SYRUS 3G SL-1645

An intelligent tracking hub with Expanded Interoperability for Fleet Automation. This unit has both: 2G Quad-band & 3G Penta-band GSM/GPRS modules with superior GPS sensitivity. It has all the functionalities and features of previous SL series devices and its key features include: motion, shock and aggressive driving detection, acceleration backlog, ultra low power consumption, outstanding accessories compatibility and outstanding interoperability through DCT's APIs.

PART NUMBER

SL3G-1645

Syrus 3G SL-1645

WATER RESISTANT

MULTI-ACCESSORY COMPATIBILITY

LOW ENERGY CONSUMPTION

API INTERACTION

CAMERA INTEGRATION CAPABILITY

BUILT-IN REMOTE DIAGNOSTICS

KEY FEATURES

- Internal rechargeable backup battery
- Built in motion sensor for Smart Power Management: low power consumption modes
- Embedded GSM and GPS antennas with superior cellular and GPS quality
- IP65 sealed enclosure
- Over the air (OTA) firmware upgrade and over the air configuration management via Pegasus Gateway
- Turn by turn reports to guaranteee the best possible tracking resolution
- Up to five SMS telephone numbers
- Up to 30,000 buffered messages
- Up to 100 built-in circular geofences
- Up to 100 built-in polygonal geofences
- Virtual Hour Meter
- Virtual Odometer
- Up to 16 user signals

KEY FEATURES

- Up to 20 user counters
- Motion, shock and aggressive driving detection
- Remote configuration via API
- Abstract high level interaction via Pegasus Gateway REST APIs
- Acceleration backlog
- Customizable pre-fabricated cable connector (automotive connectors, waterproof connectors, Molex, etc.)
- Ultra low power consumption during sleep mode (<1mA)

TECHNICAL SPECIFICATIONS

PHYSICAL

Unit Dimensions (inches)	3.89 x 3.63 x 1.20
Weight	159 gm
Material	Polycarbonate 94v-0 for higher temperatures
Water-resistant casing	IP-65 Sealed

PROGRAMMING/REPORTING

Communication Protocol	Modified TAIP (Trimble ASCII Interface Protocol

ENVIRONMENTAL

Operating Temperature	-20°C to 70°C
Storage Temperature	-30°C to 85°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	15g
Protection	Internal PCM Circuit
Temperature Ranges	Charge: 0°C to 40°C Discharge: -20°C to 60°C

CONNECTORS

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	QIPEHS6
IC (Industry Canada)	7830A-EHS6
CE	1588

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
Channels	66
TTFF 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	+-16G
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: °0C ~ +40°C Discharge: -20°C ~ +40°C

CELLULAR MODEM SPECIFICATIONS

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 BdI Class 3 (+24dBm +1/-3dB) for UMTS 1900, WCDMA FDD BdII Class 3 (+24dBm +1/-3dB) for UMTS 900, WCDMA FDD BdVIII Class 3 (+24dBm +1/-3dB) for UMTS 850, WCDMA FDD BdV Class 3 (+24dBm +1/-3dB) for UMTS 800, WCDMA FDD BdVI

CELULLAR MODEM SPECIFICATIONS

HSPA Features	3GPP Release 6, 7 HSDPA Cat.8 / HSUPA Cat.6 data rates DL:max. 7.2 Mbps, UL: max. 5.7 Mbps 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
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

PERIPHERALS

Outputs	2 Open Drain Outputs Continuous Current Capacity: 1.6A Maximum Instantaneous Current (< 1 sec): 10A Maximum Switching Voltage: 32V
Inputs	3 Auxiliary Discrete Inputs Voltages From 0V to 32V 50k Ohm Impedance 1 Ignition Input. 50k Ohm Impedance
Serial Communications	RS232 (Tx and Rx) One-Wire Bus For i-Button

ADDITIONAL CHARACTERISTICS

Internal GSM and GPS antennas
Two status LEDs
Automatic 3-axis angle detection (for installation awareness)
3 axis angle auto detection
Auto alignment with vehicle's axis

PINOUT

PIN	WIRE COLOR	SIGNAL	DESCRIPTION
1	BLACK	GND	Device's electrical ground.
2	RED	MPOWER	Main supply: 8V - 32V. Connect directly to vehicle's battery.
3	WHITE/GREEN	IN3	Active ground input. Detects ON when v <= 2 V, OFF when v >= 2.5 V or when HZ Max 30 V. Zin > 50 Kohm.
4	WHITE/BLUE	IN1	Active ground input. Detects ON when v <= 2 V, OFF when v >= 2.5 V or when HZ Max 30 V. Zin > 50 Kohm.
5	WHITE/ORANGE	IN2	Active ground input. Detects ON when v <= 2 V, OFF when v >= 2.5 V or when HZ Max 30 V. Zin > 50 Kohm.
6	YELLOW	IGN	Ignition sensor: Detects ON when v >= 6.1 V, OFF when v <= 4.6 V. Max. 30 V. Zin >30 Kohm.
7	WHITE/RED	1-WIRE	Delivers 3.3 V. 50mA. Max. Standard and overdrive velocities.
8	BLUE/RED	O1	User output: open drain output. Max. 1.8 A, 30 V.
9	BROWN	TX	Data transmitter.
10	BLUE/YELLOW	O2	User output: open drain output. Max. 1.8 A, 30 V.
11	PURPLE	RX	Data receiver.

DIMENSIONS