



## Freeing IP Wireless Sensor Networks from the IT infrastructure to power new applications

**Arch Rock N4X Cellular Router** enables secure and reliable connectivity of IP Wireless Sensor Networks (WSN) without the hassle of mandating an existing local IT infrastructure. Its backhaul wireless interface uses the well-established General Packet Radio Service (GPRS) technology that is widely available from mobile service providers to enable real-time environmental sensing and resource monitoring applications. By not requiring a line-of-sight environment to a WiFi or Wired network, the GPRS technology eases rapid deployment of the IP WSN in indoor or outdoor environments.

Through permanent or temporary IP WSN deployments – sometimes referred to as the “Internet of Things” and “Internet of Services,” Arch Rock N4X Cellular Router adds opportunities to drive new business in domains such as:

- Energy monitoring
- Smart grid
- Solar generation farm
- High-end agriculture
- City street’s services
- Environmental monitoring
- Public safety
- Education and R&D

### Arch Rock N4X Cellular Router -

A networking element of Arch Rock PhyNet tiered architecture – offers WSN data protection when traffic flows over broadband wireless using IPsec encryption. It links the 6LoWPAN network to data centers hosting PhyNet and 3rd party servers using GPRS Public or Private Networks. In addition, Power Amplifier option is available to enhance the IEEE 802.15.4 mesh networking design for specific environments.



PhyNet N4X Cellular Router

### PhyNet N4X Cellular Router

- Participate in 802.15.4/6LoWPAN self-configuring, resilient wireless mesh networking
- Forward data over public wireless broadband infrastructure
- Future proof: IPv4 & IPv6
- IPsec for secured data transmission
- IEEE 802.15.4 Power Amplifier option

### BENEFITS

- Ease the deployment of IP WSN where no local IT infrastructure is in place
- Temporary & permanent installation
- Non-line of sight wireless backhaul
- Rapidly deployable



## PRODUCT SPECIFICATIONS

## NETWORKING

Interconnects and routes between IEEE 802.15.4/IETF 6LoWPAN and a Cellular backhaul uplink

Supports 6LoWPAN Node addressing with Stateless IPv4-IPv6 Translation

IP over Point-to-Point Protocol (PPP)

IEEE 802.15.4/6LoWPAN AES-128 bit authentication &amp; encryption (CBC-MAC+CCM)

Data protection over the WAN through IPsec Tunnel

Cellular Public or Private networks (using NAT Traversal)

## INTERFACES

IEEE 802.15.4/6LoWPAN		
	Frequency Bands Supported	2.405 to 2.480 GHz
	Channels	16
	Transmitter Power Output	0 dBm (standard), 20 dBm (Power Amplifier)
	Receive Sensitivity	-94 dBm (min) -90 dBm (typical)
	Outdoor Range Per Single Hop	100 to 650 meters LOS
	Antenna (not included)	5.5dBi
Cellular	GPRS Class 10	
	Frequency Bands Supported	850-MHz GSM, GPRS band 900-MHz GSM, GPRS band 1800-MHz GSM, GPRS band 1900-MHz GSM, GPRS band
	Antenna (not included)	5dBi, 250W, Mast mounted
	Subscriber Identity Module (SIM) Card	Field installable

## ENVIRONMENTAL

Power	PoE (Ethernet port for LAN only)
Dimensions	30cm x 20cm x 24cm (L x W x H)
Operating Temperature	-25°C to +70°C
Operating Humidity	0 to 100% RHI, Condensing
Environmental Rating	IP66 (Protected from dust and high pressure water jets)
Weight	3.2Kg
Mounting Bracket	Universal plates with holes for U-bolt or metal straps (not included)
Warranty	1 year

## ORDERING INFORMATION

Part Number	Description	Comments
RSS-2020-N4-CN	PhyNet N4X Cellular Router, 850/1900 MHz Band	North-America
RSS-2020-N4-CE	PhyNet N4X Cellular Router, 900/1800 MHz Band	Europe
RSS-2020-N4-CN-PA	PhyNet N4X Cellular Router, 850/1900 MHz Band, Power Amplifier	North-America
RSS-2020-N4-CE-PA	PhyNet N4X Cellular Router, 900/1800 MHz Band, Power Amplifier	Europe
RSA-8R-N4-C	PhyNet N4X Cellular Router Antenna Kit	North-America or Europe

Please visit the Arch Rock Web Store at <http://store.archrock.com>