

Signal Tower



Wireless Data Acquisition System

Wireless LED Signal Towers
for Data Acquisition
and Remote MonitoringIEEE802.15.4
2.4GHz

AirGRID

Data Acquisition and Remote Monitoring via
Wireless Network of PATLITE Signal Towers

PATLITE wireless add-on modules and receivers make PATLITE signal towers capable of sending electrical signals over a wireless network to a data center. PATLITE' s unique wireless add-on modules and receivers are a practical and economical solution for data acquisition, machine status remote monitoring, and supervisory control of industrial processes. The AirGRID is an effective solution for lean manufacturing and the visual factory. PATLITE wireless add-on modules comply with IEEE802.15.4, operating in the 2.4 GHz band.

1) Simply add to a PATLITE signal tower

Operating conditions of Patlite signal towers installed on production machines or process systems can be transmitted wirelessly to a data center. Data acquisition and remote monitoring are possible instantly and economically.

2) Wireless technology eliminates tedious wire installation

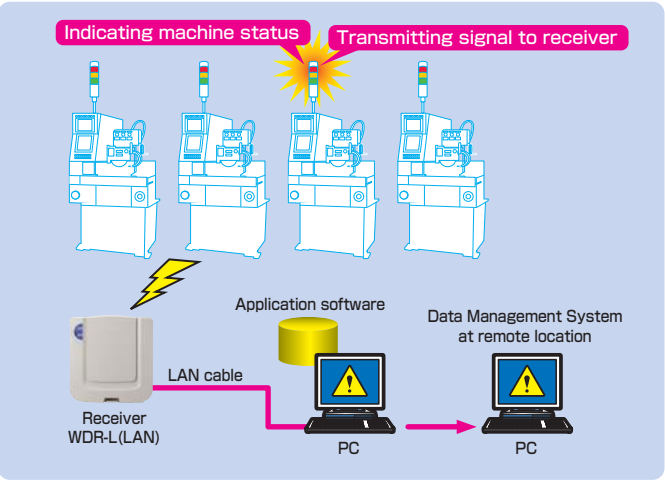
Wireless add-on modules source power from PATLITE signal towers and transmit electrical signals to the data center. Therefore wiring, component installation and related costs are minimal.

3) Multi-hopping topology and high transmitting reliability

With wireless multi-hopping topology, which can minimize potential transmitting failures or errors, a high level of stable operation and transmitting reliability are expected.

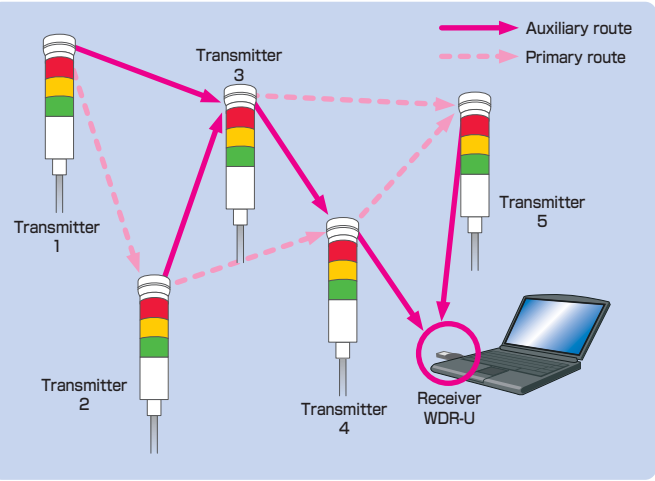
Typical Application

Multiple stand-alone machines can be networked by the AirGrid for data archiving and remote monitoring. The status and condition of the machines are indicated by the PATLITE signal towers.





Wireless Concept IEEE 802.15.4 2.4GHz

- Wireless hopping/routing functions and mesh topology can make flexible and reliable wireless network configurations possible.
- Data archived by the AirGRID is stored in a file format CSV which any off-the-shelf data management software e.g, SCADA can handle.



Specifications

Transmitters

	WDT-6M	WDT-5E
Model		
Applicable Signal Tower	LME series	LE series (only 24VDC)
Rated Voltage	24VDC no polarity	
Volatge Range	20.4VDC - 26.4VDC	
Current Consumption	70mA	
Operating Temperature	-10°C~60°C (No condensation)	
Environment Humidity	85% RH or less	
Environment Temperature	-20°C~70°C (No freezing)	
Installation	Upright position (indoor use only)	
IP Protection	Determined by PATLITE signal towers	
Dimension	φ 65×height 36.9mm	φ 65×height 38.5mm
Mass	55 grams	



(*)Ask PATLITE sales representatives for specific models of PATLITE signal towers which are compatible with the WDT-6M and WDT-5E.

Features

Wireless Standard	IEEE 802. 15. 4
Frequency Band	2400MHz-2483.5MHz (16 channels by 5MHz step from 2405MHz)
Installation	up to 20 units (*1)
Wireless Output	Max. 1mW
Compliance	FCC, R&TTE, CE, RoHS

(*1) Numbers of units to install are determined by wireless environment and installation location

Receivers

	WDR-L (LAN)	WDR-U (USB)
Model		
Rated Voltage	24VDC (Power supply not included)	5VDC(with USB bus power)
Volatge Range	20.4VDC-26.4VDC	4.5VDC-5.5VDC
Current Consumption	150mA	70mA
Operating Temperature	-10°C~60°C (No condensation)	5°C~40°C (No condensation)
Environment Humidity	85% RH or less	85% RH or less
Environment Temperature	-20°C~70°C (No freezing)	-5°C~50°C (No condensation)
Installation	horizontal , wall mount (indoor use only)	USB port of PC (no USB hub) (indoor use only)
IP Protection	IP20	-
Dimension	height 131mm×width 125mm×deep 38.5mm	height 11mm×width 28.5mm×Deep 66.5m
Mass	165g	15g



Application software(supplied free) WDS-AU

The software WDS-AU stores datas which the WDR-L/U receives from WDT-6M/5E in the file format of CSV.