

# ATL100 User Manual

CAT-M1 / NB2 / EGPRS

V1.02



<b>Document Title</b>	ATL100 User Manual
<b>Version</b>	1.02
<b>Date</b>	November 12, 2023
<b>Status</b>	Release

## Contents

Contents .....	3
0. Revision History .....	4
1. Introduction .....	5
1.1. Specifications .....	5
2. Product Overview .....	6
2.1. Product Appearance .....	6
2.2. Key Description .....	6
2.3. LED Description .....	7
2.4. SIM Card Holder .....	8
2.5. Temperature and Humidity Sensor .....	9
2.6. Light Sensor .....	10
2.7. G-Sensor .....	10
2.8. Type C Interface .....	10
2.9. Parts List .....	11
2.10. Notice .....	12

## 0. Revision History

Revision	Date	Author	Description of Change
1.01	May 12, 2023	Joel	Initial.
1.02	November 24, 2023	Joel	0. Add battery charging instructions 1. Support connect DS18B20 temperature sensor with Type C.

## 1. Introduction

The ATL100 is a cold chain terminal. The device supports multiple bands of LTE CAT-M1 (eMTC), NB-IoT (NB2) and EGPRS networks that are used in both North America and Europe, which is ideal for asset monitoring and temperature monitoring.

### 1.1. Specifications

General Specifications	
Dimensions	95mm*60mm*22mm
Network	1.EGPRS: GSM850/GSM900/DCS1800/PCS1900 2.Cat-NB2: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 3.Cat-M1 B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B27/B28/B66/B85
GNSS (Optional)	GPS, GLONASS, BDS, Galileo and QZSS
Bluetooth	BLE 5.1
Sensors	1. G-Sensor 2. Light Sensor 3. Temperature and Humidity Sensor 4. Barometer Sensor (Optional) 5. External Temperature Sensor Connect by Type C (Optional)
Battery	3.7V 1800mAh Rechargeable Li-polymer Battery
IP Rating	IP64
Operating Temperature	-20°C~+60°C
Standby Time	More than 30days
LED indicator	Power LED NET LED GNSS LED
Port	Type C

## 2. Product Overview

### 2.1. Product Appearance



### 2.2. Key Description



Key Definition	<p>When the terminal power off, terminal power on after long press more than 3 seconds (During power on, the three LEDs slow flashing is 800ms on, 500ms off, 4 times simultaneously).</p> <p>When the terminal power on, terminal power off after long press more than 3 seconds (During power off, the red LED fast flashing is 100ms on, 150ms off, 3 times).</p>
----------------	--

### 2.3. LED Description



ATL100 has three LEDs, which are power light, network light, and GNSS light respectively, they can work separately or in combination to indicate the status of the device. Please refer to the following table 1 when three LEDs work separately:

**Table 1. LED Description**

LED (Color)	Device Status	LED Status
PWR LED (Red, Yellow, Green)	Battery Charging	Fast Flashing
	Battery Low	Red Slow Flashing
	Battery Full Charged	Solid Green
	Standby	Off
NET LED (Green)	Search Network	Fast Flashing
	Register Network	Slow Flashing
	Stop Searching Network	Off
	GNSS Fixing	Fast Flashing

GNSS LED (Blue)	GNSS Fixed.	Solid Blue
	GNSS Stop Fixing.	Off

**Note:**

1. Fast flashing is 100ms on, 400ms off.
2. Slow flashing is 100ms on, 2900ms off.

Power LED is a polychromatic light, which is red, yellow, green, which represent different battery levels, please refer to the following table 2 “battery level indication of power LED”:

**Table 2. Battery level indication of power LED**

Charging Status	Battery Level	LED Status
Charging	<30%	Red Fast Flashing
	<60% & >= 30%	Yellow Fast Flashing
	<100% & >= 60%	Green Fast Flashing
	100%	Solid Green
Not Charging	< battery low threshold (10%)	Red Slow Flashing
	< 30% & >= 10%	Solid Red
	< 60% & >= 30%	Solid Yellow
	< 80% & >= 60%	Green Flashing (80ms off, 80ms on, 5 times)
	<= 100% & >= 80%	Solid Green

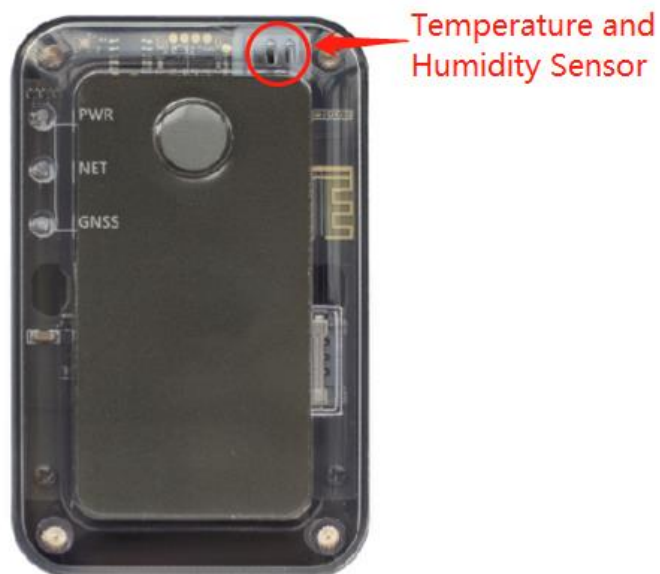
## 2.4. SIM Card Holder

Power off the device, before installing the SIM card. It supports the size of Micro-SIM (3FF type).



## 2.5. Temperature and Humidity Sensor

This is a high-precision temperature and humidity sensor, it meets NIST certification requirement.



## 2.6. Light Sensor

This is a high-precision light sensor, it supports light value ranging from 0.3 to 6500.0 lux.



## 2.7. G-Sensor

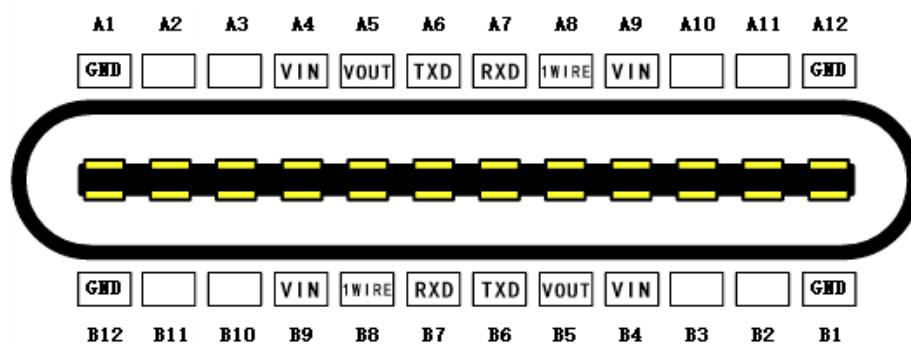
There is a three axis accelerometer which supports the detection of motion, stillness, tilt alarm, crash alarm and flight mode event.

## 2.8. Type C Interface

ATL100 uses standard type C interface, it supports configure terminal and upgrade firmware by Type-C data cable and supports a temperature range of -200 to 60 degrees Celsius for detection by Type-C external temperature sensor, as the following “**Parts List**”.






Interface of Type C defined, please refer to the following:



## 2.9. Parts List

Table 3. ATL100 Parts List

Name	Picture	Description
ATL100		EGPRS LTE Cat-M1 LTE Cat-NB2 Cold chain terminal

<p>Type-C Data Cable (Optional)</p>		<p>It is used to configure the device and update the firmware.</p>
<p>Type-C External PT100 Temperature Sensor (Optional)</p>		<p>It supports a temperature range of <math>-200^{\circ}\text{C} \sim +60^{\circ}\text{C}</math> for detection.</p>
<p>Type-C External DS18B20 Temperature Sensor (Optional)</p>		<p>It supports a temperature range of <math>-55^{\circ}\text{C} \sim +125^{\circ}\text{C}</math> for detection.</p>

## 2.10. Notice

1. When the ambient temperature less than 0 degree or more than 45 degrees, the battery charge will be disabled to protect the battery.
2. The maximum charging current is 500mA, the maximum capacity of the battery is 1800mAH, Therefore, it takes approximately 4 hours to fully charge.