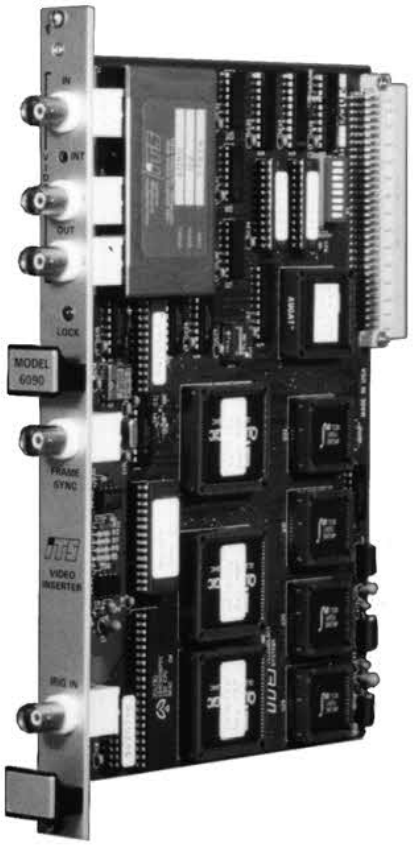
instrumentation technology systems

MODEL 6090
VMEbus IRIG B VIDEO ENCODER INSERTER

FEATURES



- Decodes an IRIG B time code signal and inserts a time message.
- Generates and inserts up to 30 lines of 32 or 64 characters per line, selectable.
- Generates and inserts two movable, sizable symbols, configurable as crosshairs or tracking-gate/closed box.
- Generates and inserts a fixed "Boresight" reticle
- Inserts up to 31 bytes of edge encoded data per field.
- Automatically synchronizes with composite video input, no external sync required.
- Operates with NTSC, RS170, or optionally, CCIR/PAL input video. (6090A)

DESCRIPTION

The ITS Model 6090 IRIG B Video Encoder Inserter contains an IRIG B time code decoder, a video data edgeencoder, an alphanumeric character generator and a reticle generator all of which may be inserted into an input RS- 170, NTSC or PAL/CCIR video signal. The edge encoding includes automatic error correction code generation. The 6090 is a memory mapped slave subsystem operating on the VME bus. The IRIG B time code is decoded and the Time Message is inserted into the applied video signal (both A/N characters and edge encoded) without bus involvement. All other message generation and symbol positioning is controlled by program transfers via the VME bus. Additionally the IRIG B time may be read via the bus. Once time is established, a loss of IRIG signal will cause the 6090 to automatically switch to a internal real time clock which will increment the time display until the IRIG signal is re-acquired. The position of the IRIG Time Message within the display may be controlled by an on board DIP switch or by commands entered via the bus.

The 6090 is contained in a dual high 6U VME card and occupies a single 0.8 inch slot.

Photo-Sonics International Ltd
5 Thame Park Business Centre,
Wenman Road,
THAME,
Oxfordshire, OX9 3FR, UK

Tel: ++44 (0)1844 260600
Fax: ++44(0)1844 260126
E-Mail: sales@photo-sonics.co.uk
www.photo-sonics.co.uk

Model 6090 VMEbus IRIG B Video Encoder Inserter

SPECIFICATIONS

Video In	Composite, 525/60 interlaced, 2:1 black negative, one volt peak-to-peak, in accordance with EIA RS-170 or NTSC; connector is coaxial SMA series. PAL/CCIR, 625/50 video optional (6090A). 75 ohm input impedance.
Video Amplifier Bandwidth	>20 MHz ±1dB
Video Out (1 and 2)	Same as video in except with character and encoded data added and DC restored; connectors are coaxial SMA series (output as specified when terminated with a 75 ohm load).
IRIG In	IRIG B standard serial time code (IRIG Document 200-98).
Encoded Data	Left edge encoded, method and format IAW Optical Systems Group Document 452-84, Section 7.
Frame Sync (Out)	Vertical blanking ref. pulse derived from incoming video; TTL level, low true.
VMEbus Compatibility	A16:D16 Slave, Bus Address switch-selectable within 64K short I/O address space; occupies 1K consecutive word address space with supervisory/non- privileged address switch selection. Interrupter is switch-selectable, I (1) to I (7) or off; switch-selectable vector.
Character Generator	96-character ASCII set plus 32 special characters displayed in a 5 X 7 pixel format. Insertion mode is constant contrast.
Reticle Format	
Boresight Reticle	Open centered fixed crosshair, with center dot.
Movable Reticle	Four selectable formats: closed crosshair, open crosshair, open with dot,box.
Video Insertion Mode	Selectable via bus, constant contrast or black.
Interrupts	Vectored interrupt generated each frame; may disable under program control.
Display Update	Full update, alphanumeric, encoded and symbol data can occur each video field. Inserted data remains until overwritten or turned off by inputs over the VMEbus.
Power Requirements	5 volts @ 560 ma nominal +12 volts @ 80 ma nominal -12 volts @ 70 ma nominal
Temperature	
Operating	0° to 60◦C (32◦ to 140◦F)
Non-operating	-20◦ to 70◦C (-4◦ to 158◦F)
Humidity	95% non-condensing
Size	Dual-high VME card (6U form factor) occupies one slot (0.8 inch spacing)

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