

ROMA

BY PURPLE BLOB.

Table of Contents

1. What is ROMA?	3
2. Advantages	6
3. Technical Specifications	8
4. Methodology	10
5.	12
6. Contacto	14
7. Aviso Legal	15



What is ROMA?

What is ROMA?

ROMA is a smart, low-power wireless signage monitoring device that provides owners and operators with a complete view of the position and status of post-based signage.

It simplifies the management and maintenance of large numbers of remote, hard-to-reach signage posts.



Detalles de ROMA

- Highly sensitive accelerometer
- Automatic alerts for falls, theft, vandalism, and other signage incidents
- Long wireless range
- Low power consumption, battery lasts over 3 years
- Compatible with LoRaWAN 1.0.2

Advantages of ROMA

Ventajas de ROMA

Data integration

Integrates data from different sources, enabling organizations to visualize and compare a wide variety of information about outdoor signage.

Efficiency

Operators can focus on repairing signs instead of conducting regular inspections.

Alerts

Allows the configuration of alerts to detect sudden changes or issues in signage.

Security

Operators can focus on repairing signs rather than conducting regular inspections.

Cost Reduction

Automates signage monitoring, eliminating the need for costly and frequent manual inspections.

Sign lifespan

Early detection of damaged signs allows for timely repair or replacement.

Technical Specifications

Specification	Value
Model	Waterproof box with 4 screws. Batteries not included.
Protection	IP67
CPU	Low-power 8MHz
Sensitivity	<ul style="list-style-type: none"> • -139dBm @ LoRa & 62,5 kHz & SF = 12 y 146bps • -136dBm @ LoRa & 125 Khz & SF = 12 y 293bps • -118dBm @ LoRa & 125 Khz & SF = 6 y 9380bps • -123dBm @ FSK & 5 kHz & 1,2 Kbps
Flash Memory	32 k

Specification	Value
RF Power	14 dBm (LoRa), 20 dBm (WiFi)
LoRaWAN	Class A only. OTAA support.
Consumption (Typical)	8uA @ 3,3V
Power Supply	3x LR04 alkaline batteries
Temperature Range	-20°C a +70°C
Installation	Plug-and-play preconfigurado, montaje en pared o suelo
Configuration	Remote, via LoRaWAN downlink frames

Methodology

ROMA Methodology

ROMA is a plug-and-play IoT device.

As it comes preconfigured, it only needs a power connection in a location with LoRaWAN coverage.

The device will automatically connect to the available network and start monitoring the correct position of the post or mast where it is installed.

It continuously monitors the orientation of the assembly and checks if it falls within a configurable threshold. An alert is sent via LoRaWAN only if the orientation is outside the allowed range or if the battery needs to be replaced.

The device also sends periodic (heartbeat) messages when no other alert has been sent in the last 24 hours, allowing maintainers or system operators to be assured that all signage elements are in place and correctly monitored.



ROMA Methodology



It also allows for the capture of small shifts in orientation through these messages, aiding in the diagnosis of terrain-related issues such as sliding or subsidence.

The low-power nature of LoRaWAN communications, combined with the ultra-low power design of the product, allows for a battery life expectancy of more than 3 years, reducing maintenance costs and truly unlocking added value for users and system operators.

The device's runtime settings can be adjusted via LoRaWAN downlink frames, which are sent by the network whenever the device reports.

The following parameters can be adjusted via a LoRaWAN-compatible platform:

- Orientation alert threshold
- Battery level threshold
- Periodic heartbeat timer
- LoRaWAN join spread factor



Purple Blob

www.purpleblob.net

contacto@purpleblob.net

Legal Disclaimer

The information in this document may contain predictive declarations, including, without limitation, declarations related to the future product portfolio, financial operatives, future technology implementations, etc.

Certain specifications might differ from the results and developments here expressed or supposed in the declarations of this document. Therefore, the information is provided only as a reference and does not establish an offer or uptake.

Purple Blob can alter this information at any time without previous notification of any kind.

© 2024 Purple Blob. All rights reserved.

This document and its content are protected by copyright laws. No part of this document may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of Purple Blob.