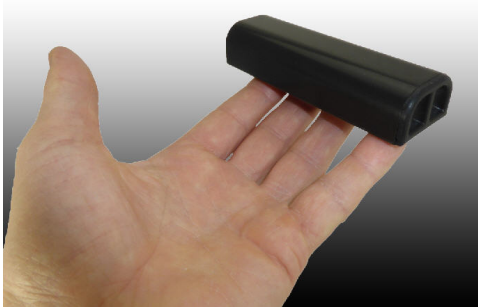


StreamLine Tube

Specifications



The StreamLine GPRS/GPS/CELLID/RFID range of modules enable you to remotely track & trace a variety of objects.

StreamLine Tube is the latest addition, targeted for both industrial and general use applications that need a minimum size while providing advanced location services.

Key Features

- Extremely small and lightweight, housing 116 x 38 x 25 mm
- Weight 110 grams
- Wide operating temperature range
- Quad-band for worldwide coverage
- Ultra low power consumption
- Excellent GPS accuracy
- Multiple watchdog levels for maximum stability
- Remote configurable, see expected life time
- Field upgradeable firmware via GPRS
- Replaceable battery
- Acceleration Sensor
- RFID

Applications

- cars, trucks, caravans,
- motors, scooters, bicycles,
- containers, equipment,
- machinery, tools,
- luggage, animals,
- etc.

The Tube offers up to 10 years operation. The number of positions per day can be increased, e.g. in case of theft or required higher position frequency (see expected life time).



Size is only 116 X 38 x 25 mm

The functionality of the module can be programmed. By default, the module will obtain 1 location each day. First the positioning is carried out with RFID. If the optional RFID tag(s) cannot be found, the position will be obtained by GPS. GPS accuracy is 2,5 meter CEP. If no GPS fix can be obtained, the module will determine the position based upon CELLID. The module expects optimal GPS signal for correct operation.

The CELLID position is based upon triangulation using position data of GSM masts. CELLID provides less accuracy compared to GPS, but even in subways and underground parkings, it will provide a location. In city areas, the accuracy is about 50-500 meters, while in remote areas the accuracy can be over a kilometre.

In areas without network coverage, position-data and events are stored in memory. As soon as communication is restored, the logged information will be transmitted.

Examples

Anti theft: Put a Tube on a static object. If the object moves within 10 years, the Tube will wake up and send an alarm.

Anti theft: Put a Tube in a vehicle, container, etc..The Tube sends a location every day and in case of theft, increase the number of locations and active the RF for easy location of the object.

Daily information: Put a Tube on any object and receive daily updates about the location.

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Data communication

GPRS/GSM Modem	Quectel Quadband	
Frequency	850 / 900 / 1800 /1900 MHz	
RF Power	Class 4 (2W) @ 850 / 900 MHz Class 1 (1W) @ 1800 /1900 MHz	
Sensitivity	850/900 MHz 1800/1900 MHz	-107 dBm (typical) -106 dBm (typical)
Data	GPRS	Class 10
	Coding schemes	CS1 to CS4
SMS	Point-to-Point mobile originated & mobile terminated	
	Cell Broadcast	

Navigation

GPS Receiver	Sirf IV	
Frequency	L1 1574.42 MHz	
Acquisition Time (TTFF)	Hot start	< 1 sec
	Cold start	34 sec
Position Accuracy	2.5 meter (CEP)	
Sensitivity	Cold start	-148 dBm
	Reacquisition	-155 dBm
	Tracking	-165 dBm
Antenna	Integrated	

Tube module

Power supply	Internal long life battery cell, non-rechargeable	
Size	116 x 38 x 25 mm	
Weight	110 gr	
Installation	Place in area with good visibility to sky for GPS. Use glue of tie-wraps for installation	
Expected lifetime	<p>Up to 10 years, depending upon the settings and environmental conditions</p> <p>Battery Life time was tested under following conditions: local temperature -8 Celsius to + 30 Celsius. A total of 3,000 cycles with gps position were recorded during life cycle testing at 20 Celcius.</p> <p>Note: Battery life time is reduced by eg. low/high temperatures, shock, reduced gps signal, distance to gsm network.</p>	
Sim card	Micro sim	
Operating temperature	-25 Celsius to +85 Celsius	
Positioning	GPS / CELLID / RFID	

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Coverage

Standard coverage

The Tube includes the sim card and standard European coverage, *incl. all data traffic and roaming costs*. Below mentioned are the covered countries.

Austria
Belgium
Bulgaria
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Gibraltar
Greece
Hungary
Iceland
Ireland
Italy

Latvia
Liechtenstein
Lithuania
Luxembourg
Malta
Norway
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
Switzerland
The Netherlands
United Kingdom

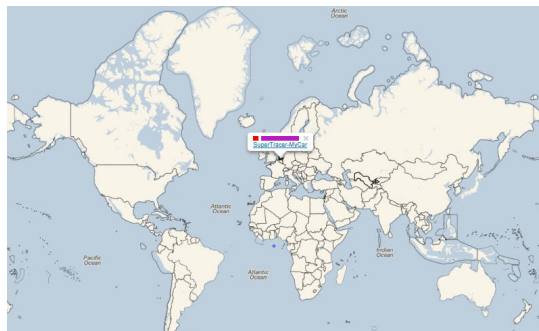
Extended Coverage

All countries with GPRS/GSM coverage are supported.

Additional costs may apply for the extended global coverage. Please contact our sales department for detailed information.

At 1000+ modules, for the extended coverage, OEM production is offered.

Web forwarding / Web portal services



Web forwarding and / or web portal services are included. Data is forwarded to your web portal. If a gps/CellID position is obtained: date, time, latitude, longitude and position type (CellID or gps). If a rfid tag is used: date, time, rfid code. The data will be forwarded in XML format.