

Fleet Management

Track & Trace

Security

Data Mining

API integration

Syrus 3G

GPS

THE
ULTIMATE
TRACKING
DEVICE



BUILT FOR IoT / M2M APPLICATIONS

Actionable intelligence for infinite possibilities interacting with multiple sensors and accessories through APIs.

Key-Features

3G - UMTS/HSPA+: Dual band UMTS 850/1900MHz

High speed data transfer for faster communication and interaction for IoT/M2M applications.

3-Axis Internal Digital +-16G accelerometer

Turn over signal with instant acceleration monitoring as well as back log for crash condition history report.

Backup Satellite Communication capability

IRIDIUM network compatible with SATCOM accessory sold separately. Configuration and app available at PEGASUS Gateway- SYRUSMART.

Advanced OTA configuration management via PEGASUS Gateway

Specialized Over-The-Air configurations available for multiple business models and applications.

Water Resistant IP65

Now suitable for all kind of vehicles and mobile assets exposed to harsh weather conditions.

Tamper Detection

Anti-tamper functionality accurately detects when the device's case has been opened.

ECU Monitor compatible

Easy CAN / OBD integration with external ECU Monitor accessory that can be managed via PEGASUS Gateway – REST APIs.

Back & Forward Log

Retrieve back or forward log messages to provide valuable data after a critical incident such as harsh braking condition, crash event with photo capturing functionalities.

Large Store & Forward Buffer

Save up to 30,000 events when no GPRS or GSM network is available.

Built-in remote diagnostics

Advanced functions to monitor the health of hardware components as well as efficiency of communication.

Intelligent Geofencing capability

Embedded integration of up to 100 circular and 50 polygonal user defined geofences.

Low Energy consumption

Ultra low power consumption during sleep mode (1mA).



Low energy Consumption



Water Resistant IP65



Tamper Detection

Proudly supported by DCT IoT/M2M high-level ecosystem

Advanced development tools and resources to deploy successful smart connected solutions: devices, accessories, enabling platform, remote diagnostic, global connectivity, prime support and professional training.



Advanced Interaction through APIs

Create and deploy IoT/M2M solutions quickly with PEGASUS Gateway/REST APIs. Eliminate the complexity of data abstraction and interact without the hassle of learning hardware protocols.



SYRUSMART Ready

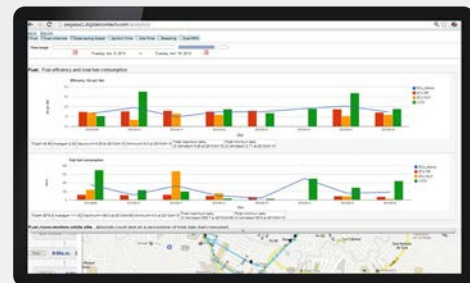
Choose among hundreds of advanced configurations and Apps available at SYRUS development community.



IoT/M2M Enabling Platform for Actionable Intelligence

Professional cloud based administrative gateway that provides a portal to update and monitor the SYRUS GPS 3G firmware, remote diagnostic, advance configurations management, real time interaction with accessories and advanced solutions deployment.

Pegasus Gateway sustains SYRUSMART, a specialized IoT/M2M applications market with a growing development community dedicated to expand the infinite possibilities with SYRUS GPS.



COMPATIBILITY with multiple accessories for advanced IoT/M2M Integration

'One Single device for multiple applications' - Outstanding actionable intelligence for Advanced Solutions with multiple sensors and accessories.



Navigation dispatch and routing



Fuel monitoring



Driver ID



Jamming detection



Road assistance



Temperature monitoring



Camera

Specifications: SYRUS 3G

Additional features

- Over-The-Air firmware upgrade and configuration management via PEGASUS gateway
- Turn-by-turn reports to guarantee the best possible tracking resolution
- Up to 100 built-in circular geofences
- Up to 50 built-in polygonal geofences
- Virtual hour Meter
- Virtual odometer
- Motion, shock and aggressive driving detection
- Customizable on-fabric cable connector (automotive connectors, waterproof connectors, Molex, etc)



Physical Specifications:

Unit Dimensions:	See last page
Weight:	TBD
Material:	Polycarbonate 94V-0 for higher temperatures
Waterproof casing:	IP-65 sealed

