

SYRUS 3G BLUETOOTH

Intelligent hub specially designed for wireless bluetooth-sensors integration and interaction. Its Bluetooth 4.1 module offers optimal power consumption for infinite possibilities for wireless applications. The SYRUS S3GBT-2481 has all the advanced features of previous SYRUS models plus enhanced remote interaction capabilities through DCT's REST APIs.

PART NUMBER

S3G-2481









Syrus^{3G}



KEY FEATURES

- Bluetooth 4.1 Smart Ready Mode**
 Easy pairing with external Bluetooth devices including the Syrus BTT-1634 multi-sensor tag, with optimal power consumption for infinite possibilities for wireless solutions.
- High speed data transfer**
 3G - GSM/GPRS/EDGE: Quad band 850/900/1800/1900MHz
 UMTS/HSPA+: Penta band 800/850/900/1900/2100MHz
- Advanced Configurable Accelerometer**
 The 3-axis internal digital accelerometer +/- 16G allows for a turn over signal with instant acceleration monitoring as well as back lock for crash condition history report.
- Backup Satellite Communication Capability**
 IRIDIUM network compatible with SATCOM accessory sold separately. Configuration and app available in the Pegasus Gateway- SYRUSMART.
- Advanced OTA Configuration Management**
 Specialized Over-The-Air configurations available for multiple business models and applications via the Pegasus Gateway.
- Water Resistant IP65**
 Now suitable for all kinds 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 the Pegasus Gateway – REST APIs.
- Back & Forward Log**
 Retrieve back or forward log messages to provide valuable data after a critical incident with photo capturing functionalities.

KEY FEATURES

- 
Large Store & Forward Buffer
 Save up to 21,000 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 100 polygonal user defined geofences.
- 
Enhanced Remote Interaction
 Through REST APIs supported by Pegasus Gateway, it can transform device data to structured reports with simple API calls.
- 
Intelligent Counters Computed on the Edge
 Outstanding embedded intelligence with user-defined thresholds and actions computed on the edge.
- 
Accelerations Backlog
 Retrieve logs with instant accelerations for valuable data before and after critical incidents.
- 
Supported by DCT High-level Ecosystem
 Advanced development tools and resources to deploy successful smart connected solutions.
- 
Multi-sensor/Accessories Compatibility
 Different ports with outstanding actionable intelligence for actionable telematics with multiple sensors and accessories.

TECHNICAL SPECIFICATIONS

PART NUMBER	
S3G-2481	
S3G-2481A	With external GPS Antenna Connector
PROGRAMMING/REPORTING	
Communication Protocol	Modified TAIP (Trimble ASCII Interface Protocol)
PHYSICAL	
Unit Dimensions (inches)	3.89 x 3.63 x 1.20
Weight	220 gm
Material	Polycarbonate 94v-0 for higher temperatures
Water-resistant casing	IP-65 Sealed
ENVIRONMENTAL	
Operating Temperature	-30°C to 85°C
Storage Temperature	-25°C to 40°C
Operating Humidity	Up to 95% non-condensing
Storage Humidity	10% to 90% non-condensing
BACKUP BATTERY SPECS	
Capacity	250 mA
Operating Voltage	3.7V
Technology	Polymer Li-Ion
Weight	6g
Protection	Internal PCM Circuit
Temperature Ranges	Charge: 0°C to 40°C Discharge: -20°C to 40°C

CONNECTORS	
GPS Antenna	Optional SMA male type
SIM Access	Yes (SIM Holder) Supports Embedded Simcard
POWER SUPPLY PROTECTIONS	
Overvoltage	Yes
Over-current	Yes
Reverse Polarity	Yes
Internal Resettable Fuse	Yes
ELECTRICAL	
Operating Voltage	8 - 32VDC
Power Consumption	
Deep Sleep Mode	1mA @ 12V
Active Tracking	70mA @ 12V
CERTIFICATIONS	
FCC	
IC (Industry Canada)	
CE	
PTCRB (pending)	
AT&T (pending)	
MOUNTING	
Screw Mount	Yes
Tie-Wrap	Yes

