

# R-9PRO Vehicle Tracking Unit



## Features

- GPS and GSM modules integrate inside
- Save and auto resend up to 8192 locations
- Built in motion switch (activated by G-Force)
- Detect external power loss
- Multi-task allows saving/reading GPS and GSM data at the same time
- Smart tracking with distance and angle tracking
- Accurate distance measurement using GPS data
- Upload firmware or configuration over the air (multiple units can be updated at the same time)
- Vehicle immobilizer via phone or browser
- Built in 1000 mAh backup battery
- Analog input for temp/fuel/pressure monitoring
- Hands-free voice communication (optional)

## Specifications

MECHANICAL & ENVIRONMENTAL CHARACTERISTICS		
<b>Physical Characteristics</b>		
Unit Size (L x W x H)	95 x 77 x 30 mm (±1mm)	
Weight	234.2 g (±10g)	
Housing	Aluminum case	
<b>Environmental Characteristics</b>		
Operational Temperature	-20°C ~ +60°C (board temperature)	
Storage Temperature	-40°C ~ +80°C	
<b>NOTE:</b> Battery has individual operational and storage temperature limitations!		
<b>General Characteristics</b>		
I/O	4 Outputs	4 negative outputs (200 mA max)
	4 Inputs	4 negative or positive inputs – active low or active high (1 can be configured as pulse counter input)
	1 Analog Input	1 analog input (0 ~ +3.3 Volt – max) with 8 bit resolution
	1 RJ45 Multi-Port	Serial RS232 port (9600 baud rate)
		Direct GPS output RS232 (9600 baud rate)
1 Voice I/O	Voice I/O connector	
<b>Electrical Characteristics</b>		
Input Voltage	+9 ~ +36V dc, Ripple < 300 mV	
<b>Battery Characteristics</b>		
Backup Power	Li-Ion Cell Battery – 3.7V/1000mAh	
Battery Temperature Limitations	Operation Temp.	-20°C ~ +60°C
	Storage Temp	-20°C ~ +35°C

<b>GPS SPECIFICATION</b>	
<b>General</b>	
Frequency	L1, 1575.42 MHz
C/A Code	1.023 MHz chip rate
Channels	20 parallel channels
<b>Accuracy</b>	
Position	10m, 2D RMS
	5m, 2D RMS, WAAS corrected
	<5m (50%), DGPS corrected
Velocity	0.1 m/sec
Time	1 sec synchronized to GPS time
<b>Datum</b>	
Default	WGS-84
<b>Time to First Fix (TTF)</b>	
Cold Start	37 sec
Warm Start	34 sec
Hot Start	1.5 sec
<b>Dynamic Conditions</b>	
Altitude	18,000m (60,000ft.) above sea level, max
Acceleration	4G, max
Velocity	515 m/sec (1000 knots), max
Jerk	20 m/sec, max

<b>GSM SPECIFICATION</b>	
Frequency Bands	Quad Band : GSM 850 / GSM 900 / GSM 1800 / GSM 1900
Maximum RF Power	GSM 850 / EGSM 900 Class4 (2W)
	GSM 1800 / GSM 1900 Class1 (1W)
Receiving Sensitivity	GSM 850 / GSM 900 < -109dBm
	GSM 1800 / GSM 1900 -105dBm ~ -106dBm
SIM Interface	Standard SIM interface (3V/1.8V)
GPRS Data Transmission	GPRS Class 10
	Coding Scheme CS 1, CS 2, CS 3, CS 4
	Maximum transmission speed : 85.6 Kbit/s
	Support PBCCH
	Built-in TCP/IP protocol. Support multi-slot, ACK response, support large memory buff.
CSD Service	Support CSD data transmission up to 9600 bit/s
	Fax support : Group 3, Class 1.0
	Support USSD