# Analog Trunk FXO/PCIe Boards
# HMP

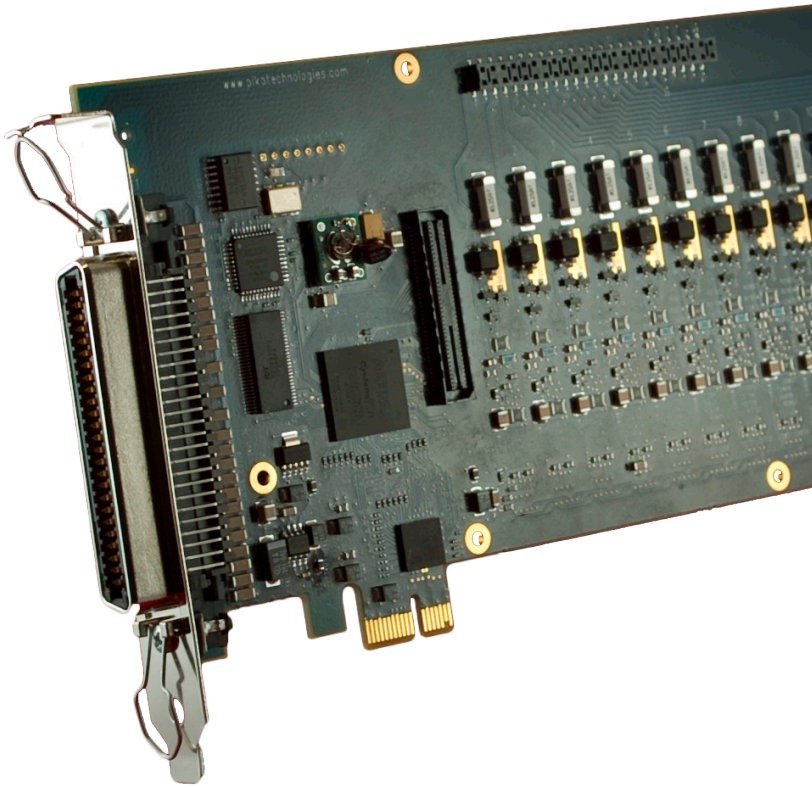
PIKA TECHNOLOGIES INC.

PIKA Analog Trunk/FXO Boards with Host Based Media Processing (HMP) provide up to 16 analog trunk ports. Highly flexible, they are software-configurable for use in multiple countries.

This 9.5 inch board features the PCI Express format, and will easily integrate into a PC chassis. Media processing is performed using PIKA's host-based (HMP-X) software resources.

These boards are ideal for traditional telephony applications as well as for fax and VoIP applications. The boards enable voice and fax services by way of connectivity to TDM and IP networks (via HMP-X).

PIKA Analog Trunk/FXO Boards, and PIKA MonteCarlo SDK with Host Based media processing (HMP-X) represent a complete and scalable set of reliable building blocks for the development of feature-rich communications solutions.



## Key Features

- Single slot PCIe card
- Only 9.5 inches long
- Available in densities ranging from 4 - 16 analog line circuits (software license enabled) in 4-port increments
- Superior host-based echo cancellation and RTP packetization available (suitable for analog to IP gateway applications)
- Advanced host-based media processing capabilities including voice, tone and conferencing
- Low latency host-based switching between PIKA's boards
- Windows and Linux development environments via PIKA's low and high level APIs

