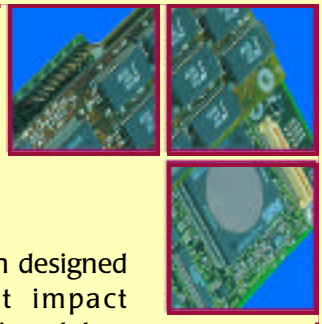

VoIP PCI H.323 Gateway

For computer telephony developers and integrators who are seeking to implement conversation quality speech over IP networks, Aculab offers the VoIP PCI card. This standards based H.323 gateway offers up to 60 channels with low latency, all in a single PCI slot. Unlike other VoIP cards Aculab's product offers: ease of use through a simple familiar API; scalability to build a single gateway with multiple cards; optimal use of channels; and fully specified performance characteristics. So when quality and performance count, you can count on Aculab.

Ease of use

Aculab's VoIP gateway comes with a single API, which is just a small extension to the existing generic API that existing customers will be familiar with. For new users all that is required is to master a couple of API commands or function calls, it's that simple. The API provides easy control of the H.323 protocol stack, RTP packet handling and voice compression, from within a single interface. For new and active developers alike this makes it easy to leverage VoIP through existing applications, which can be ported from current platforms with minimal time and effort.

Scalability

When an H.323 call is set up all of the RTP packet handling is carried out on the card, the data path is fully offloaded from the host processor. This means there is no contention for host processor power, as packets are not crossing the host PCI bus, and a true scalable architecture is achieved. Multiple cards can therefore be installed to form a single H.323 gateway. With no adverse loading to the host, and a specified minimal contribution to delay from the card, there is little impact on latency regardless of the number of cards used.

Optimal use of channels

When every channel counts, it is good to know that Aculab's VoIP card has sufficient power to simultaneously handle all 60 channels using any supported codec: G.711; G.723.1; G.729A/B. There is a free allocation of any of the above codecs on a per channel basis ensuring full usage at all times.

Fully specified performance

Aculab's technology has been designed to minimise factors that impact conversation quality including delay, echo, and background noise. This leads to a reduced "effort to listen" for users. The VoIP gateway is designed as a multiple class terminal to meet TIPHON quality of service ratings. A system using Aculab's card allows High/Best quality ratings to be achieved on a suitable LAN, and High quality ratings to be acheived on a suitable WAN. It is therefore possible to deploy an "out of the box" solution meeting high performance standards in a well-managed private network environment.

Flexible hardware

The VoIP PCI card offers complete H.323 gateway functionality for either 30 or 60 channels, including dual redundant 10/100 Base-T LAN interfaces as well as optional single or dual E1/T1 telephone network interfaces using Aculab's worldwide range of protocols and approvals. If separate telephony interfaces are preferred, the H.100 CT bus may be employed.

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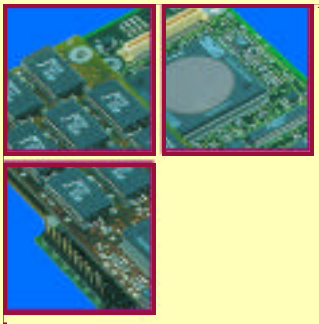

Physical & environmental		
Card format		PCI full length expansion card
Single card slot occupied?		✔
Computer bus type		PCI Universal (5V or 3V3), 32bit
CT bus interconnection		H.100 (with legacy MVIP or SCbus option)
Arbitrary matrix switching between all timeslots?		✔
CT bus (H.100) loading factor		1
Bridged chassis backplane working?		✔
EMC standard		Europe, FCC and Australia: Class 'B'
Safety standard		CB Certificate to IEC 950, Australian, ACATS 001, UL/CUL
Power consumption	Maximum in Watts Maximum in Amps	23W 4.6A
Operating environment	Temperature Humidity Altitude	0-60ºC 0-70% RH non-condensing 0 to 2,500m
Storage environment	Temperature	-20º to 70ºC
Operating systems supported	(Future releases in brackets)	Windows NT 4 (Windows 2000; Sun Sparc Solaris; Linux)
H.323 gateway functionality		
Voice activity detection (VAD)		✔
Comfort noise generation		✔
DTMF carriage, detection and generation		✔
Jitter buffer (adaptive)		✔
Echo cancellation up to 32ms		✔
Fast on-board RTP/UDP/IP		✔
Codecs supported		G.711; G.723.1; G.729 (A&B)
Protocols supported (contact us to discuss additional requirements)		H323 Version 1 & 2
Multiple cards can form a single H323 gateway		✔
TIPHON quality ratings ~ as defined in TR 101 329 V2.1.1 (1999-06)		
In suitable LAN	4 (Best)	Equivalent to PSTN; end to end delay <150ms; call set-up <1.5 Seconds
In suitable WAN	3 (High)	Similar to PSTN; end to end delay <250ms; call set-up <4 Seconds
Full speech processing		Not applicable – Prosody recommended
Packet network access support		
LAN protocol		10/100 Base-T Ethernet
LAN connectors		Dual RJ45
Redundancy		Full dual port redundancy
Digital telephone network access support		
Hardware options	PM1/PM2 daughter module	1 or 2 E1 or T1 links
	VoIP module	30 or 60 channels
Network connectors	1 or 2 off RJ45/RJ48C, BNC via adapter	
Network terminations	75R, 100R or 120R	
Telecom approval and protocol support	A wide range of 'host independent' approvals and protocol coverage has been achieved – see **www.aculab.com/products_main/approvals_main.htm**	

For more Information, please contact your Account Manager or view our web pages:
http://www.aculab.com

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