

# IOTA-VTI

## Technical Specifications

Power supply - clean 7V to 12V 5.5mm x 2.1mm coaxial jack centre pin positive.  
The unit will not function with less than 4.3V applied.

Video in:- NTSC or PAL, RCA connector.

Video out:- NTSC or PAL (whatever is coming down as video in) RCA connector.

USB:- Type B socket, uses the FTDI USB-serial driver, 57600 baud 8N1.

Driver is available at:-

<http://www.ftdichip.com>

Use the VCP driver, not the D2XX.

Note that the GPS unit sends at 4800 baud but this data stream is internally upsampled to 57600 baud.

GPS unit - US Global Sat EM-406A

Output sentences

Position screen:- GGA, ZDA (every three seconds)

Time screen:- GSA, ZDA (every second)

Timing accuracy:- GPS 1PPS is specified to +/- 1 microsecond / second for the EM-406A.  
The VTI will present an error if its adjusted internal clock is more than 99 microseconds ahead or behind the 1PPS.

Time from P fix (3D) to almanac download:- less than 15 minutes of continuous fix.

Period of almanac retention with no power applied:- 3 hours minimum (most units are good for a week).

Operational lifetime (EEPROM):- 50,000 hours continuous running. The unit will continue to run after this time but the EEPROM may not retain the time of the last almanac update.