# Technical Specifications

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| **PCIe Bus Interface** | Based on PCIe revision 1.0a specifications |
| **PCIe Bus Speed** | 2.5 GHz, single lane link |
| **Memory Address Allocation** | Automatically assigned by Plug and Play cycle |
| **Interrupts Allocation** | Automatically assigned by Plug and Play cycle |
| **Slot requirements** | PCIe 9.5" slot |
| **Dimensions (Metric)** | 241 mm L x 98 mm H |
| **Dimensions (Imperial)** | 9.5" L x 3.875" H |
| **Power consumption from 3.3V rail** | 2 W max |
| **Power consumption from LS Lines** | North America 1.4 W<br>European Union 2.0 W |
| **Environmental Requirements** | Operating Temperature: 0 °C to +60 °C<br>Storage Temperature: -20 °C to +85 °C<br>Humidity, non-condensing: 5% to 95% |
| **Mean Time Between Failure (MTBF)** | 31 years |
| **Telephony Interfaces** | 4 - 16 FXO trunk interface ports |
| **AC Impedance (in audio band)** | Off-hook: 600 ohms<br>On-hook metallic (tip to ring): >300 k ohms<br>Return Loss: >26.8 dB |
| **DC Current - Loop Current Range** | 13 - 110 mA |
| **DC Resistance** – Longitudinal (tip to ground, ring to ground) | >9.8 M ohms |
| **DC Resistance** – On-Hook Metallic (Tip to Ring) | >6.5 M ohms |
| **DC Resistance** – Off-Hook Metallic (Tip to Ring) | 310 ohms @ 20mA<br>117 ohms @ 100 mA |

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| **Ring Detection** | 14 Vms @ 16 Hz<br>14 Vms @ 20 Hz<br>12 Vms @ 68 Hz |
| **Ringer Impedance (20 Hz)** | > 26 K ohm |
| **Ringer Equivalence Number (REN)** | 0.1B |

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| **Gain Tolerance (Linearity)** | On-Hook in (2 to 4 wire) NA | 0.0 to 0.8 dB (300-3400 Hz) |
| | Off-Hook In (2 to 4 wire) NA | -1.5 to -0.4 dB (300 -3400 Hz) |
| | Off-Hook Out (4 to 2 wire) | -4.8 to -0.7 dB (300-3400 Hz) |

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| **Gain Range** | Fixed - On-Hook H/W Gain In (2 to 4 wire) | -1.6 dB |
| | Fixed - Off -Hook H/W Gain In (2 to 4 wire) | -0.75dB |
| | Fixed - Off-Hook H/W Gain Out (4 to 2 wire) | +0.24 dB |
| | On-Hook Signal overload level @0 dB gain In (2 to 4 wire) | +4.77 dBm |
| | Off-Hook Signal overload level @0 dB gain In (2 to 4 wire) | +3.92 dBm |

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| Trans-hybrid loss (THL) | >27 dB (300-3400) |
| On-Hook Common Mode Gain | -52.9 dBm0 avg |
| Signal to Noise Ratio (15 dBm, 1 KHz reference) | > 38 dB |
| On-Hook Inter Hybrid (Interface) Crosstalk | No measureable crosstalk |
| Off-Hook Inter Hybrid (Interface) Crosstalk | No measureable crosstalk |
| Idle Channel Noise | 6 dBrnc |
| Transverse Balance | > 57 dB |
| Supervision | Ring Detection, Loop Disconnect, Reversal Detection, Loop Voltage, Loop Current |
| Signalling | Off Hook, Flash, DTMF, Pulse Dial |
| Onhook Audio Detect | Caller ID, DTMF, Audio Logging |

*Note:* All dimensions are approximate and do not include board faceplate and RJ-21 connector. Proper system cooling, which will vary based on system design, is required to maintain an acceptable operating temperature.

## RoHS

All PIKA boards are RoHS compliant.

## Warranty

PIKA provides a 1-year warranty on all boards.

## About PIKA Technologies

Since 1987, PIKA Technologies has pioneered technology and products that enable global telephony, fax and communications solutions. PIKA's offerings include telephony appliances, board-level TDM products, mobile PBX, media gateways, end user applications, smart phone apps and custom telecom development services. Known for exceptional voice quality, reliability and renowned customer service, PIKA enables developers, system integrators and businesses worldwide to take full advantage of advanced communication solutions. This includes products that support innovation in legacy and emerging telephony models, as well as solutions that bridge the path from TDM to VoIP and services in the cloud.

With customers in more than 35 countries and numerous product and technology awards to its name



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