Need Help? 1800 810 820

Pathfinder Mesh Network Modbus-to-Wireless Unit

Dual Function Wireless Base or Remote Node

Pathfinder Options (Please select)

RS232 & RS422/485

What it does:
Enables a mesh network of modbus slave devices to be connected wirelessly to a modbus master program.

Define Instruments **Wireless Pathfinders** are the perfect solution for applications that require **low data rates** and **wireless mesh networking** across large areas. They employ the Modbus/RTU protocol, simplifying setup and integration with PLCs, and offer a variety of communication methods and topologies to suit different needs for small, medium or large networks.

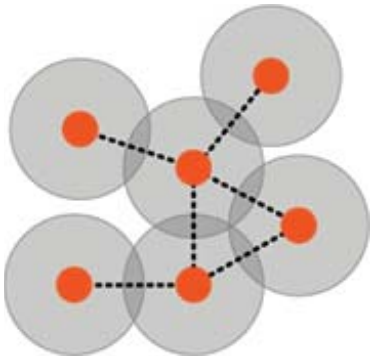
The dual function **Wireless Pathfinder** can be used as either a **Base Node** or a **Remote Node**. So to start a Modbus-to-wireless mesh network, two Pathfinders are all it takes!

Highly flexible:

- Configured as a **Modbus slave device** for easy PLC integration
- Serial or ethernet comms
- Optional digital I/O

- ✔ Now includes **boosted transmission range**, to transmit data up to 0.9mi line-of-sight
- ✔ Optional Sleeper Nodes also available

Better than Bluetooth or Wi-Fi!



Unlike Bluetooth or Wi-Fi devices, Define Instruments Pathfinder nodes implement **Mesh Networking**, enabling them to connect using multiple pathways. This enables routes to be created between nodes that would otherwise be out of range, allowing the network to be extended across a much wider area. It also increases the stability of the network, because data can easily be rerouted if any node malfunctions.

Connections between nodes are dynamically updated and optimised through sophisticated mesh routing tables, and new nodes can easily be added as needed. Up to 67 Pathfinder nodes can be connected in a single network (1 base and 64 remotes!) and each is capable of transmitting data **up to 0.9mi** line of sight.

Wide Range of Applications

Wireless Pathfinders can be used to network entire factories or plants, and are ideal for a host of monitoring and control applications, including:

- Smart energy/grid
- Automatic Meter Readings (AMR)
- Lighting controls
- Tank monitoring
- Building automation systems
- HVAC control *and more...*

R-NZ E2180 CE Modbus MEMBER

SPECIFICATIONS

Transmission

Unit function	2.4GHz wireless base/remote
RF data rate	250Kb/s
RF frequency range	2405–2485MHz
RF transmission power	+20dBm (Boosted Power Range)
Transmission range	Up to 0.9mi line-ofsight with default antenna
RF receiver sensitivity	-100dBm
Number of RF channels	16

Number of RF channels 16

Number of wireless nodes Up to 1 Base node, 63 Remote nodes and 32 Sleepers in a single mesh network

Spreading method Direct sequence

Modulation O-QPSK

Power

Supply voltage 9–35V DC

Power adaptor WG-PSU multi-region power adaptor included with purchase

Modbus/RTU

Baud rate 9600, 19200, 57600 or 115200 baud

Parity Even or none

Comm Port(s)

Serial port configuration (select one)
S: 1 x RS232 and 1 x RS485/422, or
E: 1 x Ethernet (Modbus/RTU)

Digital I/O's

OPTIONAL

Digital inputs 4 x digital inputs (**-IO** option only)

Digital outputs 2 x digital outputs (**-IO** option only)

Relay outputs 2 x relay outputs (**-IO** option only)

Construction

Casing 35mm DIN rail mount casing

Ingress protection rating IP20 - install in a protective enclosure

Dimensions (H x W x D)
Unit body: 3.98 x 0.91 x 4.72" (101 x 23 x 120mm)
With included antenna: 5.91 x 0.91 x 5.75" (150 x 23 x 146mm)

Environmental conditions

Operating temperature –40 to 185°F (–40 to 85°C)

ORDERING

WG-PTH

Comms	
-S	1 x RS232, 1 x RS232/485
-E	Ethernet Modbus/RTU port

Digital I/O	
	None
-IO	2 x relay output, 4 x digital input, 2 x digital output

Sample order codes: WG-PTH-S, WG-PTH-E-IO

Accessories/Software

WG-PSU	12V DC power adaptor
Bridge Key	USB Bridge Key and communications kit (required for software configuration)
Antenna Upgrades	Click here for antenna upgrade options

http://www.defineinstruments.co.nz/shop/modbus-to-wireless-pathfinder