

# ADAM-2051Z

# ADAM-2051PZ

**Wireless Sensor Network 8-ch Digital Input Node**

**Wireless Sensor Network 8-ch Digital Input Node with Power Amplifier**



ADAM-2051Z



## Features

- IEEE 802.15.4 Wireless Standard
- Supports Star/Tree/Mesh Network Topologies
- Modbus Communication Protocol
- Low Power Consumption
- LED Indicators
- Event Triggering

## Specifications

### Digital Input

- **Channels** 8
  - **Input Resistance** 10 K $\Omega$
  - **Input Level**
    - Dry contact: Logic level 0: Close to GND  
Logic level 1: Open
    - Wet contact: Logic level 0: 0-0.8 V max  
Logic level 1: 2.0 ~ 5.0 V
- (Note: The Digital Input Level 0 and 1 status can be inverted)

## Ordering Information

- **ADAM-2051Z\*** Wireless 8-ch Digital Input Node



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## Common Specifications

### Wireless Communication

- **IEEE Standard** IEEE 802.15.4
- **Modulation Type** DSSS (OQPSK)
- **Frequency Band** ISM 2.4 GHz  
(2.4 GHz ~ 2.4835 GHz)
- **Channels** 11 - 26
- **RF Data Rate** 250 Kbps
- **Transmit Power Typ.** 3  $\pm$  1 dBm (ADAM-2051Z)  
19  $\pm$  1 dBm (ADAM-2051PZ)
- **Receiver Sensitivity** -97 dBm
- **Topologies** Star / Tree / Mesh
- **Outdoor Range** 110 m with line of sight (ADAM-2051Z)  
1000 m with line of sight (ADAM-2051PZ)
- **Function** End Device

### General

- **Connectors** 1 x plug-in terminal block (#14 ~ 22 AWG)
- **Power Input** Unregulated 10 ~ 30 V<sub>DC</sub>
- **Battery Input** 2 x AA Alkaline
- **Power Consumption** 0.3 W @ 24 V<sub>DC</sub>  
(ADAM-2051Z/PZ) Battery AA \* 2  
380  $\mu$ W @ 3 V<sub>DC</sub> (1 minute Tx Interval)  
220  $\mu$ W @ 3 V<sub>DC</sub> (2 minute Tx Interval)  
130  $\mu$ W @ 3 V<sub>DC</sub> (5 minute Tx Interval)

### Environment

- **Operating Temperature**
  - External Power -20 $^{\circ}$ C ~ 70 $^{\circ}$ C (-4 $^{\circ}$ F ~ 157.9 $^{\circ}$ F)
  - Battery Power 0 $^{\circ}$ C ~ 50 $^{\circ}$ C ( 32 $^{\circ}$ F ~ 122 $^{\circ}$ F)
- **Storage Temperature** -20 $^{\circ}$ C ~ 70 $^{\circ}$ C (-4 $^{\circ}$ F ~ 157.9 $^{\circ}$ F)
- **Operating Humidity** 20~95% RH
- **Storage Humidity** 0~95% RH

\*If want to operate in a wider temperature (-40 $^{\circ}$ C~ 85 $^{\circ}$ C (-4 $^{\circ}$ F ~ 157.9 $^{\circ}$ F) ), contact our sales team.