

# ARL

## Pavement deflection & temperature



### DESCRIPTION

Autonomous sensor for continuous measurement of the temperature of the pavement's different modules and the deflection basin when vehicles are passing.

Each sensor is autonomous; it doesn't need another box nor a sending station

### APPLICATIONS

Predictive maintenance of road behavior.

## SENSOR CHARACTERISTICS

### DATA RECORDING

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Local measurement interval	1 second (via Bluetooth application)
Data reporting interval	20 minutes (configurable)
Reported data	Pavement module temperature Deflection Battery voltage

### TEMPERATURE PROBES

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Measurement principle	Digital
Measuring range	-40 ... +125°C
Resolution	±0,0625°C
Repeatability	±0,25°C from -40°C to +125°C

### DEFLECTION MEASUREMENT

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Measurement principle	Combination of sensors and AI
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## LONG DISTANCE RADIO

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Radio technology	LoRaWAN
Security	AES-128 data encryption
Supported features	LoRa private or operated, OTAA
Radio range	Up to 15 km
Transmitted power	Up to 20 dBm (adaptive)
Receiver sensitivity	-142 dBm
Frequency band	868 MHz (EU), 915MHz (US, AS, AU)
Antenna	Internal or external to the housing

## LOCAL RADIO

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Radio technology	Bluetooth Low Energy
Radio range	Up to 40m
Transmitted power	Up to 4 dBm
Receiver sensitivity	-96 dBm
Frequency band	2.4 GHz ISM
Antenna	Internal to the box

## POWER SUPPLY

Battery type	Lithium-Ion	
Power consumption	< 1mW	
Battery life *	Measurement period 20 minutes	Duration (up to) 2 years (rechargeable) or 8 years(non rechargeable)

\* Indicative duration, for use in the conditions of use

## SENSOR

Operating temperature	-40 ... +70°C
Dimension	270 x 62 x 62 mm
Weight	1250g
Internal memory	1024 measurements
Case	PVC IP68

## **ORDER REFERENCES**

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ARL pavement sensor (temperature and deflection)

Other options: contact us

## **WARNINGS**

Specifications and information in this document are subject to change without notice.

A3IP products are not warranted or licensed for use as a critical component for medical or other life-saving or life-sustaining applications, or other applications where failure could reasonably be expected to cause serious injury, death, or damage to any structure, work or building.

In addition, devices are indications and decision aids and cannot be used in alarm or critical applications.

## **CONTACT**

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