

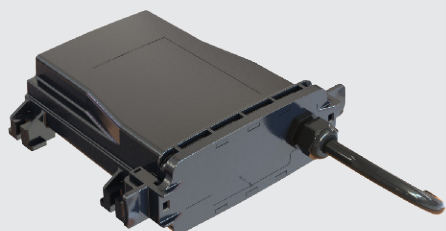
# Access Point System

# SmartNodes®

## Datasheet

DS\_2110\_EN\_B

### APS-G3-R3



\* APS-G3-R3-IA-SIM-SN  
Other product versions might look slightly different.

### Solution description

**SmartNodes is a Smart StreetLighting solution, future-proof and large-scale deployable.**

SmartNodes transforms the street lighting infrastructure into a scalable communication network for other city sensors thanks to its solution of nodes and gateways, while providing a remote web service to control, manage and monitor light points.

The solution is composed of connected nodes (SLC or SLN), a gateway (APS) and a Central Management System (CMS) using the TALQ v2 protocol.

### Product description

**The SmartNodes APS (“Access Point System”, also named “Gateway”) connects the nodes to the Internet and the CMS system, using the TALQv2 protocol.**

Through a secure internet connection (3G/4G or ethernet) the APS connects to and receives information from the CMS. In the field, it connects to the RF mesh network (2,4 GHz using Wirepas technology) made by the SmartNodes solution.

It can be installed outdoors (on a pole or wall) or indoors (in a cabinet or elsewhere).

### main features



**Internet Access  
(3G/4G or ETH)**



**TALQ V2  
Certified**



**Automatically  
geolocated (GPS)**



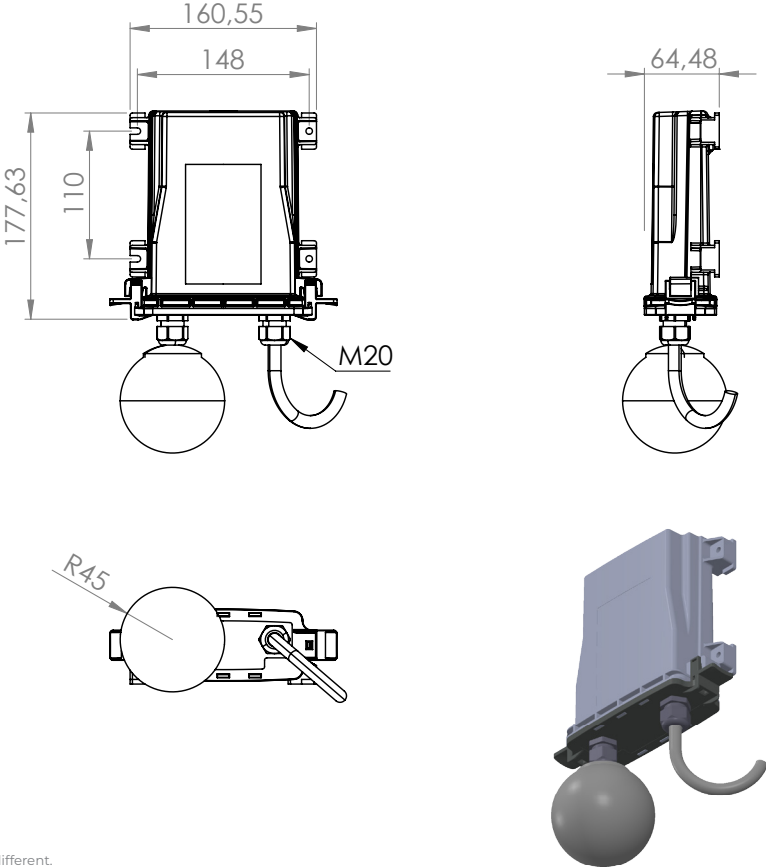
**WIFI Access  
Point**



**Indoor &  
Outdoor versions**

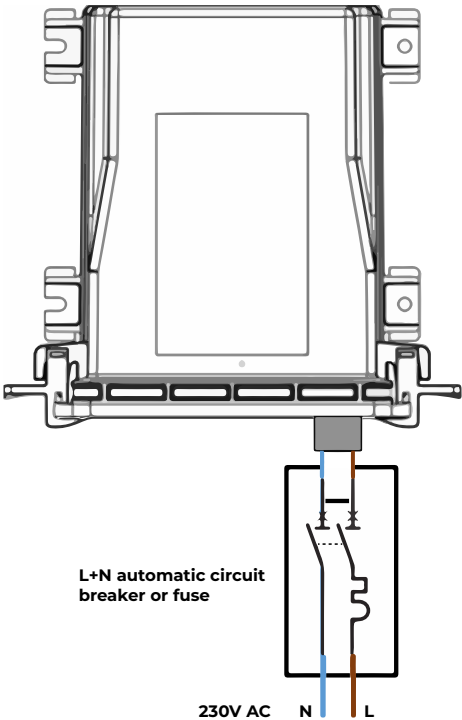
# Product drawings

## Mechanical drawings



\* APS-G3-R3-IA-SIM-SN-SOUND  
Other product versions might look different.

