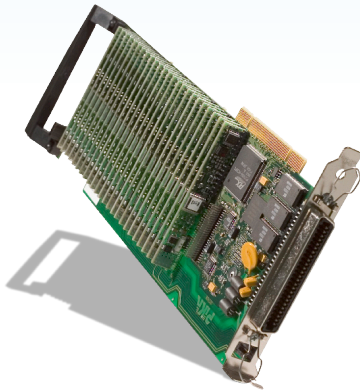


## Datasheet: **High Density Analog Board with DSPs** (Daytona )



Highly scalable, PIKA High Density Analog Boards with DSPs are configurable from 4 to 24 analog line circuits depending on your unique needs. There is switching and DSP capacity for every channel. A full-length, standard sized PCI card, it will easily integrate into any PC chassis. It features H.100 compatibility.

PIKA High-density Analog Boards give you the flexibility to mix and match any combination of trunk and station ports on a single PCI card.

These boards are ideal for traditional telephony applications as well as for logging, fax, and VoIP applications. They enable voice and fax services by way of connectivity to TDM and IP networks.

### Key features

- Single slot PCI card
- Capable of providing combinations of loop start, station and passive/high impedance logging of analog line circuits
- Available in densities ranging from 4-24 analog line circuits
- DSP based echo cancellation and RTP packetization available (suitable for analog to IP gateway applications)
- Advanced DSP based media processing capabilities include voice, tone, fax and conferencing)
- H.100 compatible, full on board switching available
- Windows and Linux development environments via PIKA's low and high level APIs
- Compatible with other popular technologies such as Asterisk ® and Skype

### Functionality

Functionality	Specifications
Analog Line Circuits	4 to 24
Computer Telephony (CT) Bus Type	H.100
Bus Data Rate (H.100)	2, 4, 8 MHz
CT Bus Switch Connections	up to 512 simultaneous half duplex connections can be made between any of the 4096 CT bus timeslots and any of the local timeslots
PC Host Interface Type	PCI (universal signalling)
Maximum V-Engines	1 (Motorola 56303 DSP based)

DSPs: On-board DSPs Chip Type Memory Clock Speed Instruction Speed	1 Motorola 56303 (see note) 128 K 100 MHz 100 MIPS
Supported Operating Systems (OS)	Windows 2000/XP/2003 Red Hat 7.3/Enterprise 4 SuSE 9.3 distributions of Linux

**Note:** DSP applications are independent programs that perform operations such as dual tone multi frequency (DTMF) detection, speech compression, conferencing, and speech recognition or tone detection. The number of supported applications is limited only by the amount of available memory and real time. V-Engine is an add-on expansion card with up to 6 extra DSPs that attach to a high-density Analog Board. V-Engines are used to expand the available signal-processing horsepower for use in DSP applications such as Conferencing, Audio playback/record and Echo Cancellation.

## Technical Specifications

PCI Interface		PCI 32 bit target/ initiator V2.2 compliant 33 MHz bus speed
PCI Interface		50 pin Amphenol: RJ21 (optional 12 x RJ14 breakout)
<b>Loop Start Interfaces</b> (standard mode or passive logging mode)	DC resistance	North American: 330 ohms @ 20mA) to 127 ohms @ 105 mA European 420 ohms @ 14 mA) to 89 ohms @ 150 mA
	DC Loop Current	North American 20 mA to 105 mA (operating range) European 14 mA to 150 mA (operating range)
	AC Impedance	North American 600 ohms (off hook), >350 K ohms (on hook) European Complex as per TBR21 spec (off hook), >350 K ohms (on hook)
	Supervision	North American ringing voltage (15.3-68 Hz, >=32 VRMS), loop current disconnect European ringing voltage (16-60 Hz, >=25 VRMS), loop disconnect
	Signaling	Off-hook, flash, DTMF On Hook Audio Detect: Caller ID, DTMF (KT23), Audio Logging
	DC Triggering	3V, 18V or 33V programmable threshold
<b>Station Interface (SLIC)</b>	Current Limiting	Constant at 30 mA
	AC Impedance	600 ohms
	Loop Range	0-750 ohms @ -24VDC
	Supervision	Off hook, Flash, Ring Trip, DTMF
	Signaling	Ringing (externally sourced), Cadence and Power Management Under Software Control
	Maximum Ringing Load	North America: 15-120 mA Euro version: 14-130 mA
Compliance and Capabilities		FCC part 15 and FCC Part 68, Industry Canada CS-03, CSA C22.2 no 950 NRTL/C TBR21 EU 55022:1998 Class B, EU 55024:1998, EU 60950:1992 2002/ 95/ EC RoHS 6
DSP		Motorola 56303 DSP Software reset on per DSP basis

MTBF		Daytona Baseboard: 68 years Daytona Loop Start Module: 280 years Daytona Station Module: 244 years V-engine: 144 years
<b>Power Requirements</b> <i>(Note: typical values)</i>	12LC	770mA max @ +5 Volts
	24LC	960mA max @ +5 Volts
	12P	1060mA max @ +5 Volts
	24P	1540mA max @ +5 Volts
	4LC/8P	960mA max @ +5 Volts
	8LC/16P	1350mA max @ +5 Volts
	MM Series V-engine	890mA max @ +5 Volts
Environmental Requirements		Operating Temperature: 0 °C to +60 °C Storage Temperature: -20 °C to +85 °C Humidity: 5 to 95%, non-condensing
Media Capabilities		Play and Record DTMF, tone, speech detection DTMF, tone generation Fax RTP, IP/SIP Integration with Asterisk and Skype technologies

## RoHS

All PIKA boards are RoHS compliant.

## Warranty

PIKA provides 3 warranty on all boards.

## About PIKA Technologies Inc.

For over 2 decades, PIKA Technologies has been providing developers with the tools they need to build advanced voice and fax applications like IP PBX, fax broadcast and self-service IVR. As the technology landscape has changed, so too has PIKA, building out its product offering so its customers can choose the right tool set for their applications. Whether building applications using DSP board-based media processing, host-based or VoIP only solutions, whether your application requires telephony boards or appliances, application developers of all kinds turn to PIKA for their development tools.

Visit [www.pikatechnologies.com](http://www.pikatechnologies.com) or call +1-613-591-1555 for more information.