



## **IOSiX, LLC**

315 East Eisenhower Pkwy, Suite 211  
Ann Arbor, MI USA 48108

## **GPS LOGGER**

---

# **Product Brief**

---

*Author:*  
ROBERT VOGT IV

July 31, 2011

### **Abstract**

This document overviews the capabilities and specifications of the IOSiX GPS Logger (v2.0).

# 1 GPS

Chipset	MediaTek MT3329, 66 channels
Frequency	L1, 1575.42 MHz, C/A code
Acquisition sensitivity	-148 dBm
Tracking sensitivity	-165 dBm
Position accuracy	3.0m 2D-RMS 2.5m 2D-RMS (DGPS)
Time to first fix	<35 seconds (cold start) <34 seconds (warm start) <1 second (hot start)
DGPS	SBAS (WAAS, EGNOS, MSAS, GAGAN)
AGPS	Supported (offline)
Update rate	1-10 Hz
Temperature range	-40 to +85 °C

## 2 Sensors

### 2.1 Accelerometer (factory option)

### 2.2 Temperature Sensor (factory option)

Resolution	13 bits
Accuracy	$\pm 1$ °C
Temperature range	-55 to +125 °C

### 2.3 Analog Inputs

Range	0-36 V
Resolution	10-16 bits

### 3 Wi-Fi (factory option)

#### 3.1 802.11b

Data rates	1 & 2 Mbit/s
Security	WEP, WPA, WPA2
Antenna	Internal
FCC ID	W70-ZG2100-ZG2101
IC ID	8248A-G21ZEROG
Japan ID	AC164136-2 - 005WWCA0311 005GZCA0149

#### 3.2 802.11b/g/n (available 3Q11)

Data rates	Up to 65 Mbit/s
Security	WEP, WPA, WPA2
Antenna	Internal

### 4 CAN (factory option)

Baud rates	125, 250, 500 kbit/s
Headers	11- & 29-bit
Protocols	Raw, J1939, ISO-15765

### 5 Storage

#### 5.1 Built-in flash (factory option)

Capacity	8 or 16 MB
File system	Custom

#### 5.2 MicroSD (factory option)

Card type	microSD
Capacity	Up to 2 GB
File systems	FAT16 & FAT32

## 6 Power

Sleep	<1 mA
Acquisition	50 mA
Tracking	40 mA
Uploading	200 mA

## 7 Processor

Chipset	PIC32
Architecture	32-bit MIPS M4K
Frequency	30 MHz
Flash	512 KB
RAM	64 KB
USB	CDC class
CAN	1 channel
Temperature range	-40 to +85 °C

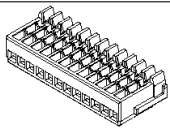
## 8 Indicator

An RGB LED located on the underside of the unit provides a status indication. This placement is to prevent distraction of the driver in a vehicle application.

## 9 Connector

### 9.1 Specification

Device connector	Molex 55456-1269
Mating connector	Molex 54596-1210
Type	Insulation displacement
Pins	12



## 9.2 Pinout

Pin	Description	Range
1	Ignition input	0-36 V
2	Analog 1	0-36 V
3	Analog 2	0-36 V
4	Analog 3	0-36 V
5	CAN High	
6	CAN Low	
7	TTL Serial RX	0-5 V
	USB 5V input	0-5 V
8	TTL Serial TX	0-5 V
9	USB D+	0-3.3 V
10	USB D-	0-3.3 V
11	Ground	0 V
12	Power input	4-30 V