

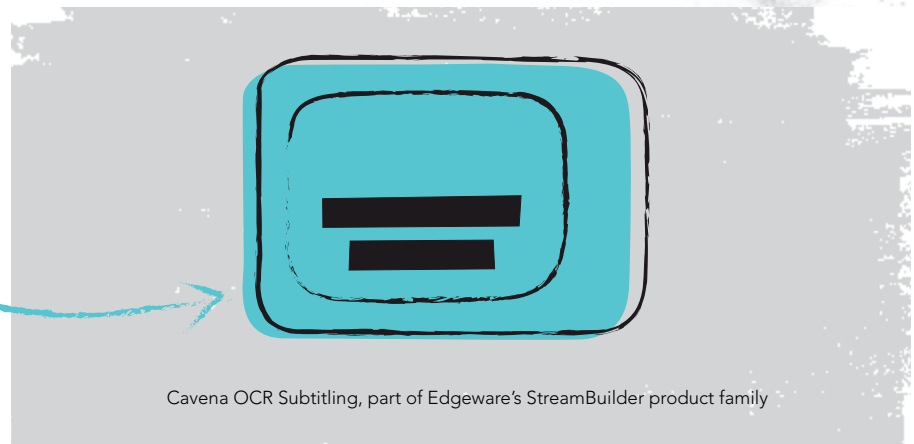
STREAMBUILDER OVERVIEW

StreamBuilder is one of Edgware's four product families and includes content processing functionality necessary for an OTT distribution.

Available as both an on-prem and saas offering it brings key capabilities to capitalize your content, offer a glitch-free viewing experience and a scalable solution.

StreamBuilder includes products for the following applications:

- OCR Subtitling
- Ingest and Segmentation
- Ad Insertion
- Time-shift TV
- Just-in-Time Repackaging
- Protection
- Content Stitching



Cavena OCR Subtitling, part of Edgware's StreamBuilder product family

SUBTITLE TRANSCODING WITH OCR, FROM IMAGE TO TEXT-BASED, FOR HIGH QUALITY OTT DELIVERY

Cavena OCR Subtitling, part of Edgware's StreamBuilder, transcodes subtitles in an easy and quick way for OTT delivery. With the capabilities to deliver high quality subtitles to any client, in any screen size and in any language, the Cavena OCR Subtitling is one of the key factors for delivering the best quality of experience (QoE) for your OTT TV viewers. Using Optical Character Recognition (OCR) technology, the image-based subtitles are automatically - and instantly - transcoded to text-based subtitles and ready for distribution to the client device.

WHAT IT DOES

Edgware's StreamBuilder products provide the ultimate capabilities for distributing live streams and VoD assets over an http delivery platform.

Cavena OCR Subtitling reads DVB subtitle data from a transport stream and transcodes these on-the-fly to one or more transmission formats. It uses the Cavena-based Subtitle Transmission Unit (STU) to convert DVB bitmaps to text-based formats with Optical Character Recognition (OCR) technology.

The Cavena OCR Subtitling solution transcodes the subtitles within frames, allowing instantaneous OTT delivery in any ABR format.

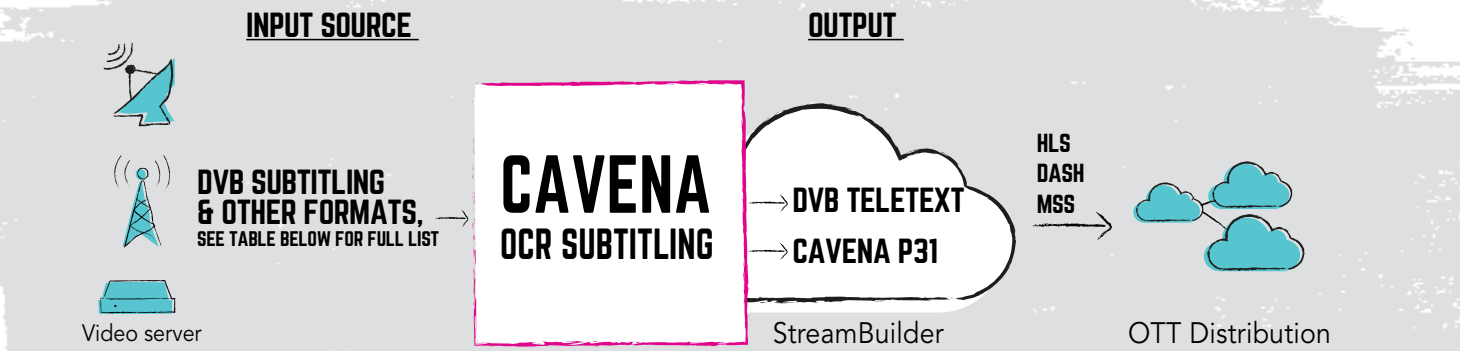
With its broad support for multiple languages, including Asian languages, the Cavena OCR Subtitling is delivering high quality subtitles to any client device and in any screen-format requested.

KEY FEATURES & BENEFITS

- ✓ Automated transcoding from image-based to text-based subtitling
- ✓ Instantaneous conversion within frames using OCR technology
- ✓ Supporting more than 100 languages including Asian
- ✓ Enables subtitles to be prepared for any ABR format (HLS, MPEG-DASH, MSS) requested for multi-screen OTT delivery
- ✓ Stand alone or integrated with the StreamBuilder functionality providing a valuable solution preparing content for a glitch-free OTT TV experience
- ✓ Part of Edgware Cloud Service allowing a quick and easy way of adding high quality subtitling to your TV services

HOW IT WORKS

1. STU reads subtitle data from incoming TV signal/transport stream.
2. Optical Character Recognition (OCR) technology is used to convert the image-based subtitles to text-based subtitles.
3. The subtitle file is repackaged into any ABR-format requested by the client device, either using Edgware's Packager and Protection product or by any other repackaging product.
4. The subtitle file is delivered together with audio and video files in the ABR format requested by the client device.



HOW TO DEPLOY

Packager and Protection can be deployed in public or private clouds, in data centers or on COTS hardware.

The product can also be offered as part of the Edgeware Cloud

Service, with Edgeware operating it from the cloud. The modular architecture of the StreamBuilder products allow full flexibility to suit different market characteristics and

business models and provide an elastic and scalable content processing solution.

TECHNICAL SPECIFICATIONS FOR CAVENA OCR SUBTITLING

INPUT FORMATS
Transport stream
DVB Teletext (ETSI 300 472)
DVB Subtitling (ETSI 300 743)
SCTE-27
EIA 608/708
ARIB
Cavena format, P31
SDI
EBU Teletext, SD
OP-47/SMPTE 2031, HD
EIA 608/708
Cavena format, P31

OUTPUT FORMATS
DVB Teletext (ETSI 300 472)
DVB Subtitling (ETSI 300 743)
EIA 608/708
SCTE-27
Cavena format, P31

CLOUD FRIENDLY
Object based storage
S3
Azure blob
Cloud platforms
AWS
Azure