



## FM-Eco4 light 3G devices

FM-Eco4 light 3G is a compact GNSS tracker designed for vehicle tracking and monitoring tasks such as providing information on vehicle location, speed, trip history, mileage, fuel level, etc. The device has internal GNSS & GSM antennas and is small in size. Therefore, it fits easily anywhere in the vehicle and makes installation much easier.

The device is also available with an integrated battery – FM-Eco4 light+ 3G.

The device communicates using GSM (2G) and UMTS (3G) networks.

## Key features

- Vehicle location, history, mileage and speed monitoring
- Driver behaviour monitoring (Eco-Drive)
- Driver identification
- Temperature monitoring
- Remote ignition blocking
- Internal geozones
- Jamming detection
- Configuration via SMS and SMS alerts
- Supports additional sensors

	FM-Eco4 light 3G	FM-Eco4 light+ 3G
<b>Environmental specifications</b>		
Temperature	Operating: -30 to +60 °C Storage: -40 to +65 °C	Operating: -20 to +60 °C Battery charging: 0 to +45 °C Battery discharging: -20 to +60 °C Storage: -20 to +60 °C
Relative humidity	5 % to 95 % Non-condensing	
<b>Electrical specifications</b>		
Power supply range	10 ÷ 32 V DC	
Power supply voltage	12 / 24 V DC	
Maximum current rating	150 mA @ 12 V DC	
Internal battery	–	LiPo 3.7 V 190 mAh
Protections	Battery short circuit protection (FM-Eco4 light+ 3G only) Reverse polarity protection Internal F2 type slow-blow 1 A fuse Overcurrent protection on 1-Wire power line	
<b>Power consumption @ 12 V DC</b>		
Operating	Idle mode: 40.1 mA Active mode: 66.9 mA Sleep mode: 13.0 mA Deep sleep mode: 8.6 mA	
Operating while charging battery	–	Idle mode: 112.2 mA Active mode: 144.4 mA Sleep mode: 82.7 mA Deep sleep mode: 77.8 mA
<b>Connectivity</b>		
GSM/UMTS	Modem: Quectel UG96 Antenna: Internal (Quad-band) GSM frequency band: 850 / 900 / 1800 / 1900 MHz UMTS frequency band: 800 / 850 / 900 / 1900 / 2100 MHz	
GNSS (GPS, GLONASS) module	Modem: Ublox EVA-M8M Antenna: Internal Frequency: 1575.42 MHz (GPS); 1602 MHz (GLONASS) Channels: 72 Tracking sensitivity: -164 dBm (GPS); -163 dBm (GLONASS) Reacquisition sensitivity: -159 dBm (GPS); -156 dBm (GLONASS) Cold start duration: < 30 s	

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<b>Interfaces</b>		
4 x Digital inputs (DIN)	Voltage range: 0 - 30 V DC Voltage threshold: 4 V DC Configuration invertible digital inputs DIN3 and DIN4 (pull-up / pull-down) Voltage threshold (inverted): 250 mV DC	
2 x Analog inputs (AIN)	Voltage range: 0 - 30 V DC Resolution: 12 bit	
2 x Digital outputs (DOUT)	Maximum voltage: 32 V DC Maximum current: 1 A	
1-Wire interface	Power output: 80 mA @ 4.1 V DC Maximum cable capacitance: 4 nF	
User interfaces	Mini USB interface 3 x Indication LEDs	
<b>Features</b>		
Internal storage	4 MB (max. 30000 records)	
Accelerometer	3-axis auto-calibrating; g-force up to 4 g	
<b>Certifications and ratings</b>		
Certifications	E-mark, CE, RoHS, FCC	
IP Rating	-	
<b>Physical properties</b>		
Dimensions (L x W x H)	64.5 x 61 x 22 mm	
Weight	62 ± 5 g	68 ± 5 g
Housing	Plastic	

## Ordering information

<b>FM-Eco4 light 3G</b>	Eco4 light with UMTS (3G)
<b>FM-Eco4 light+ 3G</b>	Eco4 light with UMTS (3G) and battery

## Warnings

All internal components including the battery must be replaced only by the manufacturer! Any self-willed attempt to repair or change any components will void the warranty.



Caution! The devices are shipped to the users with partially charged batteries. After the first power up the device must not be used with the battery. It must be connected to an external power source until the battery is fully charged. Once charging is complete, the device can begin its normal operation.



Caution! There is a risk of explosion if the battery is replaced with a battery of an incorrect type. Dispose of used batteries according to environmental requirements.



Waste equipment should not be disposed of with your other household waste. The product must be taken to separate collection points at the product's end-of life.

## Document application

Given parameter values and various characteristics within this document apply only to the most recent device hardware version.

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### Contact information:

Ruptela  
Perkunkiemio st. 6  
LT-12130 Vilnius, Lithuania  
Phone: +37052045188  
Web: [www.ruptela.com](http://www.ruptela.com)

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