

# SynTRAC™ PLM

## Embedded Cellular Modem

### 4G LTE Cat M1 / 4G LTE Cat NB1/2G

SynTRAC™ PLM is a multi-region 4G LTE Cat M1, 4G LTE Cat NB1, global 2G communications platform. It features multi-GNSS satellite navigation technology, supporting in parallel GPS, GLONASS, Galileo, BeiDou, as well as QZSS. SynTRAC™ PLM 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 can provide 2G fallback.

#### ABOUT THE SynTRAC™PLx SERIES

SynTRAC™ PLM is a member of the SynTRAC™PLx family of embedded cellular modem's 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.

SynTRAC™ is a trademark of Syndesy Technologies, Inc.; u-blox® and CellLocate® are registered trademarks of u-blox AG

#### 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

- 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-PLM-410</b>	multi-region 4G LTE Cat M1; 4G Cat NB1	Cellular Modem/ Evaluation
<b>SynTRAC-PLM-412</b>	multi-region 4G LTE Cat M1; 4G Cat NB1; global 2G	Cellular Modem/ Evaluation
<b>SynTRAC-PLM-410 TR</b>	multi-region 4G LTE Cat M1; 4G Cat NB1	Tracking
<b>SynTRAC-PLM-412 TR</b>	multi-region 4G LTE Cat M1; 4G Cat NB1; global 2G	Tracking

Made in the USA



**SPECIFICATIONS**

	SynTRAC™ PLM-410	SynTRAC™ PLM-412
<b>Regions</b>	Multi-region North America	Multi-region North America
<b>Carriers</b>	Vodafone T-Mobile AT&T Verizon	Vodafone T-Mobile AT&T
<b>Technology</b>		
Band Data Rates	4G LTE Cat M1/ 4G LTE Cat NB1	4G LTE Cat M1/ 4G LTE Cat NB1/ 2G
LTE Bands	2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 28	2, 3, 4, 5, 8, 12, 13, 20
LTE Bands (roaming)	1,26	26,28
EGPRS quad-band (MHz)		850, 900, 1800, 1900
<b>Positioning</b>		
GNSS Chipset	72-channel u-blox® UBX-M8 multi-GNSS receiver (or similar)	
GNSS Systems	GPS, Galileo, GLONASS, BeiDou (concurrent 3 out of 4); SBAS (WAAS, EGNOS, QZSS)	
Indoor Positioning	Hybrid Positioning and CellLocate® (Dependent on FW version)	
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 PLM-410	FCC, ISED, NCC, RCM, RED, PTCRB (in process), AT&T (in process), T-Mobile (in process), Verizon (in process)	
SynTRAC PLM-412	FCC, ISED, RED, PTCRB (in process), AT&T (in process), T-Mobile (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**



+1 (703) 880-6300



[info@syndesyttech.com](mailto:info@syndesyttech.com)



[www.syndesyttech.com](http://www.syndesyttech.com)



13800 Coppermine Road, 1<sup>st</sup> Floor  
Herndon, VA 20171