極星國際航電股份有限公司
ARKNAV International Inc.

A-411M (MTK)

Bluetooth GPS Data Logger

GENERAL DESCRIPTION

The A-411M (MTK) is the industry leading Bluetooth GPS data logger that offers simultaneous use of real-time GPS reception and data logging. The A-411M (MTK) features extended battery life, (up to 20 hours) with rechargeable battery and increased memory size. (4MB) It can interface with any Bluetooth-enable mobile device to provide GPS data to applications. The A-411M (MTK) is capable of keeping up to 250,000 records or positions, including longitude, latitude, speed, UTC, and tag data. The log file can be downloaded for analysis via high-speed USB connection, the location histories can also be exported to mapping software such as Google Earth or TrackMaker.

It can be used as a wireless and mobile data logger for asset tracking, fleet management, heavy logistics and

APPLICATIONS

- Land/Marine Navigation
- Asset Tracking
- Telematics
- Fleet Management
- Sports and Recreation

KEY PRODUCT FEATURES

- 32 channels “All-In-View” tracking
- Cold/Warm/Hot start time: 36/33/1 sec. (average)
- Superior sensitivity: -158dBm tracking
- Built-in rechargeable Li-ion battery
- Support standard NMEA-0183 at 38400 bps baud rate
- Compatible with Bluetooth devices with Serial Port Profile (SPP)
- 4M Bytes flash memory for data logging, with 16 bytes binary data per record that stores up to 250K data records
- Log data can be exported to mapping software such as Google Earth and TrackMaker
- Logging data interval programmable: by time or distance
- Data tag (start, stop point) can be set by user, maximum 250 sections
- Support G-mouse function via USB cable
- Vibration sensor for power management (auto power on or goes to sleep mode)
- Low power consumption: 20 hours

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SPECIFICATIONS

GPS Features

Chipset	MTK low power chipset
Frequency	L1, 1575.42MHz
C/A Code	1.023MHz chip rate
Channels	Supports 32 channels
Antenna (Internal)	Built-in low noise patch antenna

Sensitivity

To -158dBm Tracking, Superior Urban Canyon Performance

Time to First Fix (TTFF)

Cold Start	36 sec, average
Warm Start	33 sec, average
Hot Start	1 sec, average
Reacquisition	<1 sec
Update Rate	1 Hz (max.)

Accuracy

Position	<3m CEP (50%) without SA
Velocity	0.1m/sec, without SA
Time	±50ns synchronized to GPS time

Power

Built-in rechargeable 1100mAh Li-ion battery and 5V DC input

Operation Current	~57mA (Typical)
Operation Time	20hrs, fully charged, in continuous mode
Sleeping Mode	Sustain more than 2000 hours
Charging Time	3.0hrs. (Typical)

Environmental Characteristics

Operating Temperature	- 20°C to + 60°C
Storage Temperature	- 20°C to + 85°C

Datum

WGS-84

Dynamic Conditions

Altitude	<18,000 m (60,000feet)
Velocity	<515 m/s (1000 knots)
Acceleration	<4G
Motional Jerk	20m/sec^3 max.

Interface

Communication Protocol: Communicate with host platform via Bluetooth (class 2) serial port profile

Bluetooth communication distance 10meters (Typical)

GPS Protocol: Default: NMEA-0183 - RMC

Data bit: 8, stop bit: 1 (Default)

Device Size and Weight

77.4 (L) X 46.3 (W) X 22.5 (H) mm

3.05 (L) X 1.82 (W) X 0.89 (H) inch

68g (battery included)

Accessories

Car charger (12V in, 5V output)

AC adaptor (5.3V output, 500mA)

Data Logger

Log 249,856 records in flash memory (4M bytes)

Log data: NMEA format (Longitude, Latitude, Speed, UTC, Tag)

Output data format: WGS84 2-degree transverse mercator

Mapping software: a. Google Earth b. TrackMaker c. *.csv (logdata.csv)

