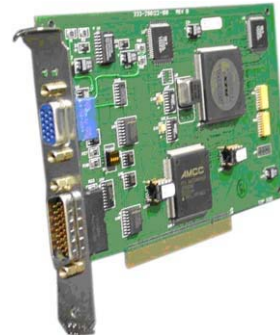


## Programmable Dual-Stream PCM Simulator PSIM-200

### Features

- Independent 2-Channel Simulation
- 1/2 Size PCI Form Factor
- Integrated IRIG Time Code Output
- Fixed Dynamic Output Capability and
- All IRIG PCM Data Codes
- Operation to 30 Mbps

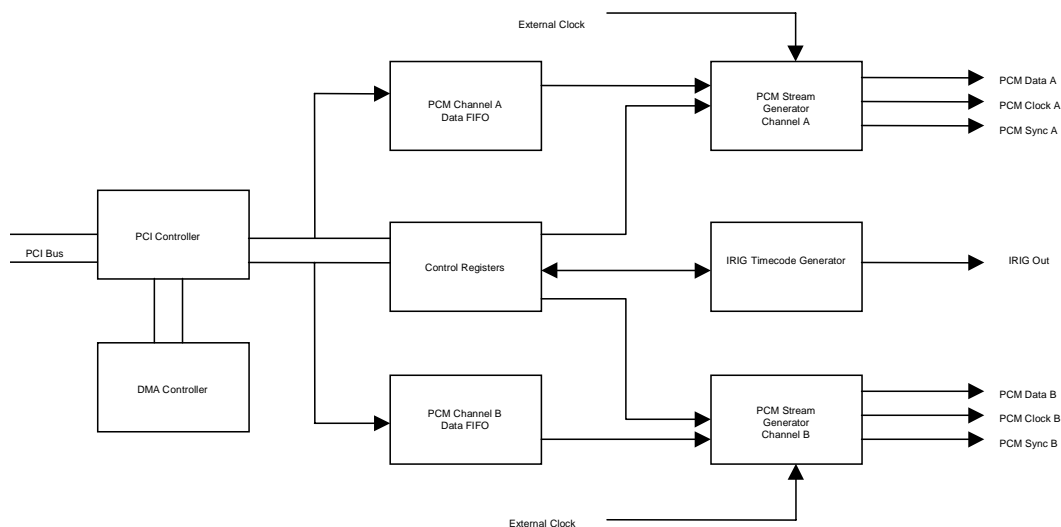


### Introduction

The PSIM-200-001 PCM Simulator provides two identical and independent PCM simulators. Each PCM channel is capable of being independently enabled/disabled and is capable of operating at different clock rates (whether internal or external). The modules support either system CPU-based data transfer or on-board DMA-based data transfer. Each PCM channel can be configured to insert a predefined synchronization word into the data stream at regular intervals as defined by the number of words specified in the programmable frame size. In addition, a single IRIG timecode generator is provided that gives an IRIG B serial time signal. The contents of the sync word and its length (4 to 64 bits) are programmable via software. In addition, the length of the frame (in words) is also programmable. The frame size (in words) can be any value from two words through 256K words. The word size may be programmed from 4 to 32 bits.

The output serial PCM data stream for each channel may be formatted into any one of the following data codes: NRZ-L/M/S, BiØ-L/M/S, DM-M/S, or RZ. Additionally, NRZ-L data is capable of being randomized in either the forward or reverse direction with code lengths of 9, 11, or 15.

Each PCM channel provides an output clock associated with the corresponding data stream. This output clock has a programmable 0° or 180° phase selection.



<b>Functionality</b>	Number of Channels	2 channels, serial PCM 1 channel, IRIG B timecode
	Data Processing	Programmable fill word insertion (programmable size 4 to 32 bits) Programmable sync insertion with sync pulse Programmable frame size (up to 256K words) Programmable sync set (4 to 64 bits) Word size (programmable 4 to 32 bits)
<b>Simulation Clock</b>	Source Rate	Internal or external (programmable) 1 kHz to 20 MHz (internal, programmable) 1 Hz to 30 MHz (external)
	Clock Input	TTL, 75 ohms, single ended, RS-422, 120 ohms, differential (programmable)
<b>Output Data</b>	PCM Codes	NRZ-L/M/S (programmable) Bi- $\emptyset$ L/M/S DM-MS RNRZ-1 (forward or reverse lengths 9, 11, 15)
	Rate	1 bps to 30 Mbps, NRZ codes .5 bps to 15 Mbps, all other codes
	Polarity Data Order	Normal or inverted (programmable) MSB first or LSB first (programmable)
	Level	TTL compatible (single-ended) into 75-ohm load 1V peak-to-peak with no DC offset into 75-ohm load RS-422 differential (120 ohms)
<b>Output Clock</b>	Rate	1 bps to 30 Mbps, NRZ codes .5 bps to 15 Mbps, all other codes
	Clock Phase	0° and 180° (programmable)
	Level	TTL compatible (single-ended) into 75-ohm load RS-422 differential (120 ohms)
<b>Output Sync Pulse</b>	Level	TTL compatible (single ended) into 75-ohm load RS-422 differential (120 ohms)
<b>IRIG Timecode B Output</b>	Rate	Amplitude modulated 1 kHz carrier
	Level	6V, 3:1 Ratio (into 1K ohm)
<b>Mechanical</b>	Form Factor	Half-size PCI slot
	Connectors	Real panel DB style
<b>Electrical</b>	Power	5V => 1.10 Amps    5.5 Watts +12 => 0.025 Amps    0.3 Watts -12 => 0.025 Amps    0.3 Watts
<b>Environmental</b>	Temperature	0 °C to 70 °C operating -20 °C to 80 °C storage
	Humidity	20 to 95% noncondensing
<b>Ordering Codes</b>	PSIM-200	Two-stream PCI-based simulator with IRIG time output