

# **Products for conferencing platform developers**

## **Product deployment note**

## The Aculab solution

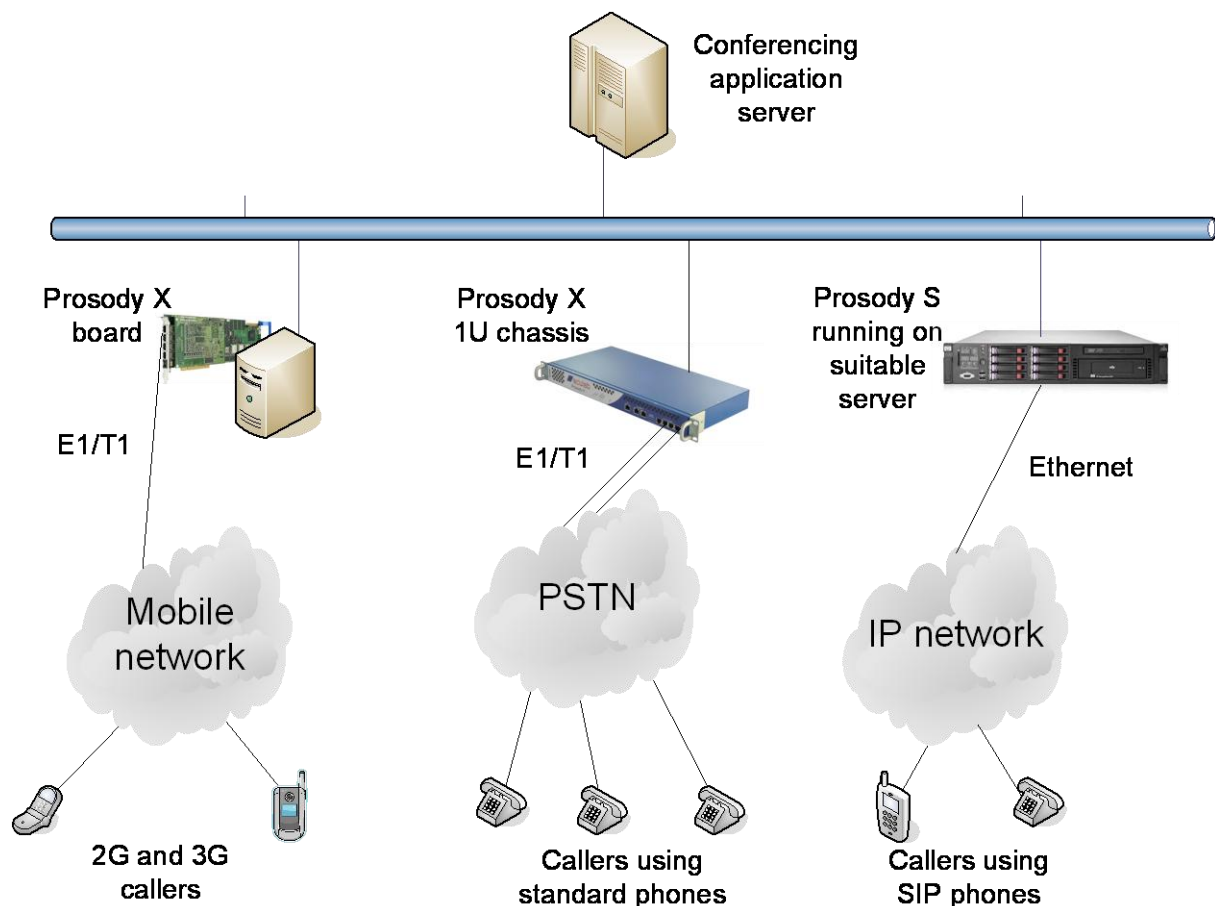
### The market needs

The changing market conditions, lower cost of telephone calls, teleworking, business travel patterns and changing telecoms regulations are all contributing to an increased rate of growth of voice and video conferencing services.

In addition, leaps in technology such as improved voice quality, VoIP-based (SIP-based) conferencing and telepresence / realview video conferencing are re-invigorating the voice and video conferencing market. These technology improvements are key to widespread acceptance of high density conferencing as a real alternative to business travel for meetings.

Widespread adoption will come through a good user experience - this is fuelled through making high-density voice conferencing platforms and systems that are easy to use, flexible in deployment and cost efficient.

### Aculab technology for conferencing platform developers



Aculab's media processing resources and call control technology satisfies service providers' needs for converged VoIP and TDM voice conferencing solutions, benefiting from high integration density, outstanding voice quality and low cost per conferencing channel.

Implementation of a highly integrated conferencing service enables lower overall system costs, reduces development cycles and speeds time to market. Coupled with Aculab's unparalleled digital network access support and consistent API, the Prosody portfolio enables fast, global deployment of narrow-band and wide-band voice conferencing solutions.

Conferencing system features and capacities vary depending on the market segments they target. Small to medium enterprises (SMEs) may look to enhance the built-in conference call functions of their phone system, while larger companies may require a stand-alone solution for intra-company conferencing. Carriers and service bureaus may look to provide large scale, high-density conference facilities as a business offering. Some example applications include premium rate chat lines, intra-company worldwide training, distance learning and corporate referendums or voting.

