atim cloud wireless™
PRODUCT LINE

ATIM Cloud Wireless

LoRaWAN Tester
TST

Quick Installation Guide

Concerned model:

ACW/LW8-TST

LoRaWAN™

ATIM Radiocommunications

Chemin des Guillets

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Technical specifications

Dimensions	90 x 45 x 15 mm
Radio frequency	868 MHz
RF Power	25 mW ≡ 14 dBm
Easy to use	1 key button + 1 multi-colour LED
Internal Voltage	3,6Vcc (LiPo battery 325mAh)
Battery charger	Via micro-USB cable
Weight	30g
Consumption	LoRaWAN
Mode Tx	50 mA_{max} during 6s
Sleep	2 μA_{typ}

Operating mode

a. Prior registration

The tester must be commissioned beforehand on a LoRaWAN network (subscription in addition to the ACW/LW8-TST). IDs shared at shipment with the device via email allows the commissioning of the tester on the LoRaWAN network (DevEUI, DevAddr, AppEUI, AppKey, NwkSKey, AppSKey).

b. Join process

To realize the “Join” between the tester and the LoRaWAN network, the below steps must be followed:

1. Plug the USB cable on the tester to a power supply.
2. Unplug the USB cable on the tester.
3. Step #2 forces the reinitialization of the tester and sends a Join frame.

c. Recharge

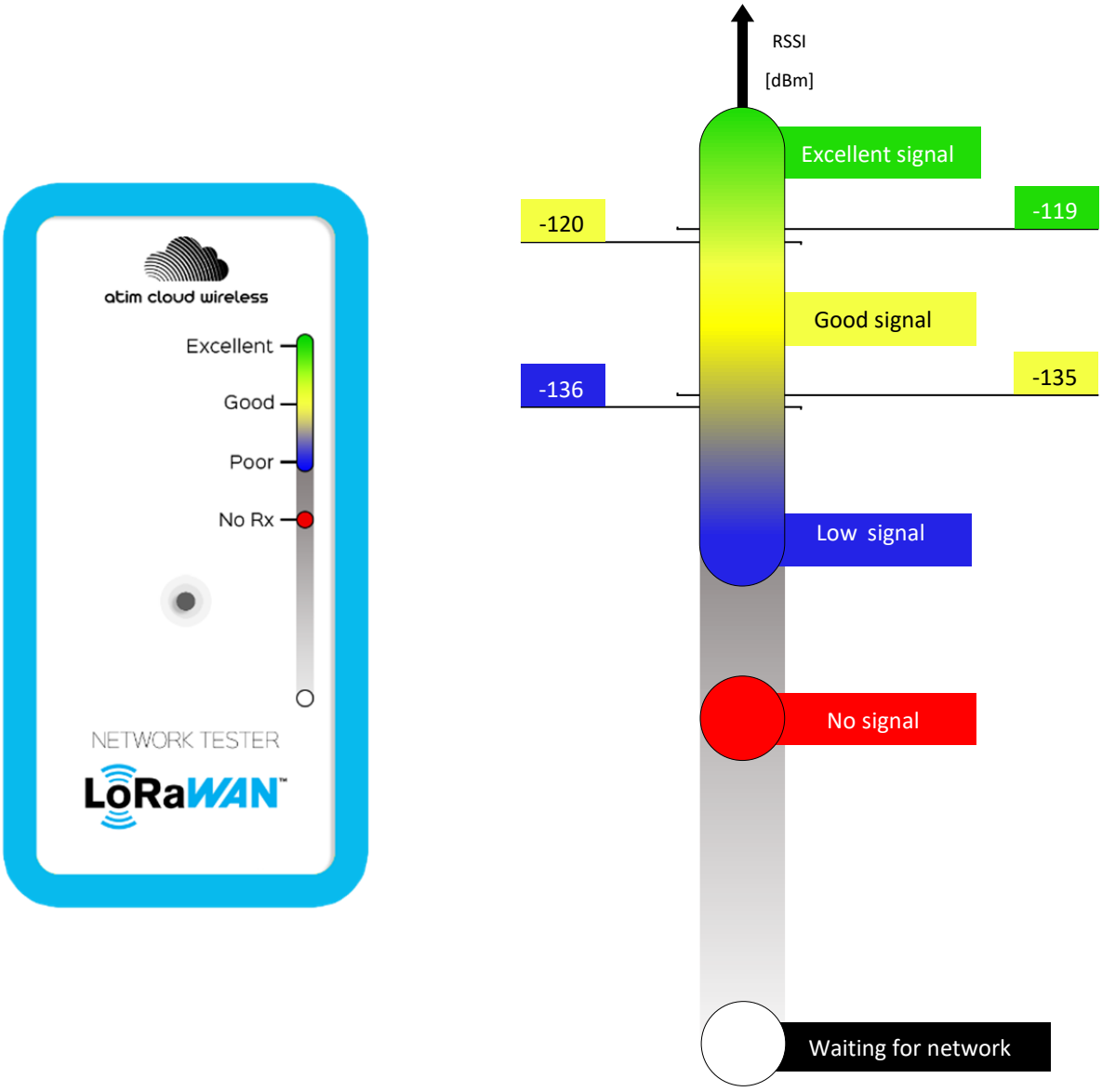
The ACW/LW8-TST is recharged by USB cable.
When the battery product is charging, a red LED is on.
This LED leds off when the charge is complete.

