



Integrated Pulse Coded Modulation (PCM)

ENCODER

DESIGNED FOR MISSION CRITICAL APPLICATIONS

INVOCON, INC.

0324

The Integrated PCM Encoder (iPCMe) provides a significant number of data channels for remote sensing in a highly integrated configuration. With over 100 channels of input in a small package, the iPCMe is designed as a low-cost solution for a broad range of telemetry applications. Every aspect of the Encoder's design is intended to simplify integration and survive rugged launch environments. Robust packaging includes a rugged aluminum enclosure and DB connectors placed on top of the unit. The single orientation for the connectors reduces integration and reconfiguration headaches associated with the complexities of routing and re-routing cables. The common DB connectors add convenience and value by minimizing the cost and lead times associated with more exotic connectors.

The software included with the encoder provides a simple PCM Matrix configuration tool that helps to ensure data is packed efficiently into the PCM stream. It also provides real-time display of data as well as health and status from the unit.

An iPCMe can transmit at bit rates exceeding 10Mbps and has the following features:

- 100 analog channels
 - Simultaneous sampling
 - >15 bits of dynamic range
- 13 digital channels
 - Input: Discrete, UART or SDLC with RS-422, LVDS, TTL or RS232 interfaces
 - Output: open-drain
- 2 NTSC video input channels
 - MUXed to one JPEG 2000 video format output
- Dedicated inputs for GPS & Smart Battery
 - Supports GPS 1PPS redistribution
- PCM Telemetry Output (copper and fiber)
 - Copper Clock/Data or Data only transmitter interface: RS422 or LVDS
 - Fiber Data ground interface: 850nm multimode. Supports 2 km transmission over 50/125 μm fiber
 - IRIG106 Chapter-4 PCM with optional Randomization (RNRZ-L15) and/or Minor Frame CRC
- Configuration Port (RS-232) for setting up the PCM Matrix, analog sample rates, digital I/O, video, etc. Supports Invocon's KIPS/WKIPS *Capture Link*™ interface for lethality assessment bandwidth sharing



Typical Specifications:

Electrical	
Input voltage	16 – 50 VDC
Power (typical)	11.2 W
Connectors	D-Sub (power, analog, & digital inputs; telemetry output) SMA (video input), qty 2 ST fiber (ground telemetry output)

Mechanical	
Size (L x W x H)	6.72 x 4.85 x 1.70 inches (not including connectors)
Weight	3.1 lbs.
Case material	6061 aluminum, Alodine coated
Environmental	
Operating Temperature	-24 to 61 °C
Standards	Designed to comply with MIL-STD-461, MIL-STD-810

System specifications subject to change without notice.

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