

Cerify™ 200—Automated Quality Control of File-Based Video

► CYC200 • CYS200 • CYM200



► Product Information

Quality control of file-based video that may be ingested from different sources and encoded at different bitrates, formats and compression standards for SD/HD, VOD and IPTV delivery presents considerable challenges. File-based video must be quality checked for:

Correct Syntax: At the digital level the audio and video must be correctly encoded without errors in accordance with the compression standard, so that it plays out correctly at the customer's STB/payout device.

Correct Parameters: The audio and video bitrates, GOP structure, video color-space, color depth, frame size, frame rate, aspect ratio, quantization levels must be correct.

Correct Baseband and Quality

Levels: The analog parameters of signal levels, luma, chroma, gamut and quality levels of black frames, video quality (blockiness), loss of audio, audio clipping, video and audio playtime.

Manual inspection can play out, watch and listen but is subjective and cannot look inside the encoding to check that the correct parameters have been used - for example, have the packet size, GOP structure and bitrates been set correctly?

Cerify™ 200 solves all these problems, and can be easily integrated with Automation and Asset Management systems using the CeriTalk™ API. It is the world's first and leading automated system for checking/verifying file-based video content prior to transmission or use.

Cerify™ 200 uses the latest server technology providing very high throughputs and processing speeds. Each high reliability Linux-based unit integrates with video servers and can test four files simultaneously.

Units can also be clustered to provide very high throughputs and redundancy.

Testing is in accordance with user-defined templates, and can run fully automatically 24/7.

► Applications

Broadcasters: For Checking Audio and Video After Encoding, At Ingest, After Editing and Before Payout for Terrestrial, Satellite, Cable, Internet and Video-on-Demand Content

Archiving: For Checking Integrity Before and After Archiving

Content Providers: For Checking Post Production Content Has Been Correctly Encoded and Conforms to the Required Quality and Format Standard Before Dispatch to the Broadcaster

Cerify test templates and results databases are fully compatible with Tektronix CerifyLite

► Features & Benefits

Replaces Error-prone, Time Consuming and Expensive Manual Process of Visually Inspecting Video Content

Runs Automatically 24/7 to Perform Consistent and Thorough Checks of Incoming Video Files Against User-defined Templates

Integrates with Video Servers

Integrates with Automation and Asset Management Systems using CeriTalk API

Multiple Simultaneous Hot Folder Operation

Each Unit test can Test Four Files Simultaneously, and Multiple Units can be Clustered Together to Achieve Very High Throughputs

Logs Errors, Informs Automation Systems, Plus Programmable Actions such as e-mail User Alert, Quarantine and Move Files

High Reliability Linux-based Server Integrates via GigE with Installed Video Server Systems

Web-browser User Control

Tests for:

- Encoding Errors, Syntax Errors, Format, Bitrate, Quants, Framerate, GOP, Aspect Ratio, Color Format, VBV Buffer, File Size, Correct PID, CableLabs VoD Compliance
- Video Playtime, Signal Levels, Gamut, Luma, Chroma, Black Frames, Video Quality (Blockiness), Freeze Frame
- Audio Playtime, Peak and Minimum Levels, Audio Loss, Clipping, Mute, Test Tones

Formats

- Video: MPEG-2, MPEG-4 AVC (H.264), VC-1/WMV9, MPEG-4 Part 2, H.263, DV25, DVCPro25
- Wrappers: MPEG-2 Transport Stream, MPEG-2 Program stream, MP4/3GPP, MXF, GXF, MOV, ASF
- Format: QCIF, CIF, D1, 720p, 1080i, 1080p
- Audio: MPEG-1, MPEG-2, MPEG-2 AAC, AAC-Plus, HE-AAC, PCM, AC3

With Cerify You Know Your Content is Correct Before it is Transmitted or Used

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Jobs can be assigned different priorities depending on how quickly they need to go to air.

Cerify™ logs errors as the content is checked, can inform automation systems, move files depending on the results, and email users and content encoders detailing the errors found.

CeriTalk™ API provides complete integration with automation and asset management systems.

Multiple Cerify Media Test Units

Cerify™ can be used as a single unit, or alternatively multiple Cerify Media Test Units can be used on a network, providing enhanced throughput for multiple content channels, and load re-distribution and redundancy in the event of failure.

► The testing of files is controlled by a Cerify Supervisor Unit, which allocate test **Jobs** to the Media Test Units (where there is only one Cerify unit, it acts as Supervisor and Media Test Unit).

► The Supervisor Unit is accessed via a standard Web browser from any location on the network.