d. Coverage test

To realize a network coverage test, the below steps should be followed:

1. The tester must be held vertically **and** from the bottom part (refer to the adjacent picture).
2. Press the pushbutton.
3. Wait 10 seconds (Downlink maximum response time from the LoRaWAN network) until the response of the Sigfox station.
4. LED blinks and shows the reception quality of the LoRaWAN signal in function of the displayed colour (refer to the below scheme)

Note
In case of "static" applications (devices' locations are fixed), it is important to test the exact location where the sensor will be installed.



Scheme 1: Interpretation of the network reception quality

e. How to get precise data on the ATIM Cloud Wireless Platform?

If you have taken a subscription to the ATIM IoT platform, this will allow you to view the precise radio levels: RSSI (reception level) and SNR (signal / noise ratio).

A subscription to the Atim IoT platform allows to visualize the precise quality of radio levels, provided by the network:

- RSSI (signal level of reception)
- SNR (ratio signal/noise)

The platform is compatible multiple LoRaWAN operators as Objenious or Orange and the LoRaWAN gateways for example.

See below an example of visualization with a tester connected with LoRaWAN operator, Objenious:

Charger plus de messages | Exporter | Rechercher

Timestamp	Delay	Data	Data ASCII	Operator	uplink Counter	RSSI	SNR	Port	Spreading Factor
2018/02/16 12:19:33	+ 1 s	53 46 3D 31 32 20 52 53 53 49 3D 2D 30 30 30 38 33	SF=12 RSSI=-00083	Objenious	19	-93	-5	5	12
2018/02/16 12:12:51	+ 1 s	53 46 3D 31 32 20 52 53 53 49 3D 2D 30 30 30 37 31	SF=12 RSSI=-00071	Objenious	18	-95	-1	5	12
2018/02/16 12:00:18	+ 1 s	53 46 3D 31 32 20 52 53 53 49 3D 2D 30 30 30 38 32	SF=12 RSSI=-00082	Objenious	17	-97	-2	5	12
2018/02/16 11:12:02	+ 1 s	53 46 3D 31 32 20 52 53 53 49 3D 2D 30 30 30 38 32	SF=12 RSSI=-00082	Objenious	16	-93	-6	5	12
2018/02/16 11:10:59	+ 1 s	53 46 3D 31 32 20 52 53 53 49 3D 2D 30 30 30 38 32	SF=12 RSSI=-00082	Objenious	15	-91	-9.2	5	12
2018/02/16 08:11:11	+ 1 s	53 46 3D 31 32 20 52 53 53 49 3D 2D 30 30 30 38 32	SF=12 RSSI=-00082	Objenious	11	-96	-2.5	5	12
2018/02/16 08:10:38	+ 2 s	53 46 3D 31 32 20 52 53 53 49 3D 2D 30 30 30 38 32	SF=12 RSSI=-00082	Objenious	10	-97	0.2	5	12

Below, an example of visualization of precise results of network quality test of the ACW/LW8-TST on the ATIM IoT platform: