
Supported Codecs and Transcoding

The SBC Core supports setting the media (including codec) policy on a call-by-call basis. Media parameters are defined in the Packet Service Profile (PSP) which can be attached to an IP trunk group or IP Peer. For each call, an ingress PSP and an egress PSP is determined, and then these PSPs are "combined" to arrive at a set of media parameters for the call.

The PSP includes the following configurable features:

- allowed codecs (ordered list)
- packetization parameters
- fax handling
- modem handling
- DTMF handling
- transcoding combinations

The Packet Service Profile supports up to four audio codecs using ERE. Compression algorithms available for assignment to these are shown below.



The PSX supports configuring up to 12 codecs in the Packet Service Profile and Preferred Packet Service Profile. The SBC supports receiving all 12 codecs from the PSX in the PSP and Preferred PSP. This applies to interworking with an external PSX (Advanced ERE deployment scenario). See [Routing and Policy Management](#) for deployment scenario details.

Additionally, the SBC supports up to 12 codecs over Gateway links to SBCs and/or GSXs.



An SBC-POL-RTU license is needed to enable more than four codecs.

When call endpoints do not share a common codec, or to preserve different packet sizes, silence suppression and/or DTMF relay methods on each call leg, the SBC performs media translations (transcodings) necessary for the endpoints to connect.

Transcoding between any two supported compressed audios requires two DSP channels. Two channels each transcoding between G.711 (or IDP) and one compression codec are bound together in tandem to support a compressed-to-compressed transcoding. The SBC defines the audio pairs that are transcoded. For more information, refer to [Audio Codecs](#) and [Video Codecs](#).



The SBC SWe uses software implementation to strictly check amplitude levels and frequency while detecting inband DTMF digits. The inband DTMF digits amplitude generated from the SBC SWe for G.726 codec is considered bit-less. This may impact scenarios such as an SBC SWe sending inband G.726 digits to a second SBC SWe which is trying to detect tones. In this situation, the SBC SWe inherits the same behavior as the software implementation for detecting inband DTMF digits. This implementation of DTMF functionality is as per standard. The SBC SWe supports detecting inband DTMF digits at power levels above -25 dBm and no frequency detection below -55 dBm.

Additional topics in this section:

Audio Codecs

Video Codecs

Transcoding and Timestamps