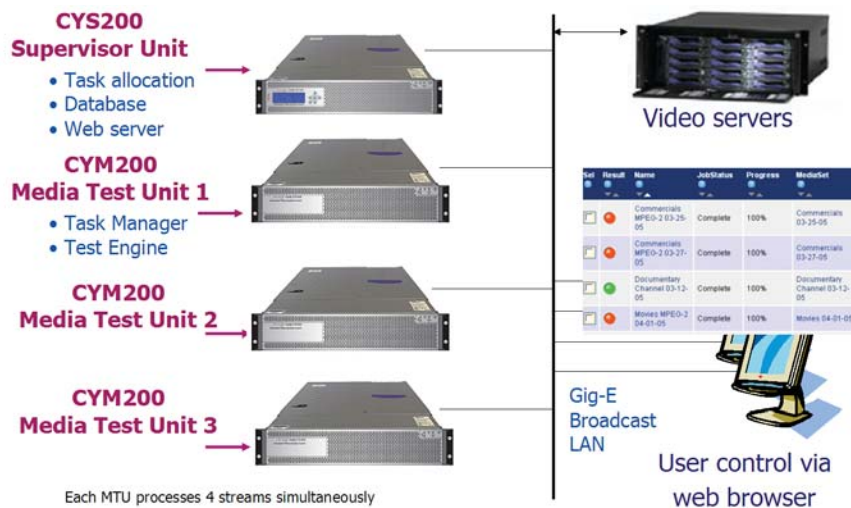
► Different levels of access are provided for different levels of users, with appropriate access rights to set/modify jobs and files.

User Interface

Easy-to-Use Web Browser Interface Shows Jobs Status Results at Top Level as Red Light/Green Light

Click to Get Job Details

Click to Get Details of Stream Errors



Set	Result	Name	Job Status	Progress	MediaSet	Profile	Priority	Files	File Size	Creator	Status	Start Time	Copy
<input type="checkbox"/>	✘	1 Commercials	Complete	100%	1 Commercials	Commercials	Medium	2	31.1MB	admin	Active	2007-07-26 10:40:37.0	
<input type="checkbox"/>	✔	1 Documentaries	Complete	100%	1 Documentaries	Documentaries	Medium	1	5.87MB	admin	Active	2007-07-26 10:40:30.0	
<input type="checkbox"/>	✘	1 Movies	Complete	100%	1 Movies	Movies	Low	3	39.4MB	admin	Active	2007-07-26 10:42:25.0	
<input type="checkbox"/>	✘	1 News	Complete	100%	1 News	News	Medium	4	31.3MB	admin	Active	2007-07-26 10:41:51.0	
<input type="checkbox"/>	✘	1 Sports	Complete	100%	1 Sports	Sports	Medium	2	31.8MB	admin	Active	2007-07-26 10:40:31.0	
<input type="checkbox"/>	✘	1 Weather	Complete	100%	1 Weather	Weather	Medium	4	3.15MB	admin	Active	2007-07-26 10:40:21.0	

Result	Filename	Size	Status	Progress	Start Time	End Time	Poster Frame
✘	fp:\cerify\controller\content\news\airport_interview.ts	8.01MB	Complete	100%	2007-08-17 15:53:05.0	2007-08-17 15:53:27.0	
✘	fp:\cerify\controller\content\news\beijing_weather_girl.ts	7.61MB	Complete	100%	2007-08-17 15:53:27.0	2007-08-17 15:53:48.0	
✔	fp:\cerify\controller\content\news\live_report.ts	8.08MB	Complete	100%	2007-08-17 15:53:13.0	2007-08-17 15:53:33.0	
✔	fp:\cerify\controller\content\news\news360.ts	7.52MB	Complete	100%	2007-08-17 15:53:34.0	2007-08-17 15:53:54.0	

Alert Details

Job Details

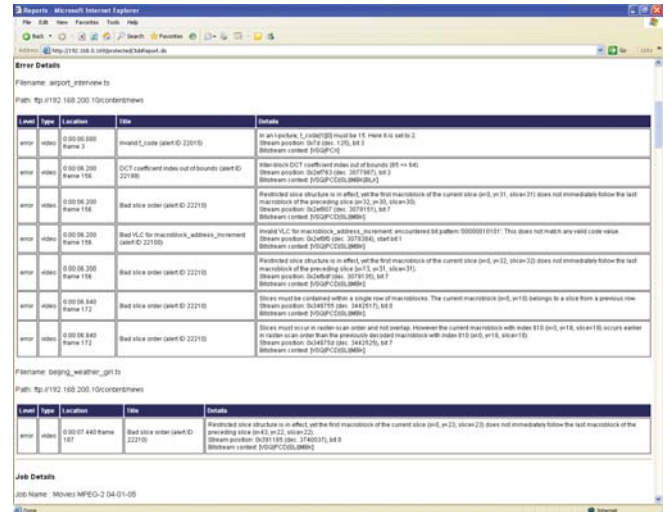
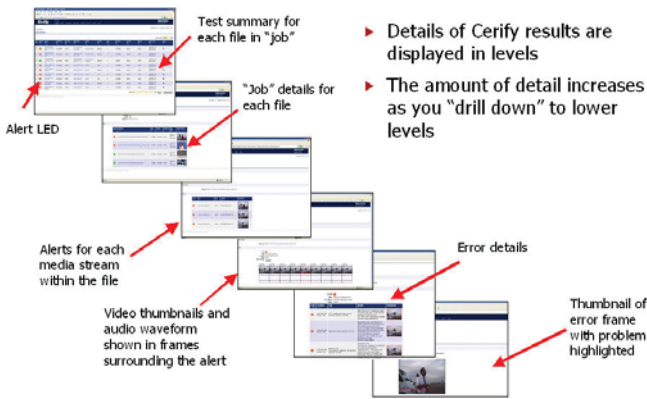
- Job Name: 1 News
- Priority: Medium
- Profile: News
- MediaSet: 1 News

