

Opus Settings — Cheat Sheet

The three modes, the bitrate sweet spots, the FEC/DTX/frame-size dials, and the rule that picks Opus over AAC.

Three modes

SILK-only	Speech engine (linear prediction). Voice at low bitrates.
CELT-only	Music engine (MDCT). Music and lowest-latency settings.
Hybrid	SILK on lows + CELT on highs. Natural full-band speech.

Bitrate sweet spots (20 ms frame, RFC 7587)

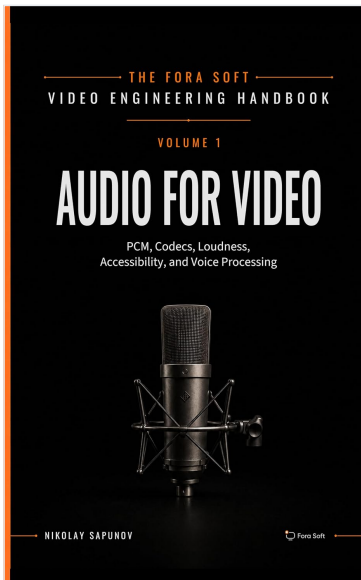
Narrowband speech	8-12 kbit/s
Wideband speech	16-20 kbit/s
Full-band speech	28-40 kbit/s
Full-band mono music	48-64 kbit/s
Full-band stereo music	64-128 kbit/s

The dials that matter

Bitrate	6 to 510 kbit/s, changeable at any instant.
Frame size	2.5 / 5 / 10 / 20 / 40 / 60 ms. 20 ms is the real-time default.
FEC (useinbandfec=1)	Puts a backup of the prior packet in the next one. Recovers loss.
DTX (usedtx=1)	Stops sending during silence; emits comfort noise.
SDP	rate=48000, channels=2; negotiate stereo, cbr, maxaveragebitrate.

The one rule

Live two-way conversation -> Opus. One-way playback to many devices -> AAC.
Doing both? Opus for the calls, AAC for the recorded library.
Enable FEC and DTX on BOTH ends, or the redundancy is sent and thrown away.



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This sheet lists the Opus modes, bitrate sweet spots, FEC, DTX and frame-size dials, and when to pick AAC. Volume 4 covers audio codecs in depth: Opus and AAC internals, sampling and bit depth, channel layouts, loudness, and the real-time voice processing in front of the encoder.

WHAT YOU WILL FIND INSIDE

- Opus SILK, CELT and hybrid modes
- Sample rates, channels and stereo negotiation
- Opus versus AAC for calls and libraries
- Echo cancellation and noise suppression before encode

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