Skywire® LTE CAT M1 with GNSS
End-Device Certified Modem

Skywire® LTE CAT M1 embedded modem with GNSS is purpose-designed for IoT applications, particularly those with location-based functionality. Based on the Telit chipset, it has full FCC and carrier certification, which can save users months of testing and tens of thousands of dollars in cost. Like all Skywire modems, they are the smallest embedded modems in the industry and are compatible with a range of Skywire development kits and microprocessor shields to help accelerate product development and prototyping.

CAT M1 modems have the lowest power requirements of any cellular modem type, making them ideal for battery operated, mobile, or off-grid applications. Depending on the application they may be able to run for years unattended and without requiring a battery replacement or recharge.

Features

- Small form-factor
- No additional carrier certification required
- Skywire interface
- USB or UART communication paths
- 1 U.FL port provides cellular antenna flexibility
- 1 U.FL port provides GNSS antenna flexibility
- M1 Uplink speeds up to 375 kbps
- M1 Downlink speeds up to 300 kbps

Advantages

- Lower power than 2G, 3G, and 4G LTE CAT 3/4
- Comparable to LoRa and other LPWAN price points
- GNSS Receiver: GPS, Glonass, Bei-dou, Galileo
# Technical Specifications

**NL-SW-LTE-TM1G-V** and **NL-SW-LTE-TM1G-A**

| **Form Factor** | Skywire interface  
|                | 29mm x 33mm x 10.5mm |
| **Frequency Bands** | NL-SW-LTE-TM1G-V: B4[AWS1700], B13[700]  
|                | NL-SW-LTE-TM1G-A: B2[1900], B4[AWS1700], B12[700] |
| **Approvals** | NL-SW-LTE-TM1G-V: FCC, GCF, Verizon  
|                | NL-SW-LTE-TM1G-A: FCC, PTCRB, AT&T |
| **Speeds** | Uplink up to 375 kbps  
|                | Downlink up to 300 kbps |
| **Electrical** | Input voltage: 3.5V-4.3VDC  
|                | I/O voltage: 1.65V-5.5Vdc |
| **Temperature Range** | -40°C to +85°C |
| **Antenna Specifications** | Cellular: U.FL Primary  
|                | GPS: U.FL |
| **SIM Slot** | 3FF Micro SIM connector |
| **Support and Warranty** | 1 Year standard warranty |