

MPAC IP Media Board

An IP-based telephony board with a dedicated specialized processing engine (SPE) for hardware acceleration of complex or resource-hungry media processing applications.

KEY FEATURES

- 2016 concurrent bi-directional RTP streams
- Tone detection and suppression
- N-way or 3-way conferencing
- Echo cancellation
- Play/record
- Packet loss concealment
- Scalable from 512 to 2016 voice channels
- High audio quality
- Can be used in conjunction with, or as a replacement for, host media processing
- PCIe smallest form factor

KEY BENEFITS

- Low server CPU requirements
- High-quality audio
- Flexible APIs
- Field-proven FPGA technologies
- Dedicated signal processing resource

APPLICATIONS

- IMS nodes (MRF)
- SIP servers
- IP based – IVR
- IP centric – conferencing bridge
- Online game conferencing servers
- IP announcement servers
- VoIP telephony testing systems servers

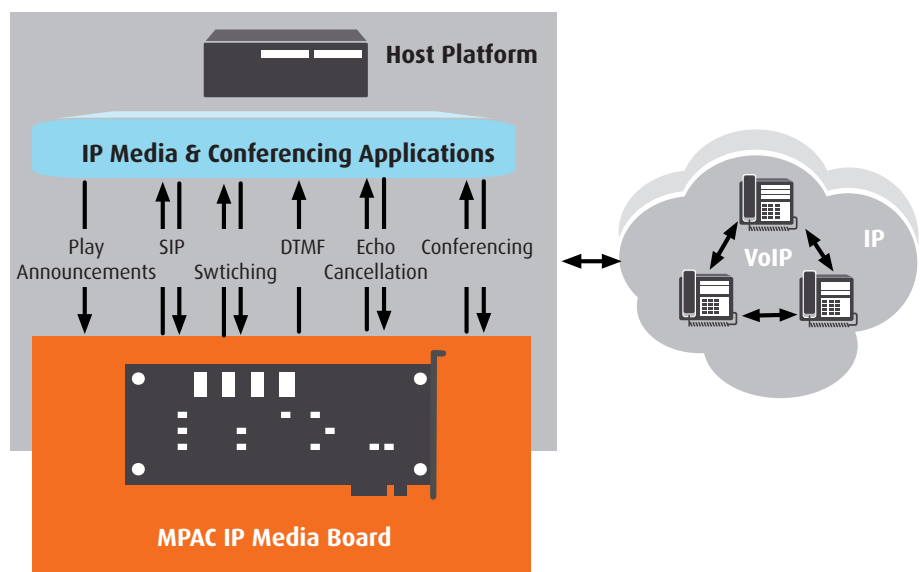
OVERVIEW

The MPAC IP Media Board is an IP-based telephony board providing hardware acceleration and dedicated on-board resource for high-density media processing applications.

A specialized processing engine (SPE), the board is ideal for high-density carrier-grade applications where, due to CPU limitations, host media processing alone is not sufficient to achieve the channel densities required.

The board massively reduces load on the host processor and guarantees quality of service by performing application-critical and processor-intensive functions such as acoustic tone detection, echo cancellation, conferencing and IVR (interactive voice response) functionality.

The MPAC IP Media Board is designed for use in RTP/IP-based networks such as IP multi-media subsystems (IMS). Using this dedicated resource for media processing ensures that the host CPU is never overloaded and quality of service is maintained at all times. It enables OEMs to develop high-density voice applications with a quality of service and channel density not possible with standard CPUs and host media processing (HMP) alone.



MPAC IP Media Board

COMPANY OVERVIEW	Features	Comments
<p>Major equipment vendors and operators rely on Telesoft Technologies for leading-edge technology. Our extensive experience of real-life SS7, SIGTRAN and SIP networks enables our partners to deliver solutions to the widest possible market, quickly and at minimal cost.</p> <p>In 1989 Telesoft Technologies set out with a mission to deliver specialist high-density signaling, media and monitoring solutions for deployment in real-world networks.</p> <p>We continue to impress our customers around the globe by delivering solutions to unique requirements more quickly and more cost-effectively than our competitors.</p>	Codec	G.711 a-law and μ -law
	Signaling	SIP
	Media transport	2016 channels of: <ul style="list-style-type: none"> • RTP/RTCP (RFC 1889) or SRTP • 10ms packet support • Silence suppression G.711 appendix 2 (roadmap) • IMS extensions available
	Quality of service	Packet loss concealment: <ul style="list-style-type: none"> • Last received packet • Silence • G.711 appendix 1 (roadmap) Echo cancellation G.168 (128ms tail) Silence insertion G.711 appendix 2
	Media	Acoustic DTMF detection (2016 concurrent channels) Out-of-band DTMF support RFC 2833 VAD detection CNG generation Play announcement (dynamic and static) Record G.711 to HDD
	Conferencing	N-way or 3-way (up to 1000 listeners and 256 active speakers) Independent gain and volume control for all listeners DTMF suppression
	Adaptive jitter buffering	Packet reordering Duplicate packet removal Frame packing
	Switching	RTP to RTP switching
	Operating system	Linux, Windows, Solaris

The IP Media Board is supplied in a PCIe (half-width, half-height) form factor compatible with modern computer servers. Using the latest generation of powerful FPGAs for its digital signal processing allows a single board and server combination to perform packet loss concealment, echo cancellation, IVR functions and conferencing all concurrently.

The TDAPI framework, a suite of telephony-based protocol stacks and flexible access APIs, allows the board to perform media processing on up to 2016 voice channels. The mix of software features makes it perfect for OEMs building a range of IP-centric applications. TDAPI software is used extensively by operators and OEMs for applications in telephony throughout the world.

www.telesoft-technologies.com

Headquarters:

Telesoft Technologies Ltd
Observatory House
Blandford Dorset
DT11 9LQ UK

T. +44 (0)1258 480880
F. +44 (0)1258 486598
E. sales@telesoft-technologies.com

Americas:

Telesoft Technologies Inc
Suite 601
4340 Georgetown Square
Atlanta GA 30338 USA

T. +1 770 454 6001
F. +1 770 452 0130
E. salesusa@telesoft-technologies.com

Asia Pacific:

Telesoft Technologies Ltd
(Branch Office) Building FC-24
Sector 16A Noida 201301
Uttar Pradesh India

T. +91 120 466 0300
F. +91 120 466 0301
E. salesindia@telesoft-technologies.com

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