

OCR SUBTITLE TRANSCODER

OCR-1000

Graphics to Text based
Subtitle Converter by optical
character recognition (OCR)



OCR-1000 is the definitive solution for OTT providers to deliver graphics-based subtitles to Apple®, Android®, Chromecast® Set-Top Box and PC devices

Global

General

Vista de Subtítulo

Stream 224.2.2.2:6001

Propiedades	
DVB PMT PID:	5064
DVB Sub PID:	2584
Out TS Id:	1
Out Program #:	64
Out PMT PID:	5064
TeleTxt PID:	101
TeleTxt Type:	2
TeleTxt Magazine:	0
TeleTxt Page:	88
TeleTxt Line:	0
Límite de descarte de la conversión [ms]:	5000
Umbral de conversión [ms]:	0

Alarmas	
Alarma de Conv -> ocurrencias:	0
Alarma de Conv -> tiempo [ms]:	0
Alarma de Conv -> fecha:	-

Estadísticas	
Tiempo de conversión promedio [ms]:	95
Tiempo de conversión mínimo [ms]:	40
Tiempo de conversión máximo [ms]:	1165
Tiempo de conversión promedio (por letra) [ms]:	4.9
Tiempo de conversión mínimo (por letra) [ms]:	1.9
Tiempo de conversión máximo (por letra) [ms]:	123.5

¿Eric?
Habla Charles Townsend.

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MAIN FEATURES

- ▶ Simultaneous generation of multiple output transport streams with subtitles in DVB-TXT (teletext) format, widely configurable from input transport streams with subtitles in DVB-SUB and SCTE-27 (bitmap) formats.
- ▶ Basic input transport stream analyzer, which shows the description of each transport element and allows the detection of continuity errors.
- ▶ Profile storage capability that allows to save configurations, quickly switch between them, and export/import them between different machines.
- ▶ Real-time monitoring of DVB-SUB and DVB-TXT subtitles, including graphics captured from bitmap subtitles and their matching text, setup configuration, conversion statistics and output packet counters.
- ▶ Training of optical character recognition (OCR) algorithm, which allows to add specific fonts contained in the input subtitles, thus optimizing conversion effectiveness and adapting to their requirements.
- ▶ Embedded Multiplexer for the cases where it is required to bypass Video, Audio and Data streams from input to output.

VideoSwitch OCR-1000 is a software solution that converts graphics-based subtitles in DVB-SUB and SCTE-27 standards to DVB-TXT standard, which are received and transmitted in transport streams through the IP video network of the operator. It is compatible with the Linux operating system, what allows deploying it in servers or VMs with the resources according to each requirement.

DVB-SUB and SCTE-27 subtitles are made up of a static image shown on the screen overlaid with the video, for this reason the OCR-1000 uses a high complexity algorithm that identifies the text inside the image and transforms it to a format based on the DVB-TXT standard, which uses plain text. The subtitle in DVB-TXT allows more flexibility when displaying it on screen, since many parameters can be modified, e.g.: size, type of font (italic, bold), color and location.

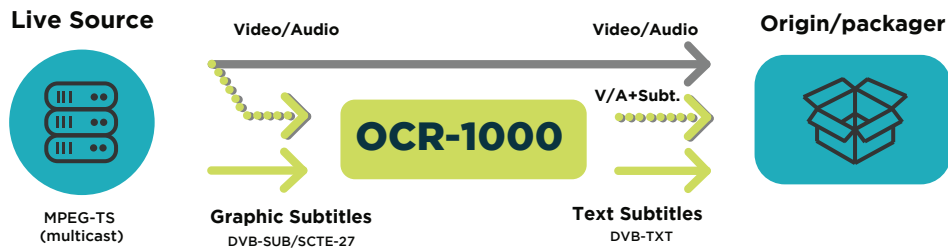
OCR-1000 can work in 2 different modes: processing only subtitle streams and filtering out the rest of the streams,

or generating multiplexed outputs with all input streams (including Video, Audio, Data) and added Subtitles. In this way, it is possible to adapt its use to the architecture and requirements of each OTT operator.

Converts DVB-SUB and SCTE-27 to DVB-TXT subtitles in real time, thanks to the speed and efficiency of its optical character recognition (OCR) algorithm. The OCR algorithm also allows to be trained with different source fonts that may exist in the graphic subtitle input, being able to reach, in this way, a very high conversion effectiveness.

Supports the configuration of the output parameters: transport stream id, program number, PID numbers, language and spatial location of the text, among others. In addition, it supports automatic positioning of the output subtitle from the input subtitle image.

The OCR-1000 currently allows converting text in the Spanish, Portuguese and English languages, being able to extend to more languages as required.



OCR-1000	
OTT SUBTITLE TRANSCODER	
INPUT	<ul style="list-style-type: none"> Number of sockets: unlimited. Subtitle format: DVB-SUB (ETSI EN 300 743), SCTE-27. Stream format: TS / UDP / IP Unicast / Multicast. Monitoring: Yes, characteristics of PAT, SDT, PMT, PID and continuity counters.
OUTPUT	<ul style="list-style-type: none"> Number of sockets: unlimited. Restricted only by license and resources. Subtitle format: DVB-TXT (ETSI EN 300 472 and EN 300 706), option DVB-TTML/WebVTT. Stream format: Single or multiplexed TS / UDP / IP Unicast / Multicast. Table generation: Yes. Optional PAT and PMT tables, with configurable transmission periods. Stream Multiplexing from input to output: Yes, user defined according to the requirements. TS configuration: TS ID, Program Number, PID. DVB-TXT configuration: Type, Magazine, Page, Language. Text configuration of the DVB-TXT: Manual or automatic positioning. Monitoring: Yes, number of packets transmitted and characteristics of transport elements.
OCR	<ul style="list-style-type: none"> Conversion time: Average less than 5 milliseconds. Effectiveness: Greater than 99% per character. Training: Yes, based on TTF fonts. Processes and accepts standard languages. Monitoring: Input image and output text in real time, and conversion time.
CONTROL	<ul style="list-style-type: none"> Interfaces: WEB, CLI (command line). Communication: IP network, independent of the video network. Configuration profiles: Yes, supports up to 8. Access control: Yes, with administrator, operator and guest user profiles. Languages of the Web: Spanish, English (selectable by the user).
PLATFORM	<ul style="list-style-type: none"> Operating System: Linux 64 bits. Distributions: Ubuntu, Debian, Red Hat, CentOS, among others. RAM memory: 8GB (minimum recommended). Disk space: 60GB (recommended minimum). Supports virtualization: Yes.