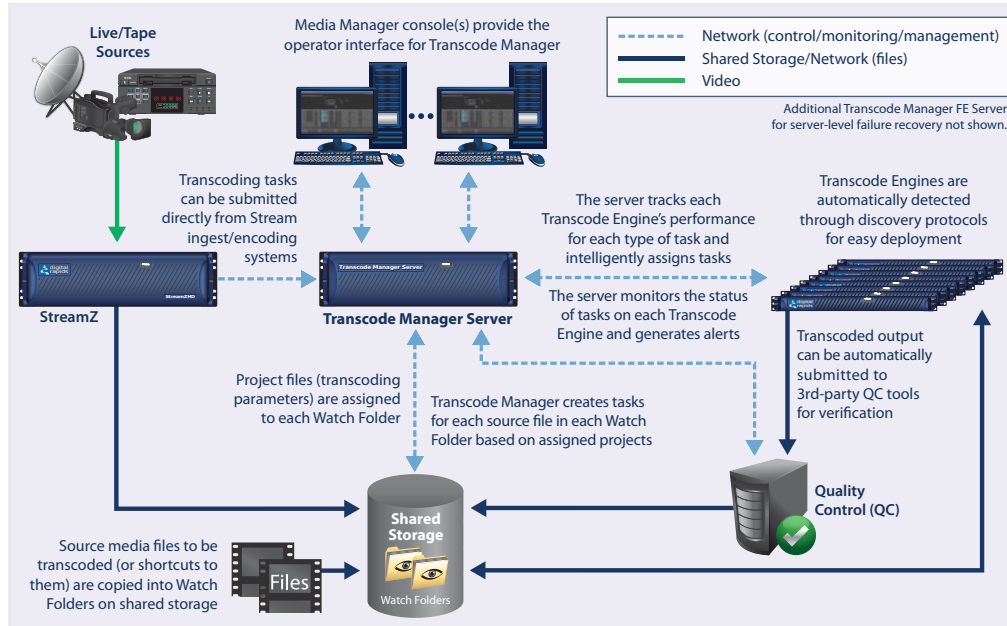### Easy to Set Up, Simple to Operate

Digital Rapids Transcode Manager integrates easily into network-based digital media workflows. Transcode Engines are found automatically on the network using discovery protocols and are assigned into groups, each monitoring specified watch folders. Project files define transcode settings, video and audio pre-processing functions (including adaptive inverse telecine, graphic overlay for branding, color space conversion, optional Civolution Teletrax watermark embedding for content tracking/monitoring and more) and delivery options (including folders, web publishing and automated FTP distribution). The automated 'commercial black' removal feature in Transcode Manager FE automatically detects and skips over blank sections of the source content originally intended for television advertising insertion, producing seamless transcoded outputs for VOD, multi-platform distribution, archive and other non-television applications without costly, time-consuming manual editing.

When files are dropped into a watch folder, tasks for each project file assigned to that folder are queued by Transcode Manager for intelligent distribution to available transcoders. Jobs can also be sent to Transcode Manager directly from Digital Rapids Stream™ ingest and encoding solutions through the Stream software interface, quickly freeing the capture system for further ingest tasks.

Scalable, Automated Media Transcoding

Automated Intelligence for Maximum Throughput and Reliability

Digital Rapids Transcode Manager goes beyond standard load balancing mechanisms with intelligent job assignment, predicting which node can most efficiently process a given job. As your transcoding operations grow, newer host systems will feature improved processor capabilities, making certain host systems better for particular transcoding jobs than others. The Transcode Manager server tracks the performance of all Transcode Engines for each type of encode, "learning" which systems are best for each and allocating jobs accordingly to optimize utilization and throughput. This sophisticated scoring system delivers greater efficiency than simple queuing or round-robin task allocation could provide.

Automated failure recovery ensures reliability. The Transcode Manager server monitors the status of its networked Engines, attempting to restart any failed transcodes. If a failure is detected and the transcode cannot be successfully restarted on that system, the job is resubmitted to another Engine, ensuring that the task is completed (job-level failover). Automated notifications also alert personnel to any failures, letting you leave the system unattended with confidence.

Enterprise-Class Capabilities for Critical Operations

Transcode Manager FE goes beyond the feature set of Transcode Manager LE with advanced fault tolerance, workflow integration and management features. Server-level failover automatically transfers control to a backup server if the primary Transcode Manager FE server fails, ensuring that your transcoding operations continue uninterrupted. Error conditions can also be monitored by any SNMP-compliant network management system, enabling Transcode Manager to be monitored alongside other SNMP-compatible devices as part of a consolidated enterprise system view.