File Details

Alert

0:0:6.040 Frame 152 0:0:6.080 Frame 153 0:0:6.120 Frame 154 0:0:6.160 Frame 155 0:0:6.200 Frame 156

Report by Job, Type, Date Range, File Name, Etc.



► Ordering Information

Cerify 200 can be ordered as a single CYC200 Combined unit.

Product	Option	Description
CYC200		Combined Supervisor and Media Test Unit
CYC200	MP2	MPEG-2
CYC200	MP4	MPEG-4 and H.263 (Baseline)
CYC200	AVC	H.264/AVC
CYC200	VC1	VC-1
CYC200	DV	DV

Cerify 200 can also be ordered as a cluster of one CYS200 Controller unit and multiple CYM200 Media Test Units.

Product	Option	Description
CYS200		Supervisor Unit for network clusters
CYM200		Media Test Unit for Cerify clusters
CYM200	MP2	MPEG-2
CYM200	MP4	MPEG-4 and H.263 (Baseline)
CYM200	AVC	H.264/AVC
CYM200	VC1	VC-1
CYM200	DV	DV

All Cerify Systems are supplied with on-site installation.

Installation and Support Services

Product	Description
CYINSTALL	System on-site installation
CYCONFIG	Reconfiguration install

And comprehensive on-site hardware and software maintenance service per unit including software updates.

Product	Description
MNTSTD	1 st year Standard maintenance hardware and software
MNTENH	1 st year Enhanced maintenance hardware and software

Service Package Comparison

Service Feature	Standard	Enhanced
Software Maintenance	Included	Included
Telephone Technical Support	Business hours M-F	Business hours M-F
On-Site Support	Pay per visit local hourly rate; hour minimum + 2 travel and per diem	Included
Hardware Maintenance/Repair	Advanced Exchange, 3 Day	Advanced Exchange, Next Day

Note: Service coverage can be renewed for subsequent 12-month periods.

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► Characteristics

► Standards Supported

Video Formats	HD and SD - NTSC, PAL, SECAM, 24 fps
Resolutions	QCIF, CIF, SD, D1, 720p, 1080i/50, 1080i/60, 1080p (and non-standard sizes from 16x16 to HD+)
Systems Level	MPEG-2 TS, Program stream, PES, MPEG-4 Parts 1, 14 and 15, 3GPP, MXF, GXF, MOV, ASF
Video	MPEG-2, MPEG-4 AVC (H.264), VC-1/WMV9, MPEG-4 Part 2, H.263, DV25, DVCPro25
Audio	MPEG1, MPEG2, MPEG2 AAC, AACPlus (MPEG-4 AAC), HE-AAC, PCM, AC3

Test Templates and Levels are User-Controlled and Include:

- Container level transport system tests
 - Correct standard and integrity
 - File size, bitrate, playtime, number of video and audio streams in transport container
 - Packet size, CableLabs VOD compliance
 - Signalling of close captions, teletext
- Video tests
 - Correct encoding standard, profile, and syntax checks for encoding errors
 - GOP structure, quantization, frame rate, bitrate, frame size, interlaced/progressive, aspect ratio
 - Baseband tests including gamut levels, luma, chroma, signal levels, letterbox/pillarbox, playtime
 - Color depth, color format (4:2:0, 4:2:2), copyright
 - Black frames (lead in, lead out and during the video), video quality (blockiness), frozen frames
- Audio tests
 - Correct encoding standard, profile, syntax checks for encoding errors
 - Sample rate, bitrate, playtime
 - Number of channels, peak and minimum signal levels on each channel
 - Audio silence (lead in, lead out and during the video), clipping, mute, test tones
- Action templates and reporting
 - Copy or move file on success or error
 - Email alerts with test reports
 - Web-based on-screen job reports and detailed drill-down to error details
 - Text/html query reports of all files in the database with full file details and error reports
 - CeriTalk automation API
- Multiple user templates and profiles can be set up for different content types and sources

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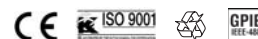
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www.tektronix.com

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