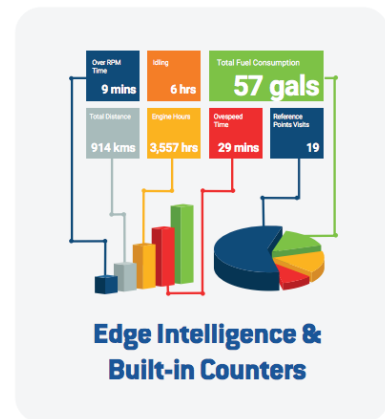
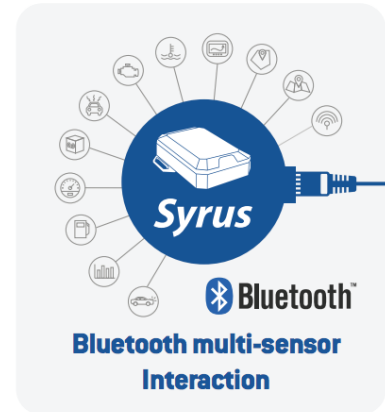
TECHNICAL SPECIFICATIONS

GPS SPECIFICATIONS

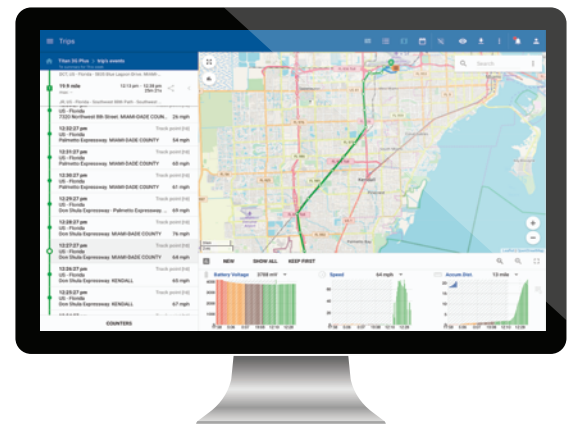
GPS Solution	MTK MT3339
Frequency	L1, 1575.42MHz
Sensitivity Acquisition	-148dBm, cold start
Reacquisition	-163dBm, hot start
Tracking	-165dBm
Tracking	66 Channels
TTFB Hot start	1 second typical
Warm start	33 seconds typical
Cold start	35 seconds typical
Altitude Maximum	18,000m (60,000 feet)
Velocity 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)
Protection	Internal PCM Circuit
Temperature Ranges	Charge: 0°C ~ +40°C Discharge: -20°C ~ +40°C

PERIPHERALS

Bluetooth	Bluetooth 4.1 Smart Ready compliant (Optional) Master and slave modes 200-400 meter line of sight range BR/EDR/BLE
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. 50KΩ Impedance 1 Ignition Input. 50KΩ Impedance 1 Analog Input (ADC). Voltages from 0V to 15V. 127KΩ Impedance
Serial Communications	RS232 (Tx and Rx) One-Wire Bus For i-Button
Audio	2 Ways Audio