Transcoded output files can be automatically submitted to Tektronix Cerify or Interra Systems Baton quality control (QC) analysis tools, which perform a user-specified range of verification tests including content conformance, standards compliance and quality analysis. Users can be alerted to QC failures with links to full analysis reports.

XML-based clip lists allow individually trimmed sections of multiple distinct audio and video source clips to be concatenated into a single transcoded result. Priorities can be manually overridden for time-critical tasks, while extended notifications keep you informed of job progress, completion and more. User access can be managed locally or via industry-standard LDAP services.

Transcode Manager FE tracks all events in either its embedded database (also available in Transcode Manager LE) or through support for a variety of third-party databases including Oracle 10g®, Microsoft® SQL Server and PostgreSQL. For those wishing to integrate Transcode Manager directly into their own applications, a comprehensive Web Services (SOAP) API is also available, letting developers take advantage of the enterprise-level performance, load-balancing intelligence and failover capabilities of Transcode Manager FE through an easy XML-based programming interface.

Need single-system transcoding on a smaller scale? Need transcoding *and* ingest from live sources or decks?

All of our studio media encoding solutions – including **StreamZ** and **StreamZHD** encoding servers and **Flux™** board-and-software bundles – include transcoding capabilities.
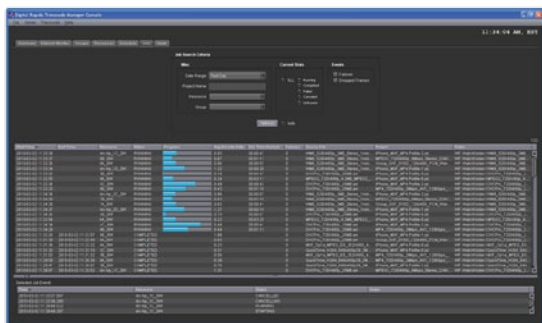
Feature Comparison

Features	Transcode Manager LE	Transcode Manager FE
High-volume transcoding management and automation	•	•
Designed for large studios & facilities with enterprise-level requirements		•
Designed for smaller studios and workgroups	•	
Intelligent Load Balancing "learns" Engine performance to optimize throughput	•	•
Multiple watch folders for transparent automated operation	•	•
Direct job submission from Digital Rapids Stream ingest/encoding solutions	•	•
Automatic Transcode Engine discovery plus firewall and proxy support for easy deployment	•	•
Remote deployment of upgrades to transcoding nodes	•	•
Video processing including graphic overlay, adaptive inverse telecine and more	•	•
Job Failover (failed jobs re-attempted or re-distributed)	•	•
Server Failover (backup server takes over management if primary fails)		•
Maximum Transcode Engines supported (additional engines sold separately)	10	unlimited
Failure alerts/notifications	•	•
Extended alerts/notifications		•
Simple Network Management Protocol (SNMP) support		•
Integration with Tektronix Cerify and Interra Systems Baton automated quality control tools		•
Scripting for programmatic automation of custom tasks		•
Manual job prioritization		•
User authentication and authorization with local and LDAP access management		•
Automatic 'commercial black' detection and removal		•
Automatic black border detection and removal		•
Head/Tail Clip addition for bumpers, studio IDs, ads, etc.		•
XML-based clip lists for combining multiple trimmed video and audio source clips		•
Third-party database integration (Oracle® 10g, Microsoft® SQL Server, PostgreSQL)		•
Web Services (SOAP) API for custom integration		•

Codec and Container Format Support

A choice of two Transcode Engine bundles lets you purchase the format support best suited to your requirements, with additional formats available as options. Codec support is evolving constantly. Please see our web site for the latest format support information.

Transcode Engine Core Bundles	Includes VC-1 (Windows® Media, Silverlight®, IIS Smooth Streaming files), MPEG-1, MPEG-2, QuickTime® (including MPEG-4 and H.264), AVI, RealVideo, MP3, WAV and image sequences. (Apple® ProRes import available with third-party QuickTime® filters). Additional formats optional (sold separately).
Transcode Engine Studio bundles	Includes all formats of Transcode Engine Core plus Avid DNxHD®, XDCAM HD, MXF, GXF, LXF, Omneon, Dolby® Digital / Dolby® Digital Plus, enhanced H.264, RED (import only), AAC (Dolby® Pulse), 3GPP. Additional formats (DVCPro, JPEG2000, iPhone H.264 with integrated segmenting, On2 VP6 and more) optional (sold separately).