WK-1065 HandyLan Gigabit Ethernet Hand-Held Tester

HandyLan® WK-1065: The Hand-Held Network Testing Specialist for Gigabit Ethernet, designed with powerful features & flexibility for your network trouble-shooting and verification needs within your budget.

The HandyLan WK1065 tester integrates metallic and fiber network testing in one hand-held unit, convenient and time-saving for accurate system verification and locating possible network failures. WK1065 provides 10/100 Mbps and Gigabit Ethernet multi-rate function tests. The interface is automatically switchable between copper and fiber depending on the medium is used.

Features：

1. Link Status Control & Analysis

- Able to ping & identify all devices, servers, and computer hosts connected on a network.
- Able to acquire IP address through DHCP or a manually-set mode.
- Can detect the link status of cabling including: Duplex (Full/Half); Speed (10,100,1000 Mbps); the pair of wires for Tx & Rx; network connection quality; flow control enabling status; and auto negotiation status.
- Can be enabled to shut down a device when no activity occurred within user's programmed time period.
- Can flash a remote-site LED at programmable intervals.

2. Data Flow Rate Monitoring

- Programmable up-stream /down-stream utilization rate for packet generation. Ideally for Telecomm XDSL/FTTH bi-directional bandwidth simulation and monitoring.

3. Packet Generation (WK-1065) (RFC2544 Test)

- Able to generate packet data with variable data length ranging from 48 ~ 9000 bytes at up to 100% wire speed.
- The generated data pattern can be varied with packet number and length, data pattern, source / destination, MAC address, destination IP address, VLAN ID & priority, and TX utilization rate by increment of 1%.
- Able to generate error frames: oversize, undersize, dribble, alignment, and FCS errors.
- Constant / Burst transmission type.
- Able to perform Inter-network throughput with two WK-1065 units (Loop-back test).
- Able to perform RFC2544 performance analysis which includes throughput test, frame loss test, back to back test & latency test.
- IPV4 packet generation with checksum at wire speed. The IP headers are programmable for destination and source IP addresses.

4. Statistics View

- Statistical counts for dribble, undersize, oversize, VLAN tag, collision, broadcast, multicast, unicast, and FCS errors are provided.

5. Test Report Generation

- Able to record up to 80 sets of report by entering test date, person, file names, & test site.
- Test results such as number of TX frames, number of RX frames, number of errors, TX rate (1~ 100%) of a wire speed, and VLAN / IP addresses can be reported.

6. Trace Route Test

- Able to perform trace route test to identify all IP addresses in the route to a remote node.

7. BER Test

- Able to perform 10/100/1000 Layer 2 & IP BER test with data pattern of 2^7-1, 2^15-1, 2^23-1, 2^31-1. The associated bit error count statistics is also provided.

General Specifications

Display	128 X 64 graphic LCD.
Power	Li-ion rechargeable battery. Lasts for at least 1 hour of continuous work with link at full wire speed. Battery with AC (100~240VAC, 50/60Hz).
Interface	**1st port** RJ45 for 10/100/1000 Mpbs. Compliant with: IEEE 802.3 for 10Mbps, IEEE 802.3u for 100Mbps, IEEE 802.3ab for 1000Mbps. **2nd port** for fiber transceiver of 850nm, 1310nm, and 1550nm SFP. (Auto switch between 1st and 2nd port depending on the interface medium connected; Copper has higher priority over Fiber when both are connected.) Compliant with IEEE 802.3z.
I/O	12V DC power Input, RS232 port for printer & PC link.
LED	**6 LEDs for HandyLan WK-1065** Link10/Act, Link 100/Act, Link1000/Act, Link Quality (Signal strength), Duplex/Collision, Cable Open / Error Frames.
Audio	Audible buzzer to indicate key input.
Real-time Clock	Programmable for date & time display.
Weight	Less than 500g with battery.
Dimension	90mm (W) x 24mm (H) x 160mm (D).
Operation Condition	Operating temperature: 0 ~ 40 ^{0}C, Relative humidity: 10% ~ 85% (non-condensing).

Performance

Function Category	Features	Test configuration
Link Status	To setup or display link settings: - 10/100/1000 Mbps Capability - Full Duplex / Half Duplex - Auto Negotiation - Flow control.	In -Line Test Single End Test
Flash Port	To flash the remote end of a directly connected device at programmable period to find out where the cable was connected to.	In -Line Test Single End Test
Ping	To setup & ping a remote IP device with programmable IP address, Frame size, Frame gap, Reply time, Repeat counts.	In -Line Test Single End Test
Trace Route	To test & list all IP addresses in the route to a remote node.	In -Line Test Single End Test
Cable/Fiber Diagnostics	Length of a directly connected cable Connection quality of the cable Tests the fiber for its Tx & Rx Power, and shows the current & volt & temperature.	In -Line Test Single End Test

LED Indicators

Label	LED	Description
Link 10/Act	LED blinking, solid on when linked.	Linking at 10 Mbps, data transmission & receiving in process.
Link 100/Act		Linking at 100 Mbps, data transmission & receiving in process.
Link 1000/Act		Linking at 1000 Mbps, data transmission & receiving in process.
Open	Solid on	When the cable wire broken.
Link Quality	Off	Auto-negotiation in progress.
	On	Auto-negotiation complete, establishing link.
	On	Link established, good signal-to-noise ratio (SNR).
	Fast blink	Low SNR, close to data error.
	Slow blink	Receiving bit errors detected.
	Off	Local receiver status not OK.
Duplex	On/Off	ON: Full Duplex, OFF: Half Duplex.
Error Frames	On/Off	Indicating data packet errors such as under size, over size, bad CRC or alignment, fragment, dribble errors.
Collision	On/Off	Off: No collision, Solid On: collision.