ONLY AVAILABLE ON
Pegasus
Gateway



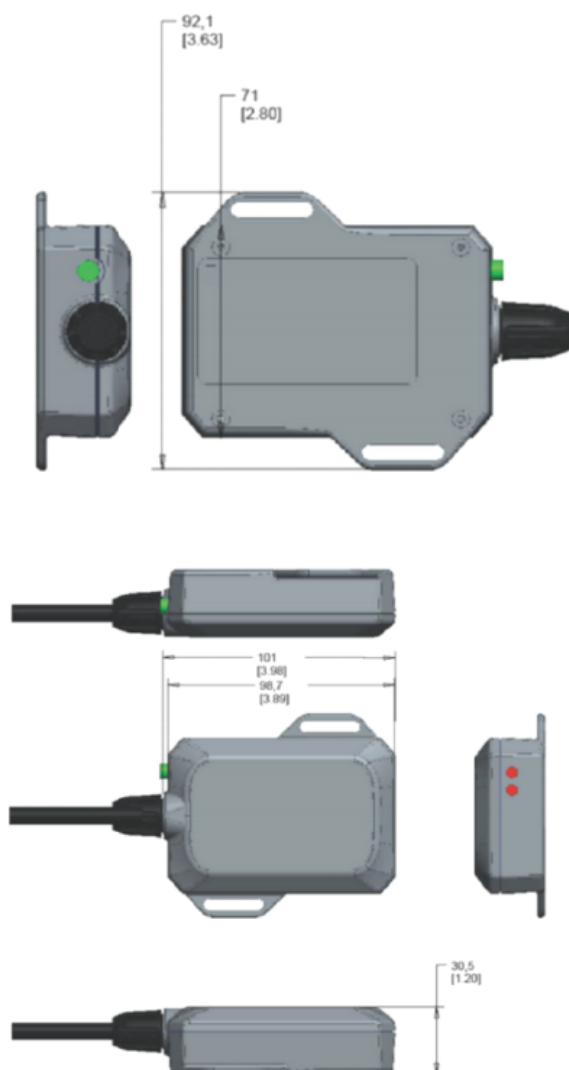
TECHNICAL SPECIFICATIONS

CELLULAR MODEM SPECIFICATIONS

HSPA Features	3GPP Release 6, 7 HSDPA Cat.8 / HSUPA Cat.6 data rates DL: max. 7.2 Mbps, UL: max. 5.76 Mbps Compressed mode (CM) supported according to 3GPP TS25.212
UMTS Features	UMTS features: 3GPP Release 4 PS data rate — 384 kbps DL / 384 kbps UL CS data rate — 64 kbps DL / 64 kbps UL
GPRS Features	Multislot Class 12 DL 237kbps, UL 237kbps PBCCH Support Multislot Class 12 Full PBCCH Support Coding Scheme 1 - 4 DL 85.6kbps, UL 85.6 kbps
Frequency Bands	GSM/GPRS/EDGE: Quad band 850/900/1800/1900MHz UMTS/HSPA+: Penta band 800/850/900/1900/2100MHz
Data Transmission	HSPA: DL 7.2Mbps, UL 5.76Mbps UMTS: DL 384kbps, UL 384kbps (PS) DL 64kbps, UL 64kbps (CS) EDGE: DL 237kbps, UL 237kbps GPRS: DL 85.6kbps, UL 85.6kbps
Output Power	Class 4 (+33dBm ±2dB) for EGSM850 Class 4 (+33dBm ±2dB) for EGSM900 Class 1 (+30dBm ±2dB) for GSM1800 Class 1 (+30dBm ±2dB) for GSM1900 Class E2 (+27dBm ± 3dB) for GSM 850 8-PSK Class E2 (+27dBm ± 3dB) for GSM 900 8-PSK Class E2 (+26dBm +3 /-4dB) for GSM 1800 8-PSK Class E2 (+26dBm +3 /-4dB) for GSM 1900 8-PSK Class 3 (+24dBm +1/-3dB) for UMTS 2100, WCDMA FDD Bdl Class 3 (+24dBm +1/-3dB) for UMTS 1900, WCDMA FDD Bdl Class 3 (+24dBm +1/-3dB) for UMTS 900, WCDMA FDD Bdl Class 3 (+24dBm +1/-3dB) for UMTS 850, WCDMA FDD Bdl Class 3 (+24dBm +1/-3dB) for UMTS 800, WCDMA FDD Bdl

DIMENSIONS

Millimeters [inches]



ADDITIONAL CHARACTERISTICS

- Internal GSM and GPS antennas
- 3-axis ±16G Digital Accelerometer
- 3-axis ±2000 dps Digital Gyroscope

PINOUT

PIN	WIRE COLOR	SIGNAL	DESCRIPTION
1	 BLACK	GND	Device's electrical ground.
2	 BROWN	GND	Device's electrical ground.
3	 RED	VIN	Main supply: 8V - 32V. Connect directly to vehicle's battery.
4	 WHITE/GREEN	IN3	Active ground input. Detects ON when $v \leq 2$ V, OFF when $v \geq 2.5$ V or when HZ Max 30 V. $Z_{in} > 50$ Kohm.
5	 WHITE/BLUE	IN1	Active ground input. Detects ON when $v \leq 2$ V, OFF when $v \geq 2.5$ V or when HZ Max 30 V. $Z_{in} > 50$ Kohm.
6	 WHITE/ORANGE	IN2	Active ground input. Detects ON when $v \leq 2$ V, OFF when $v \geq 2.5$ V or when HZ Max 30 V. $Z_{in} > 50$ Kohm.
7	 GRAY	MIC	Microphone
8	 YELLOW	IGN	Ignition sensor: Detects ON when $v \geq 6.1$ V, OFF when $v \leq 4.6$ V. Max. 30 V. $Z_{in} > 30$ Kohm.
9	 WHITE/YELLOW	SPK	32 Ohm speaker.
10	 GREEN	VIN_BYPASS	Unprotected direct MPOWER connection (pin 9). Used to supply power to accessories.
11	 WHITE/RED	1-WIRE	Delivers 3.3 V. 50mA. Max. Standard and overdrive velocities.
12	 BLUE/RED	O1	User output: open drain output. Max. 1.8 A, 30 V.
13	 ORANGE	TX	Data transmitter.
14	 BLUE/YELLOW	O2	User output: open drain output. Max. 1.8 A, 30 V.
15	 PURPLE	RX	Data receiver.
16	 WHITE	ADC	From 0 V to 15 V. $Z_{in} = 127$ Kohm.