## Electrical drawings



## Technical Information

Mechanical		
Housing Material	Polycarbonate	
Colour	RAL 9005	
Protection Class	IP66 IK08	EN 60529 EN 50102
Connection Type	Main power: 2X2,5 cable Optional, depending on version: <ul style="list-style-type: none"><li>• Ethernet cable</li><li>• 1 or 2 External antenna COAX connector(s)</li></ul>	
Weight	550g	
Outdoor Mounting	Pole mounting with strap or screw	
Indoor Mounting	DIN rail mounting with DIN rail clips	

Compliance - Safety - Reliability		
Safety Standard*	IEC 62368-1:2014 + A1:2015 + A2:2015	
EMC Standard	Emissions: <ul style="list-style-type: none"><li>• EN 55015</li><li>• EN 55022</li><li>• EN 55032</li><li>• EN 61000-3-2</li><li>• EN 61000-3-3</li></ul>	Immunity: <ul style="list-style-type: none"><li>• EN 61000-4-2</li><li>• EN 61000-4-3</li><li>• EN 61000-4-4</li><li>• EN 61000-4-5</li><li>• EN 61000-4-6</li><li>• EN 61000-4-11</li></ul>
Radio Spectrum Efficiency	<ul style="list-style-type: none"><li>• EN 300 328 V2.1.1</li><li>• EN 300 330 V2.1.1</li></ul>	

Environmental	
Ambient Temperature	-30°C to +60°C
Ambient Humidity	0 to 100%RH
Maximum Altitude	2000m

## Approvals

EMC Directive 2014/30/EU

RED Directive 2014/53/EU

LVD Directive 2014/35/EU

RoHS Directive 2011/65/EU

(\*) : Pending certification for new product release

Mains Input	
Nominal Voltage	110V - 240V AC
Frequency	50 - 60 Hz
Power Consumption	3,7W average <6W during data transmission
Electrical Protection	Class II

Features	
Processor	<ul style="list-style-type: none"> <li>• 900 MHz ARM Cortex-A7 quad-core</li> <li>• 1 GB RAM</li> <li>• 8 GB Flash</li> </ul>
GPS	<ul style="list-style-type: none"> <li>• Positioning &amp; Time Retrieval</li> </ul>
Local Communication	<ul style="list-style-type: none"> <li>• Radio mesh-network powered by Wirepas.</li> <li>• Frequency : 2,4GHz</li> <li>• Rated output Power : +7,5dBm</li> <li>• RX sensitivity : -94dBm</li> <li>• Range : Up to 175m in open air.</li> <li>• Modulation : GFSK</li> <li>• Data rate : 1Mb/s</li> <li>• Over The Air Programmable (OTAP)</li> <li>• Self-Forming &amp; Self-Healing</li> <li>• Network security : AES 128 bits encryption</li> </ul>
Modem	<ul style="list-style-type: none"> <li>• 2, 3 and 4G compatible</li> </ul>
External LEDs	<ul style="list-style-type: none"> <li>• Status indication</li> </ul>
Sound Analysis	<p>Included in APS-G3-XX-SOUND only</p> <ul style="list-style-type: none"> <li>• 1/3-octave band spectrum</li> <li>• Soundscape analysis</li> <li>• Detection of sound events</li> </ul>

Product versions	
APS-G3-R3-IA-SIM-SN	<ul style="list-style-type: none"> <li>• Outdoor version (Integrated Antenna) to be installed on a pole or wall</li> <li>• GSM connectivity (4G) included</li> </ul>
APS-G3-R3-IA-SIM-SN-SOUND	<ul style="list-style-type: none"> <li>• Outdoor version (Integrated Antenna) to be installed on a pole or wall</li> <li>• GSM connectivity (4G) included</li> <li>• Integrated sound sensor</li> </ul>
APS-G3-R3-EA-SIM-SN	<ul style="list-style-type: none"> <li>• Indoor version (External Antenna) to be installed inside a cabinet or elsewhere (DIN rail fittings included)</li> <li>• GSM connectivity (4G) included</li> </ul>
APS-G3-R3-EA-ETH	<ul style="list-style-type: none"> <li>• Indoor version (External Antenna) to be installed inside a cabinet or elsewhere (DIN rail fittings included)</li> <li>• Ethernet connection</li> </ul>

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TECHNOLOGIES  
FOR **SMARTER**  
**MOBILITY**



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