

W-Link

W-Link provides a wireless connection for remotely extending an RS485 serial interface. The typical application of W-Link is serial communication between a station and a sensor installed in a remote location where cabling is not feasible. Thanks to its high receiver sensitivity, this radio module is particularly well suited for applications requiring long-range RF transmission, enabling communication distances of over 5 km under line-of-sight conditions. W-Link is powered by a backup battery, which is kept charged by a photovoltaic solar panel.



TECHNOLOGY AND OPERATION

The W-Link module provides point-to-point or point-to-multipoint serial communication. In the latter configuration, devices are organized as one master and multiple slave units. W-Link operates in the 863–870 MHz frequency band and does not require a license.

The main operating features of W-Link are as follows:

- any data received through the serial interface is retransmitted via Radio Frequency (RF);
- any data received via RF is retransmitted through the serial interface;
- all messages are transmitted in broadcast mode (no addressing scheme is implemented);
- an automatic low-power operating mode is available and managed directly by the RF module.
- the serial communication speed is programmable.

The device is designed for mounting on poles, DIN rails, or directly onto the backplate of CAE enclosures.

TECHNICAL SPECIFICATIONS

- Frequency band: 863–870 Mhz
- Communication range: up to 5.9 km with line of sight; up to 3 km without line of sight
- RF output power: up to 13 dBm ERP
- Over-the-air data rate: 10 to 80 kbps
- Receiver sensitivity: –107 dBm at 80 kbps; –112 dBm at 10 kbps
- Supply voltage range: 10–15 V
- Serial interfaces: 1 × Rs485
- Operating temperature range: –40 °F to +140 °F
- Enclosure protection rating: IP67 polycarbonate housing
- Dimensions: 120 × 80 × 55 mm (W × H × D, front view)

