

# Wireless Range Extender RTO-21

data sheet



## FEATURES

- › Easy to install and commission
- › Extends wireless range by up to 300m (LoS)
- › Routes data from other wireless nodes
- › Integrated mains power supply
- › Wide voltage input range
- › Waterproof polycarbonate enclosure
- › Fully wireless communications
- › Wireless range of up to 300m (LoS)
- › Dimensions (LxWxH): 144mm x 112mm x 35mm
- › Self-healing mesh network
- › 2.4GHz ISM band ZigBee® wireless radio
- › Fully secure communications: 128-bit AES encryption
- › Over-the-air software upgrade capability



## INTRODUCTION

The RTO-21 Wireless Range Extender can increase the range of a wireless sensor network by up to 300m. Data is automatically routed from wireless nodes in a mesh network through the range extender and back to the NGR-30 Smart Gateway.

The Wireless Range Extender includes an internal mains power supply which is designed to work over a wide range of voltages and on-board ZigBee wireless communications.

The RTO-21 enclosure is fully waterproof, which is ideal for use in harsh industrial or outdoor environments.

## APPLICATIONS

The RTO-21 is perfect for connecting wireless nodes that have been deployed at the extremities of large buildings to the Smart Gateway, which would otherwise be out of wireless range.

Many RTO-21 units can be used in a chain to extend the wireless sensor network to even greater distances.

Increasing the number of range extenders also improves the strength and reliability of the mesh network by providing redundant paths for nodes to link to the Smart Gateway.



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## SPECIFICATIONS



Dimensions of RTO-21 Wireless Range Extender

Ordering Code	RTO-21	Wireless Range Extender (omni-directional)
Wireless Range	Indoor Range Extension Outdoor Range Extension	up to 50m up to 300m (direct line of sight)
Supply Voltage	Input Voltage Range Power Consumption	75V to 265V AC, 50/60Hz 1.1W
Certification	Certification	CE
Wireless Technology	Radio Technology Radio Frequency Channels Max Tx Power Rx Sensitivity Data Rate	ZigBee Pro 2.4 Ghz ISM Band 16 Channels (11 - 26) +3dBm (+5dBm in Boost Mode) -98dBm @ 1% Packet Error Rate up to 250 kbits/sec
Security	Encryption	128-bit AES Encryption
Physical	Dimensions (LxWxH) Weight Mounting Enclosure	144 x 112 x 35 mm 0.35kg Wall Mounting Flanges Polycarbonate Plastic, IP67 rated
Operating Conditions	Operating Temperature Operating Humidity	-40°C to +85°C up to 80% (non-condensing)