

FEATURES

- Inserts up to 1026 bytes of scanline encoded data per field into standard 525 line RS-170 or NTSC video.
- On board error correction (hamming) code and LLRC generation.
- Insert up to 30 lines of 32 alphanumeric characters.
- Automatically synchronizes with composite video input, no external vertical or horizontal sync required.
- Generates and inserts Boresight Reticle

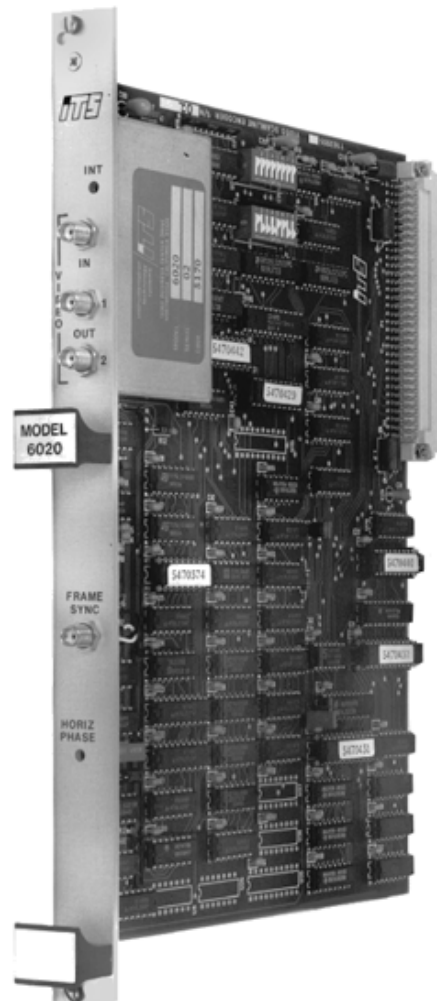
DESCRIPTION

The ITS Model 6020 provides for the insertion of up to 1026 bytes of machine readable scanline encoded data per field and up to 30 lines of 32 alphanumeric characters within a standard RS-170 or NTSC video signal. All inserted data is controlled via the VMEbus.

The encoded data conforms to RCC Optical Systems Group Document 452-86, Section 8. The number and location of encoded scan lines are set via the bus. The maximum byte capacity per field is 1026. This corresponds to a data rate of 492,480 bits per second.

The character generator produces the full 96 character ASCII set plus an additional 32 special characters. Generated characters are positioned in the video image in direct relation to the position of the character code in a 960 location memory map. Dual port memory allows addressing the map at any time. The entire character display may be blanked by activating a single control register bit.

The 6020 is contained on a dual high 6U VME card and occupies a single 0.8 inch slot.



Model 6020 VMEbus Video Scanline Encoder

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
Input Impedance	75 ohms
Video Amplifier Bandwidth	>20 MHz \pm 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)
Frame Sync (Out)	Vertical blanking reference 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 2K consecutive word address space with supervisory/nonprivileged 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
Boresight Reticle	91 x 91 pixel open centered fixed crosshair, with center dot
Encoded Data	Scan Line, Data-Into-Video IAW RCC Optical Systems Group Document 452-86, Section 8. Maximum encoded data per field is 8202 bits (1026 bytes)
Interrupts	Vectored interrupt generated each video frame; may be disabled under program control
Display Update	Full update, alphanumeric and encoded data can occur each video field. Inserted data remains until overwritten or turned off by inputs over the VMEbus.
Power Requirements	5 volts @ 2.9A nominal +12 volts @ 30 ma nominal -12 volts @ 60 ma nominal
Temperature	Operating 0° to 50°C (32° to 122°F) Nonoperating -20° to 70°C (-4° to 158°F)
Humidity	95% noncondensing
Size	Dual-high VME card (6U form factor) occupies one slot (0.8 inch spacing)