Smart-Node
All-in-One Power and Communication Solution

RADWIN Smart-Node is an outdoor power and communication solution that reduces costs and accelerates the roll-out of smart-city, IoT and telecom projects. The all-in-one Smart-Node solution offers a wide variety of power and networking interfaces including fiber and an array of radio technologies to connect multiple devices such as CCTV cameras, Wi-Fi access points and IoT sensors.

Bridging the gap between broadband and IoT applications, Smart-Node enables easy integration with 3rd party devices to support multiple applications ranging from city surveillance, smart-lighting, waste management, smart-metering and more. Smart-Node is a remarkably compact, IP-67 protection grade solution that guarantees low visual impact for street level deployments and high reliability when exposed to extreme temperatures and tough environments.
Smart-Node Overview

Smart-Node is the world’s first all-in-one outdoor multi-power and communications managed solution.

Smart-Node enables power and connectivity for fixed and PTZ cameras, wireless Point-to-Point and Point-to-Multipoint radios, IoT gateways, sensors, public announcement, Wi-Fi access points and other devices on sites with different utility power types.

Benefits:

» Simple installation, configuration and monitoring
» Unified management for power and communication
» Cost of site reduction with an integrated solution
» Ready-to-install solution – eliminate labor time (design and assembly)
» Versatile power and communication options
» Small size, IP-67 and aesthetic design
» High quality reducing maintenance costs

Typical cabinet

RADWIN Smart-Node

» 1/3 of the size
» 1/3 of the weight
» Feature rich
» Lower Cost
All power and communication needs for video surveillance, telecom and IoT applications

**Versatile power options**

**Input power options**
- RW-8019-1100 model:
  - 100-240V AC
  - UPS with 2.5AH lithium-ion battery (120W/h or 240W/0.5h at full load)
- RW-8019-3200 model:
  - 40-57V DC
  - Supporting solar panel, street light

**Output power options:**
- PoE, PoE+ (15W, 30W, 60W)
- Passive PoE (24V/56V)
- DC-OUT 12/24V-30W (configurable)
- Internal power interfaces: 12V, PoE 24V/56V

**Versatile communication options**

**GbE switch**
- 5-Port Gigabit PoE switch
- SFP Gigabit port

**Wired and wireless connectivity options:**
- Fiber – SFP
- Copper – LAN
- Wireless broadband – RADWIN PtP and PtMP radios (external)

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### Applications

- Video Surveillance
- Smart Lighting
- Municipal Wi-Fi
- Broadband Connectivity
- Traffic Control
- Smart Parking
- LPR
- Metering
All-in-one power and communications solution

- **N-Type antenna port** for 3rd party equipment
- **General purpose port**
- **2 dry contacts** - input
- **2 dry contacts** - output
- **12/24VDC output power**
- **AC input**: 100-240 VAC or DC input: 40-57 VDC (ordering option)
- **802.3 af/at/at+ (60W)** or 24V passive PoE
- **SFP**
- **802.3 af/at (60W)** or 56V passive PoE
- **802.3 af/at+ (60W)** or 56V passive PoE
- **PoE1**
- **PoE2**
- **PoE3**
- **PoE4**
- **PoE5**
- **Serial port**

- **Input Power**
  - **PoE**
  - **SFP**
  - **ANT**
  - **IoT**
  - **AUDIO**
  - **ALM-OUT**
  - **ALM-IN**
  - **DC**

- **Output Power**
  - **PoE1**
  - **PoE2**
  - **PoE3**
  - **PoE4**
  - **PoE5**
  - **Serial port**
  - **SFP**
  - **ANT**
  - **IoT**
  - **AUD**
  - **ALM-OUT**
  - **ALM-INE**
  - **DC**
Bridging the gap between broadband and IoT applications

System integrators and solution providers can easily extend Smart Node capabilities via simple integration with 3rd party devices, to shorten time to market of applications such as smart-lighting, waste management metering etc.

3rd party devices include IoT gateways (e.g. LoRa, ZigBee, Wi-Fi, Bluetooth), computing systems for analytics, storage, cyber security gateways and more.

Hosting 3rd Party Devices

- UPS with replaceable 2.5AH lithium-ion battery (120W/h or 240W/0.5h at full load)
- N-Type antenna port
- LAN or PoE - 802.3 af/at or 24V passive PoE
- IoT port - general purpose port
- Internal space for 3rd party device integration: W116mm, L160mm, H47mm.
Innovative Site and Remote Management

RADWIN Smart-Node features a unified management system for monitoring, configuring and controlling all power, networking and alarms. The system enables local and remote management and troubleshooting of internal and external devices. This eliminates the need for periodic maintenance and costly truck rolls while lowering operational expenses.

» Web-Manager: Unified power & networking management
» SNMP MIBs for integration with customer management systems

Power Management

» Remote power management
» Graceful power degradation by priority
» Lithium-ion battery backup (UPS) monitoring
» Configurable DC-OUT port (12V/24V)
## Switch and Ports Management

- Switch PoE assignment / port (802.3 af / at, PoE+, 24V/ 56V)
- Networking management
- VLAN (Transparent/Aware, Port VLAN mode: Access / Trunk, port VLAN ID)
- Trap destinations
- Remote reset and watchdog for Auto-Reset of PoE ports (to reset external devices: radios, cameras, etc.)
- Alarms management (Input and output dry contacts)

The Web-Manager displays detailed port management information: connected ports, VLAN type, power consumption, power priority and status, TX/ RX traffic and CRC.

The SFP/PoE5 screen displays detailed port management information: SFP/ PoE5 active port, network mode, connected device IP and name, Watchdog, VLAN and traffic.
Smart-Node Mechanical Overview

- Small-size: 379(h) x 309(w) x 115(d) mm
- Weight: 7.4Kg (AC), 5.6Kg (DC)
- Outdoor IP-67 (NEMA 6 equivalent)
- Operating temperatures: -40°C to 60°C / -40°F to 140°F (model specific)
- Aesthetic design
- Cast aluminum enclosure
- Stainless steel mounting-kit
- Optional cable cover for safe/hidden cable installation
- Installation: Pole mount and wall mount

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