

## IT'S ABOUT TIME



### Add a Variety of Useful Information or Simply Time/Date to Your Video

- Available with up to 10 video channels
- Precision Time and Date with fail-safe synchronization to GPS or IRIG-B inputs
- Time accurate to +/- 1 ms sampled at vertical sync, switch selectable for field or frame update
- UTC(GMT) or hour offset to local time worldwide using rotary switch
- GPS latitude and longitude display (in GPS input mode), user annotation (in IRIG-B input mode)
- Event capture accurate to +/- 1 ms, with display and serial output of run count, event count, and time
- Boresight crosshair • Edge-code write and read, with moveable crosshair in read mode

#### Prices (includes shipping)

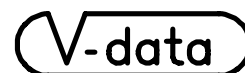
Video Encoder/Decoder, Model VED-X  
 with AC adapter and 19 inch rack mount adapter  
 Compatible 12 Channel GPS receiver, Model GPS-35V  
 S-Video (YC) Adapter (use on any channel, each)  
 DC Power Cable with locking connector

#### Terms net 30 (in US) or MasterCard/VISA

\$900X + \$3000/X (X= number of channels)  
 \$350  
 \$50  
 \$15

#### Other Products

GPS Receiver/IRIG-B Timecode Generator, Model GTP  
 Video Encoder/Decoder, Model VED-I  
 Video Encoder/Decoder (GPS on Video), Model VED-M  
 Video Encoder/Decoder with expansion capability, Model VED-A



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## V-data Video Encoder/Decoder, Model VED-X Specifications

**A Multi channel version of the VED-I where X specifies number of channels (2-10)**

**Physical:** 5 ¼”H 19”W rack mount x 8” D Aluminum Enclosure, Weight 8 lbs,

**Environmental:** Temperature Range, Operating -10 to +70C, Storage -40 to +85C

**Power:** 9-16 VDC @ 0.1X amp without GPS receiver, add 0.2 amp with GPS receiver  
2.1 mm jack, center pin positive, reverse polarity protected, self-resetting fuse.

**Video In/Out:** 1 V p-p into 75 ohms, BNC connectors, S-Video (YC) adapters available

**IRIG-B In:** 3 volts p-p, opto-isolated (compatible with V-data’s GTP)

### COM Connector (DB9F) Pin Assignment:

1. +12 VDC power to GPS receiver, 400 ma maximum load
2. Serial RS-232 (TTL) data output , 4800 baud, 8 data bits, 1 stop bit, no parity, no handshake
3. Serial RS-232 data in to VED, 4800 baud, 8 data bits, 1 stop bit, no parity, no handshake
4. Pulse-per-second input from GPS receiver
5. Chassis Ground for GPS receiver or serial data
6. Boresight Crosshair White/Black/Off (Schmidt trigger with 10k ohm pullup, active low)
7. Event Counter input (Schmidt trigger with 10k ohm pullup, active low)
8. Run Counter input (Schmidt trigger with 10 k ohm pullup, active low)
9. Chassis Ground

### Internal Switches:

Switch	On Position	Off Position
1	Hour Offset Range -12 to +3	Hour Offset Range +12 to -3
2	Updates each frame	Updates each field
3	Lat/long data display on	Lat/long display off
4	Edge-code on	Edge-code off

**GPS receiver requirements:** Receiver must output \$GPRMC message in RS-232 at 4800 baud, 8 data bits, 1 stop bit, no parity, and a pulse-per-second of 10-100 ms duration, +3 to +15 volt amplitude.

**Recommended GPS receiver available from V-data:** Model GPS-16, a 12 channel differential ready WAAS receiver with integral antenna, 16 feet of cable with VED-I compatible DB9M connector, NMEA and pulse-per-second outputs, includes a removable magnetic base. (100 foot extension cable available for \$50.)

**Time Display:** Displayed date and time is UTC(GMT) time from GPS or IRIG-B +/- the hour offset. The time starts counting from zero on power-up until valid IRIG-B or GPS input is detected as shown by an on-screen indicator. Correct time is maintained during input drop-outs.

**Event Capture:** Active low inputs or RS-232 inputs advance Run Count or Event Count and capture Event Time with millisecond accuracy. Run Count input resets Event Count. Once activated, Counts and Event Time are displayed on screen, edge-coded (if enabled), and output as serial data. After serial data output is complete (approximately 25 milliseconds) event capture is re-armed.

**Edge-code:** When enabled, edge-code is written for all sign and numeric data displayed on the bottom line. In the decode mode, which is accessed by commands from an external computer via the serial port, edge-coded data from previously recorded video can be read and output along with the position of a moveable crosshair, facilitating video position and motion analysis.

**User Annotation:** GPS lat/long data or user input data can be displayed on top line. User input data can be displayed on bottom line where it can be edge-encoded. Data can be written to all channels or to a specified channel. Channels can be selectively enabled or disabled for serial data and control pin inputs

**Boresight Crosshair:** Active low input or RS-232 input sequences crosshair White/Black/Off. The crosshair position can be changed in the decode mode and retains the new position on returning to encode mode, but returns to screen center on power-up.