

CEA-608/708 Closed Caption

CEA-608/708 captions are the standard for Digital Video Broadcasting supporting closed caption as a part of video stream. CEA-608 captions are for NTSC videos only and its captions are encoded in the signal's VBI for NTSC. CEA-708 captions are considered for digital television only and are encoded directly into the MPEG data packages. The captions follow the CEA-708-D FCC recommendations.

Note that CEA-608 has a 32-character limit per line and max 50-character total.

For your information, there are another technologies can support closed caption on world wide web: SRT, WebVTT, and etc.

Below is the example of closed caption measured by ffprobe:

```
ffprobe version 3.4.8 Copyright (c) 2007-2020 the FFmpeg developers
  built with gcc 4.8.5 (GCC) 20150623 (Red Hat 4.8.5-39)
  configuration: --prefix=/usr --bindir=/usr/bin --datadir=/usr/share/ffmpeg --docdir=/usr/share/doc/ffmpeg --
incdir=/usr/include/ffmpeg --libdir=/usr/lib64 --mandir=/usr/share/man --arch=x86_64 --optflags='-O2 -g -pipe -
Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -fstack-protector-strong --param=ssp-buffer-size=4 -grecord-gcc-
switches -m64 -mtune=generic' --extra-ldflags='-Wl,-z,relro ' --extra-cflags=' ' --enable-libopencore-amrnb --
enable-libopencore-amrwb --enable-libvo-amrwbenc --enable-version3 --enable-bzlib --disable-crystalhd --enable-
fontconfig --enable-gcrypt --enable-gnutls --enable-ladspa --enable-libass --enable-libbluray --enable-libcdio
--enable-libdrm --enable-indev=jack --enable-libfreetype --enable-libfribidi --enable-libgsm --enable-
libmp3lame --enable-nvenc --enable-openssl --enable-opengl --enable-libopenjpeg --enable-libopus
--disable-encoder=libopus --enable-libpulse --enable-librsync --enable-libsoxr --enable-libspeex --enable-
libtheora --enable-libvorbis --enable-libv4l2 --enable-libvidstab --enable-libvpx --enable-libx264 --enable-
libx265 --enable-libxvid --enable-libzvbi --enable-avfilter --enable-avresample --enable-libmodplug --enable-
postproc --enable-pthreads --disable-static --enable-shared --enable-gpl --disable-debug --disable-stripping --
shlibdir=/usr/lib64 --enable-libmfx --enable-runtime-cpudetect
  libavutil      55. 78.100 / 55. 78.100
  libavcodec     57.107.100 / 57.107.100
  libavformat    57. 83.100 / 57. 83.100
  libavdevice    57. 10.100 / 57. 10.100
  libavfilter    6.107.100 /  6.107.100
  libavresample  3.  7.  0 /  3.  7.  0
  libswscale     4.  8.100 /  4.  8.100
  libswresample  2.  9.100 /  2.  9.100
  libpostproc    54.  7.100 / 54.  7.100
Input #0, mpegts, from 'example.ts':
  Duration: 00:00:06.01, start: 53568.107556, bitrate: 1094 kb/s
  Program 1
    Stream #0:0[0x1e1]: Video: h264 (High) ([27][0][0][0] / 0x001B), yuv420p(progressive), 1024x576 [SAR 1:1
DAR 16:9], Closed Captions, 29.97 fps, 29.97 tbr, 90k tbn, 59.94 tbc
    Stream #0:1[0x1e2](und): Audio: aac (LC) ([15][0][0][0] / 0x000F), 48000 Hz, stereo, fltp, 102 kb/s
```

Like you have seen above, Close Captions are combined with the video stream (Stream #0:0).