SmartWORKS™ PCM32 Passive/Terminate Card

The **SmartWORKS™ PCM** series cards have been designed to combine the same features and capabilities of SmartWORKS cards with a PCM32 front end. This board has been designed to work with the PCM32 Megalink protocol.

Optically Isolated

The front end of the cards have been designed with a standard RS485 electrical interface that is optically isolated from the board.

Programmable Trunk Impedance

An API has been included in the SmartWORKS API to control trunk impedance which is configured on a per trunk basis. Trunk impedance is switchable between Hi-Z and 120 Ohm.

Programmable Idle Coding Format

Software selectable idle coding format: µ-law,A-law (terminate setting only).

On-board DSP to complete voice processing

Encoding capabilities, with a rich set of CODECS, reduces the need to purchase other hardware components.

CODEC Support

SmartWORKS™ products offer a large selection of voice CODECS, (including G.723.1, G.729A and MS GSM)

PCM Interface

The electrical interface conforms to RS485 specifications. Each trunk processes up to 32 channels, with a maximum of 512 channels per system. The SmartWORKS PCM supports programmable trunk impedance, coding format, frame sync. and signal configuration through the SmartWORKS™ API.

Built in Performance Monitoring

Event driven alarms are reported for loss of synchronization. This feature is enabled through the SmartWORKS API.

Common SmartWorks™ API Features

- Media Control - CODECS
- Tone Detection / Generation
- CallerID/FSK/DTMF/MF Detection
- Activity / Silence Detectors
- Switching (H.100 and MVIP)
- Automatic Gain Control (AGC)
- Automatic Volume Control (AVC)
- Stereo Recording with AGC
- Echo Cancelation
- Call Progress Monitoring (CPM)
- Full-duplex Channels
- Media Streaming
- Live Monitoring
- Start/Stop Call Recording Triggers

AudioCodes

AudioCodes Enabling Technology Products

SmartWORKS™ PCM32 Passive/Terminate Card

Specifications

System Requirements					
Operating System	Windows XP, 2003 and 2008 32 bit, Windows 64 bit (planned), Linux (Call for variant details)				
Host	Pentium 4 or equivalent · 2 GHz or better · PCI motherboard or passive backplane with 3.3V power supply, PCI 2.2 bus				
Max ports per system	Up to 512 (16 boards max)				
Environmental Conditions	Operating Temperature: 0C to +50C · Storage Temperature:-20C to +85C · Humidity: 8% to 80% non-condensing Storage humidity: 8% to 80% non-condensing				
Form Factor	Full-size PCI or PCIe card				
Host Interface (PCI 2.2)	Bus Compatibility: Complies with PCISIG · Bus Specifications: Rev. 2.2 · Bus Speed: 33 MHz Bus Mode: 32 bit bus master/target · Shared Memory: 16 MB Global shared RAM (PCI express available-1x connector)				
Software					
SDK	AudioCodes Native SmartWORKS™ API				
Interface	Input Data Rate: 2.048 Mbit/s · Output Data Rate: 2.048 Mbit/s · Frame Signal: 8 KHz square wave signal Alarm Detection and Integration: Loss of Synchronization · Input Impedance: Hi-Z /120 Ohm (sign) Audio Signal: Receive range: -68 dBm to + 3 dBm · Input gain control: +24 to -50 dB Silence Detection: Programmable from API · Transmit volume control: +24 to -50 dB Automatic Gain Control (AGC): Programmable from API · Automatic Volume Control (AVC): Programmable from API Activity Detection: Programmable from API · Alert Tone: Programmable from API · Frequency Response: 300 - 3400 Hz (+/- 3dB)				
Encoding & Decoding	5.3 Kb/s: G.723.1 · 6.3 Kb/s: G.723.1 · 8 Kb/s: G.729A · 13 Kb/s: GSM 6.10, Microsoft GSM · 16 Kb/s: G.726 24 Kb/s: G.726, OKI · 32 Kb/s: G.726, OKI · 40 Kb/s: G.726 64 Kb/s: µ-law or A-law per G.711, 8 bit linear PCM (signed & unsigned) · 96 Kb/s: 6 Khz 16 bit linear PCM(signed) 128 Kb/s: 16 bit linear PCM (signed & unsigned) Wave file formats: Microsoft GSM, Linear signed, 8 & 16-bit PCM Digitization selection: Programmable per channel, independent for encode and decode				
DTMF/MF Tone Detection	DTMF digits: 0 - 9, *, #, A, B, C, D · MF R2 Digits: 15 Digits Forward & Reverse per Q.441 · Dynamic range: -38 dBm to 0 dBm Minimum tone detection: 40 ms /programmable · Interdigit timing: 40 ms min Acceptable twist: Per LSSGR sec. 6, 8 dB forward,4 dB reverse · Frequency variation: Accept all +/- 1.5%, reject all +/-2.5% Noise tolerance: Per LSSGR sec. 6 · Talk off: Bellcore TR-TSY 000762				
Trigger Conditions	Event Driven, Caller ID, Min/Max silence · Min/Max activity				
Global Tone Generation	Tone Type: Single or dual frequency · Frequency range: 300 Hz – 3400 Hz · Frequency resolution: 1 Hz Duration: 1 ms – 8191 ms programmable in 1 ms steps · Amplitude: +3 dBm to –68 dBm · Duration: API Programmable				
Voice Processing	Echo cancelation: G.165 · DTMF Detector: Primary & Secondary channel · MF Detection: R1 & R2				
Power Requirements					
PCM3209	2.2A	5mA	n/a	20mA	7.5W
PCM6409	2.6A	5mA	n/a	20mA	9W
PCM6409-EH	3.0A	5mA	n/a	20mA	10.5W
Certifications					
Emissions	EN60950 IEC60950 (third edition) UL60950 · CAN · CSA-C22.2 No 60950-00 (third edition)				
Safety	EN55022 40 CFR FCC part 15 EN55024				
Order Information:					
PCM3209	910-0330-001				
PCM6409	910-0329-001				
PCM6409-EH	910-0702-001				

About AudioCodes

AudioCodes Ltd. (NasdaqGS: AUDC) designs, develops and sells advanced Voice over IP (VoIP) and converged VoIP and Data networking products and applications to Service Providers and Enterprises. AudioCodes is a VoIP technology leader focused on VoIP communications, applications and networking elements, and its products are deployed globally in Broadband, Mobile, Cable, and Enterprise networks. The company provides a range of innovative, cost-effective products including Media Gateways, Multi-Service Business Gateways, Residential Gateways, IP Phones, Media Servers, Session Border Controllers (SBC), Security Gateways and Value Added Applications. AudioCodes underlying technology, VoIPerfectHD™, relies primarily on AudioCodes leadership in DSP, voice coding and voice processing technologies. AudioCodes High Definition (HD) VoIP technologies and products provide enhanced intelligibility, and a better end user communication experience in emerging Voice networks.

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