Conferencing functionality available with Aculab's Prosody portfolio allows developers to create high-density voice conferencing platforms to suit any of the above market segments. By eliminating the need for dedicated, specialised conferencing hardware, Prosody products present a cost-effective solution for delivering conferencing applications with powerful features and high quality, wideband (HD voice) audio.

The flexibility of the Prosody portfolio enables conferencing solutions to be created which encompass both traditional TDM, IP-based and mobile participants using the same conference server hardware. The Prosody portfolio supports multiple voice compression (vocoder) types including multiple wideband CODECS, to give the developer the choice of providing a system with optimised network bandwidth utilisation or a premium product with maximised voice quality

### **Aculab's partnership approach**

When you decide to partner with Aculab, the leading-edge products are just the start of what we offer. Complementing the product range, we offer customers a solid vendor partnership in the field of professional services, ongoing development and support based on our in-depth expertise and experience. The foundation of Aculab's approach is our industry-recognised agility and willingness to meet and exceed our customer's demands.

We focus on our customers recognising that their success is our success, and we are willing to listen and invest in the technology they need achieve their goals. One of the key areas that sets Aculab apart is our ability to respond to customers' near term requirements through our request for change (RFC) process. An example of this in action for a conferencing application was in the development of a wideband audio codec for a conferencing provider to enable them to offer a solution with class-leading audio quality. The final solution is providing the client with industry leading conferencing capabilities. A scalable, redundant, high density solution, with over 225 wideband iSAC encoded streams mixed per single board and over 4000 per CompactPCI chassis, ensuring the client's ability to provide a premium conferencing service with minimal operational cost.

For more information on this and other examples of how our customers have used Aculab products to develop conferencing solutions visit [case studies](#).

Visit our [showcase](#) section for a list of partners offering conferencing platforms based on Aculab's technology.

## Key Features

The Aculab Prosody portfolio of hardware boards/chassis and software supports all the media processing technologies required for voice conferencing platforms:

Conferencing system requirement	Prosody media processing functionality
Scalability	<ul style="list-style-type: none"> <li>• Unlimited number of participants in a single voice conference</li> <li>• Scalable to 512 channels per Prosody X board</li> <li>• 600 full duplex conferencing channels per Prosody S based system using latest multi-core Intel chipsets<sup>1</sup></li> </ul>
Flexibility: ability to work with multiple endpoints, TDM and IP, fixed and mobile	<p>Wide range of voice codecs supported:</p> <ul style="list-style-type: none"> <li>• VoIP codecs - G.711, G.723.1A, G.726, G.728, G.729AB/A/D</li> <li>• Mobile codecs - AMR-NB, AMR-WB, GSM FR, MS-GSM, EVRC, iLBC</li> <li>• Wideband codecs – G.722, G.722.1, iSAC, AMR-WB/G722.2, Speex, SILK<sup>2</sup></li> </ul>
Flexibility: efficient control of audio channel routing and mixing	<ul style="list-style-type: none"> <li>• Active speaker detection</li> <li>• Selective mixing of the loudest or active speakers</li> <li>• Independent volume and gain control for each participant</li> <li>• Seamless mixing of voice streams originating from both wideband and narrowband endpoints</li> </ul>
User experience: voice quality	<p>Wideband conferencing engine:</p> <ul style="list-style-type: none"> <li>• Voice bandwidth up to 16 kHz delivers outstanding voice quality</li> <li>• Optimised performance - efficient use of DSP resources</li> <li>• G.722, G.722.1 &amp; G.722.2/AMR-WB (ITU-T/3GPP/3GPP2 standard) wideband voice codecs</li> <li>• iSAC/SILK wideband voice codec               <ul style="list-style-type: none"> <li>○ Used by Skype clients - deployment proven</li> <li>○ Variable bit rate - saves last mile bandwidth to improve quality</li> </ul> </li> </ul>

Recording and monitoring	<ul style="list-style-type: none"> <li>• Prosody supports the recording of the conversation between all participants in a conference, which allows carriers or service bureaus to generate additional revenue through offering extra services such as supplying a recording of the call, or a full transcription</li> <li>• Support for conference monitoring allows a moderator or coach to hear and/or speak to all or selected conference participants</li> </ul>
Ease of use	<ul style="list-style-type: none"> <li>• Active speaker notification via the contributing source real-time control (CSRC) protocol field of the real-time transport protocol (RTP) media stream</li> <li>• Ability to provide integration with a third party speech engine (ASR, TTS) utilising the standard media resource control protocol (MRCP) interface</li> <li>• DTMF detection and generation; DTMF tones relay and user indications via the IETF RFC2833</li> </ul>
Reliability and redundancy	<ul style="list-style-type: none"> <li>• Aculab's Prosody X media processing product line benefits from a distributed architecture and remote API, which means that boards can be installed in different chassis for resilience, controlled by local or remote application servers</li> </ul>
Cost efficiency	<ul style="list-style-type: none"> <li>• High channel counts, per Prosody X media processing board and Prosody S HMP platform, enable low costs per channel</li> <li>• Support for VoIP protocols enables creation of toll-free conferencing systems</li> </ul>
<p><b>Note 1:</b> Intel Xeon 5160 2x Dual-Core CPU running at 3GHz with 4Gbyte RAM</p> <p><b>Note 2:</b> Skype SILK codec available on Prosody S only</p>	

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