TURN Bandwidth Cheat Sheet

The cost formula · 2026 per-GB prices · relay-share benchmarks · the two real levers

The monthly cost formula

relayed streams = peak concurrent streams × relay share
GB / stream-hour = bitrate (Mbps) × 0.45 × directions
GB / month = relayed streams × hours × GB/stream-hour
total = (GB − free GB) × price/GB + fixed cost

1 Mbps relayed 1 h, one way = 0.45 GB. Count both directions by default.

Worked example — conferencing

1,000 streams × 20% relay = 200 relayed
2.5 Mbps × 0.45 × 2 = 2.25 GB / stream-hour
200 × 200 h × 2.25 = 90,000 GB/mo
× $0.40 (Twilio US) = $36,000/mo

Same 90k GB on Cloudflare ($0.05) ≈ $4,450/mo.

The levers that move the bill

Lever 1 — cut the relay share

Better STUN coverage, IPv6 end to end, correct ICE gathering, trickle ICE. 25% to 15% relay = -40% bill, and lower latency too.

Lever 2 — cut the price per GB

Negotiate a managed rate or self-host coturn. $0.40 to $0.05 = -88% on the same traffic. Spread across the market is ~8x.

Non-lever — a bigger server

A modest box relays thousands of sessions. Hardware relays the same GB at the same price. Size bandwidth first, server second.

Relay-share benchmarks (2026)

- **Consumer calls** — 15-25% fall back to a relay
- **Corporate Wi-Fi** — higher — firewalls block UDP
- **AI voice agents** — ~100% — server endpoint relays
- **IoT behind CGNAT** — ~100% — no direct path

Same 90,000 GB, four prices

Provider	Price / GB	90k-GB bill
Twilio TURN — US / EU	$0.40	**$36,000**
Twilio TURN — Asia-Pacific	$0.60-0.80	**$54,000+**
Cloudflare Realtime TURN	$0.05*	**$4,450**
Self-hosted coturn	$0.05+box	**~$4,500**

Typical bitrate per stream

- **Audio only** — ~0.05 Mbps (Opus)
- **SD video** — ~0.5 Mbps
- **720p** — ~1.5 Mbps
- **1080p** — ~2.5-4 Mbps