

# SynTRAC™ PL1

## Embedded Cellular Modem

4G LTE Cat 1 / 3G / 2G

SynTRAC™ PL1 is a 4G LTE Cat 1 and 3G HSPA communications platform. It features multi-GNSS satellite navigation technology, supporting in parallel GPS, GLONASS, Galileo, BeiDou, as well as QZSS. SynTRAC™ PL1 utilizes a USB interface to easily connect to all types of environments, from a sensor end point to an operating system, making integration simple. This device is ideal for applications that are transitioning to LTE from 2G and 3G, due to the long-term availability and scalability of LTE networks. At the same time in areas with marginal LTE coverage, they also provide 3G fallback.

### ABOUT THE SynTRAC™PLx SERIES

SynTRAC™ PL1 is a member of the SynTRAC™PLx family of embedded cellular modems which enable solutions providers, OEMs and others to harness the potential of the Internet of Things, making their products connected end devices. More than just a modem, the PLx family of devices are complete, fully featured, pre-certified edge devices, with cellular connectivity, GNSS/ GPS receivers and fully-integrated antenna systems. The PLx family of products support a wide range of applications, including tracking, location data, connectivity for sensors, digital signage, instrumentation and other applications that require wireless connectivity. With an integrated IP stack, the module is designed to support a wide range of data-centric applications. The unique combination of performance, flexibility, and global coverage make the module ideally suited for M2M applications, such as a cellular modem, smart energy gateways, remote access video cameras, digital signage, telehealth and telematics. When power saving mode is enabled, it reduces energy consumption and allows battery-powered modules a longer operation time.

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### MARKET APPLICATIONS

- Cellular modem
- Transport & Telematics
- Smart manufacturing & industrial IoT
- Smart buildings/cities
- Smart energy & utilities
- Retail



### FEATURES

- Small form-factor with integrated antenna
- Multi- GNSS satellite navigation technology: GPS, GLONASS, Galileo, Beidou, QZSS.
- Connectivity via USB
- Modem FOTA

### BENEFITS

- PTCRB Certified
- FCC & ISED Certified
- Reduced time to market.
- Power saving algorithms
- AT commands
- FreeRTOS coming soon
- Can be used as a low-cost evaluation platform.

### ORDERING INFORMATION

<b>SynTRAC-PL1-200</b>	LTE Cat 1 for US (VODAFONE,AT&T, TMO); global 3G & 2G	Cellular Modem/ Evaluation
<b>SynTRAC-PL1-202</b>	LTE Cat 1, 3G for US (VODAFONE,AT&T, TMO); no 2G	Cellular Modem/ Evaluation
<b>SynTRAC-PL1-204</b>	LTE Cat 1 only for US (VERIZON)	Cellular Modem/ Evaluation
<b>SynTRAC-PL1-200- TR</b>	LTE Cat 1 for US (VODAFONE,AT&T, TMO); global 3G & 2G	Tracking
<b>SynTRAC-PL1-202- TR</b>	LTE Cat 1, 3G for US (VODAFONE,AT&T, TMO); no 2G	Tracking
<b>SynTRAC-PL1-204- TR</b>	LTE Cat 1 only for US (VERIZON)	Tracking

Made in the U.S.A



**SPECIFICATIONS**

	SynTRAC™ PL1-200	SynTRAC™ PL1-202	SynTRAC™ PL1-204
<b>Regions</b>	North America	North America	North America
<b>Carriers</b>	AT&T Vodafone T-Mobile	AT&T Vodafone T-Mobile	Verizon
<b>Technology</b>			
Band Data Rates	4G LTE Cat 1/ 3G/2G	4G LTE Cat 1/ 3G	4G LTE Cat 1
LTE Bands	2, 4, 5, 12	2, 4, 5, 12	4,13
UMTS/HSPA [MHz]	850, 900, 1900, 2100	850, 1900	
<b>Positioning</b>	Hybrid Positioning and CellLocate®		Depending on FW version
Indoor Positioning	72-channel u-blox® UBX-M8 multi-GNSS receiver (or similar)		
GNSS Chipset	GPS, Galileo, GLONASS, BeiDou (concurrent 3 out of 4); SBAS (WAAS, EGNOS, QZSS)		
GNSS Systems	GPS, Galileo, GLONASS, BeiDou (concurrent 3 out of 4); SBAS (WAAS, EGNOS, QZSS)		
GNSS Tracking Sensitivity	-167 dBm (manufacturer's spec)		
Accuracy	< 2.5m CEP (manufacturer's spec)		
<b>Features</b>			
FOTA	Modem firmware update over the air		
Update Rate	Every 10 minutes when in motion (default); configurable from 1/sec to 1/day * Only Applicable with Tracking FW		
Operating Temperature	-40 ° C to +85 ° C		
Dimensions	< 80x45x12 mm3 (smaller than a credit card)		
Connectors	Atmel ICE (6 pin); Micro USB		
Accelerometer	3 Axis 8G		
<b>Environments</b>			
AT Commands	Currently Available		
FreeRTOS	Will be available with FW update		
<b>Certifications</b>			
SynTRAC PL1-200	FCC, ISED, RED, PTCRB (in process)		
SynTRAC PL1-202	FCC, ISED, PTCRB, AT&T certified, T-Mobile certified, Rogers (in process),		
SynTRAC PL1-204	GCF, FCC, ISED, Verizon (in process)		

**ABOUT SYNDESY**

Syndesy Technologies, Inc. provides IoT solutions to meet the needs of every customer. From initial design to final quality assurance processes, we make sure our goods are reliable and exceptional. We are proud to design and manufacture in the U.S.A.

**CONTACT INFORMATION**



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