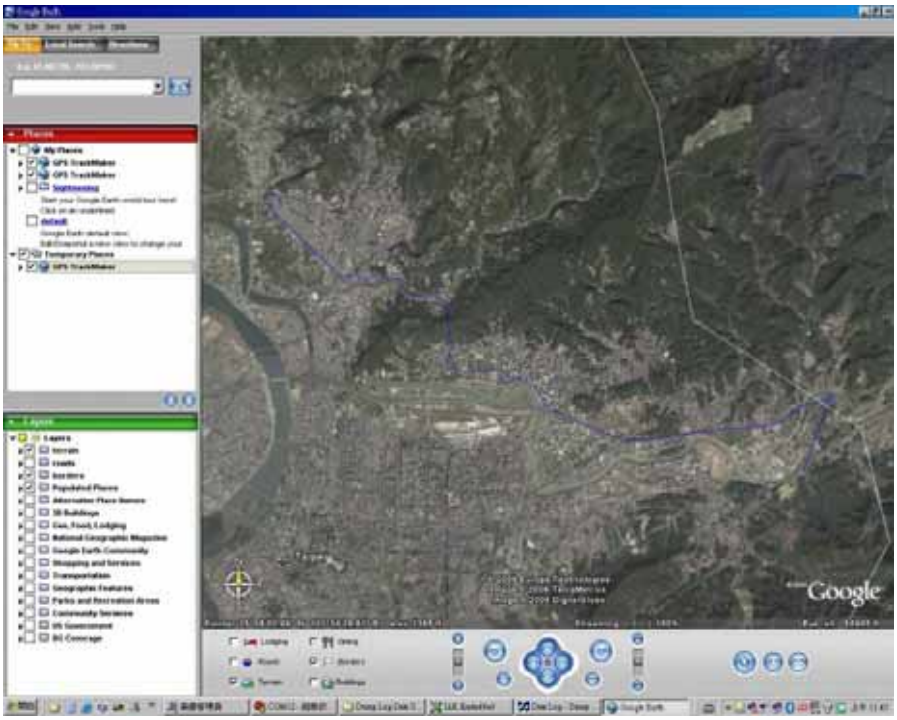
Log interval: by time (1sec~30mins) or distance (2~65535meters)

Vibration setting: disable/high/middle/low sensitivity

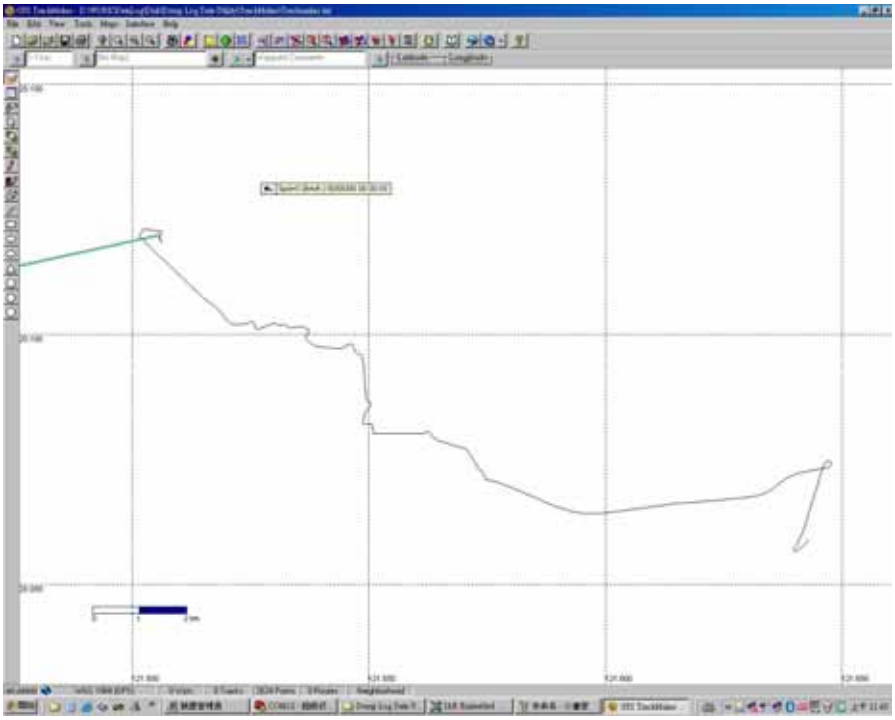
Goes to sleep mode if vehicle stays still for 15 minutes

Auto power on in 3 sec. when detecting vibration

All specifications are subject to change without notice



Example of Map loaded into Google Earth



Example of Map loaded into TrackMaker

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REVISION HISTORY

Revision	Date	Comments
V11.07	16_Nov_2007	First release