Environmental Specifications:

Operating Temperature:	-20°C ~ +70°C
Storage Temperature:	-30°C ~ +85°C
Humidity:	up to 95% non-condensing

Internal Backup Battery Specifications:

Capacity:	750 mA
Operating Voltage:	3.7V
Technology:	Polymer Li-Ion
Weight:	17g
Protection:	Internal PCM Circuit
Charge Temperature Ranges:	°C ~ +45°C
Discharge Temperature Ranges:	-20°C ~ +60°C

Electrical Specifications:

Operating Voltage:	8 - 32VDC
Active Tracking Consumption:	70 mA @ 12V
Deep Sleep Mode:	1mA @ 12V

Power Supply Protections:

Overvoltage	Yes
Overcurrent	Yes
Reverse Polarity	Yes
Internal Resettable Fuse	Yes

Connectors:

GPS Antenna:	Optional
SIM Access:	Yes (SIM Holder). Support Embedded Simcard

Mounting:

Screw Mount	Yes
Tie-Wrap	Yes

Certifications:

FCC
IC (Industry Canada)
CE
PTCRB (Pending)
AT&T (Pending)

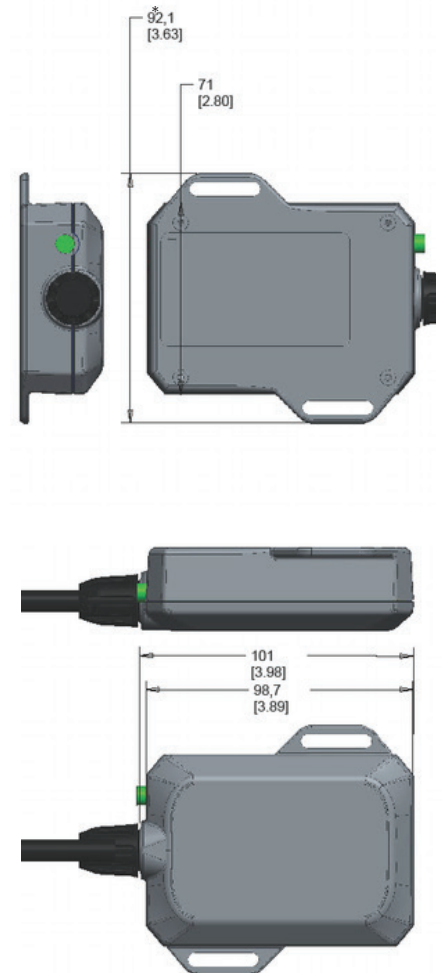
GPS Specifications:

GPS Solution:	MTK MT3339
Frequency:	L1, 1575.42MHz
Sensitivity Acquisition:	-148dBm, cold start
Reacquisition:	-163dBm
Tracking:	-165dBm
Channels:	66
TTFH Hot start:	1 second typical
Warm start:	33 seconds typical
Cold start:	35 seconds typical
Altitude Maximum:	18,000m (60,000 feet)
Velocity Maximum:	515m/s (1000 knots)
Acceleration Maximum:	+-4G, maximum 10Hz
Update Rate:	1Hz (default), maximum 10Hz
DGPS:	SBAS (default) [WAAS, EGNOS,MSAS,GAGAN]
AGPS:	Support
QZSS:	Support (Ranging)

**FROM
INTELLIGENT TRACKING
TO INFINITE POSSIBILITIES**

Cellular Modem Specifications:

Frequency Bands (EU):	GSM/GPRS/EDGE: Dual band GSM 900/1800MHz UMTS/HSPA+: Dual band UMTS 900/2100MHz
Frequency Bands (US):	GSM/GPRS/EDGE: Dual band GSM 850/1900MHz UMTS/HSPA+: Dual band UMTS 850/1900MHz
Data transmission:	GPRS Class 12 & Class 10 Max. 86 kbps (DL and UL) Coding schemes CS 1-4
Output Power (EU):	Class 4 (+33dBm ± 2dB) for EGSM900 Class 1 (+30dBm ± 2dB) for GSM1800 Class E2 (+27dBm ± 3dB) for GSM 900 8-PSK Class E2 (+26dBm +3 /-4dB) for GSM 1800 8-PSK Class 3 (+24dBm +1/-3dB) for UMTS 2100, WCDMA FDD Bdl Class 3 (+24dBm +1/-3dB) for UMTS 900, WCDMA FDD BdVIII
Output Power (US):	Class 4 (+33dBm ± 2dB) for EGSM850 Class 1 (+30dBm ± 2dB) for GSM1900 Class E2 (+27dBm ± 3dB) for GSM 850 8-PSK Class E2 (+26dBm +3 /-4dB) for GSM 1900 8-PSK Class 3 (+24dBm +1/-3dB) for UMTS 1900, WCDMA FDD Bdl Class 3 (+24dBm +1/-3dB) for UMTS 850, WCDMA FDD BdV
GPRS features:	HSDPA Cat.8 / HSUPA Cat.6 data rates - DL: max. 7.2 Mbps, UL: max. 5.76 Mbps EDGE Class 12 data rates - DL: max. 237 kbps, UL: max. 237 kbps GPRS Class 12 data rates - DL: max. 85.6 kbps, UL: max. 85.6 kbps
EGPRS features:	Multislot Class 12 Full PBCCH support Downlink Coding Schemes – CS 1-4, MCS 1-9 Uplink Coding Schemes – CS 1-4, MCS 1-9
HSPA Features:	
3GPP Release 6,7	DL 7.2Mbps, UL 5.7Mbps HSDPA Cat. 8 / HSUPA Cat. 6 data rates Compressed mode (CM) supported according to 3GPP TS25.212
UMTS Features:	
3GPP Release 4	PS data rate – 384 kbps DL / 384 kbps UL CS data rate – 64 kbps DL / 64 kbps UL



Peripherals:

Outputs:	2 Open Drain Outputs Continuous Current Capacity: 1.6A Maximum Instantaneous Current (< 1 sec): 10A Maximum Switching Voltage: 32V Automatic Overvoltage/Overcurrent Resettable Protection
Inputs:	3 Auxiliary Discrete Inputs. Voltages From 0V to 32V 50k Ohm Impedance 1 Ignition Input. 50k Ohm Impedance 1 Analog Input (ADC). Voltages From 0V to 15V. 127k Ohm Impedance
Serial Communications:	RS232 (Tx and Rx) One-Wire Bus for i-Button
Audio:	2 Way Audio

Additional Characteristics:

Internal GSM and GPS antennas
Two status LEDs
3-axis Internal Digital +/-16G Accelerometer

Cable Configuration Pin-Out

PIN	Color	Signal	Description
1	BLACK	GND	Device's Electrical Ground
2	BROWN	GND	Input's Electrical Ground
3	RED	VIN	Main Power: 8 Volts. - 32 Volts. Connect directly to vehicle's battery
4	WHITE/GREEN	IN3	Ground-activated User input. Detected ON when v<=2 Volts, OFF when v>=2.5 or when HZ. Max. 30 Volts. Zin > 50 Kohm
5	WHITE/BLUE	IN1	Ground-activated User input. Detected ON when v<=2 Volts, OFF when v>=2.5 or when HZ. Max. 30 Volts. Zin > 50 Kohm
6	WHITE/ORANGE	IN2	Ground-activated User input. Detected ON when v<=2 Volts, OFF when v>=2.5 or when HZ. Max. 30 Volts. Zin > 50 Kohm
7	GRAY	MIC	Single ended mic
8	YELLOW	IGN	Vehicle's Ignition Sensing: Detected as ON when V>=6.1 V. OFF when <=4.6 V. Max. 30 Volts. Zin > 30 Kohm
9	WHITE/YELLOW	SPK	32ohm speaker.
10	GREEN	VIN_BYPASS	Direct non-protected connection with MPOWER (pin 9). Use it to derive power to accessories
11	WHITE/RED	1-WIRE	Delivers 3.3 Volts. 50mA. max. Standard and overdrive speeds.
12	BLUE/RED	01	User output: Open Drain output. Max 1.8 Amps., 30 Volts.
13	ORANGE	TX	Transmit Data
14	BLUE/YELLOW	02	User output: Open Drain output. Max 1.8 Amps., 30 Volts.
15	PURPLE	RX	Receive Data
16	WHITE	ADC	From 0 to 15 Volts. Zin = 127 kohm

