

# DL-WM-103 Technical Specification

## Wireless Static Strain Acquisition System

Wireless static strain acquisition system for structures where cabling is difficult, supporting full-bridge, half-bridge, two-wire and three-wire quarter-bridge strain inputs, bridge-type sensors, voltage signals, ZigBee communication, 8 points per module, up to 256 points per computer, and 20 Hz per-point sampling.

System Category	DL-WM
Signal Type	Wireless static strain
Measurement Range	Full-bridge, half-bridge, and quarter-bridge strain inputs
Sampling / Response	20 Hz per measurement point
Communication	ZigBee wireless network
Protection / Enclosure	Field enclosure required by project
Power Supply	Battery operation
Installation	Distributed strain module installation

### Key Features

- Wireless strain acquisition supports large structures with scattered measurement points.
- Each module supports 8 points, with system expansion up to 32 modules and 256 points per computer.
- Supports bridge-type sensors, voltage inputs, on-device cache, and battery operation.
- Technical basis may reference GB/T 6587 environmental and electronic equipment requirements.

### Typical Use Cases

- Bridge, civil, and mechanical structural strength tests where wiring is difficult.
- Static strain monitoring with distributed measurement points and moderate sampling requirements.

### Deployment Notes

- Confirm bridge type, strain gauge resistance, module count, wireless coverage, and test duration.
- Plan gateway position and battery maintenance for multi-module ZigBee networks.
- Keep GB/T 6587 references where environmental test class documentation is required.

### Technical Highlights and Standards

- 8 points per module
- Up to 256 points per computer
- 20 Hz per point
- 1 microstrain resolution

- ZigBee communication
- GB/T 6587 reference

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