Datasheet for LanXPLORER PRO

Interfaces

- Electrical
    - Primary: RJ45 (Field replaceable RJ45 contacts) left for 10/100/1000Mb/s, Duplex: Half or Full, Auto Negotiation: On or Off
    - Secondary: RJ45 (exchangeable PING) right for 10/100/1000Mb/s
- Optical
    - SFP housing left for 1000Mb/s, Duplex: Full, , Rx & Tx power (dBm) indication (Subject to SFP used), Type of SFP supported: SX (850nm) MM, LX (1310) SM, ZX (1550nm) SM,
- Wi-Fi
    - 2.4GHz 802.11b/g/n support with external (USB) high gain antenna and internal built-in antenna
- USB (management)
    - Type A host USB 1.1 used for result/setup/SW upgrade

Configuration and results

- Configuration
    - Internal: 2 configuration files - factory default & user defined; External: export to USB; Format: xml
- Results (internal)
    - Max number of jobs (projects) – 30,
    - Max Number of result sets per Job – 250,
    - Max total number of result sets - 7500.
- Results (external)
    - via USB port to USB memory key or via dedicated Wi-Fi USB adapter to mobile devices (smart phone or tablet)

Test Mode

- End point
    - Copper (RJ45), fibre and Wi-Fi
- In-line(through)
    - Copper (RJ45) only

Wired Test (In-line & endpoint mode)

- PC Diagnostics (in-line mode only)
    - Protocols: Protocol frames counting (HTTP TCP, DNS, UDP, DHCP, IGMP, ARP, ICMP, LLDP etc.); Traffic: Host IPv4, IPv6 address, Peak bandwidth in Mb/s; IP data: IPv4 & IPv6 address, Gateway, Subnet mask, Primary DNS, Secondary DNS, DHCP Server; Link: Errors count and 802.1x activity info
- VOIP (in-line mode only)
    - Signalling (Trace): Session Initiation Protocol (SIP),
    - Port number range on called and calling No:1 to 65535 with calling and called party number and IP address, Codec: PCM A & u law; Packet: Total packet count, Lost packet count, Lost packets %, threshold (%):1 to 100
    - Jitter & Delay (ms): Max, Min, Current, Average on last successfully connected call ; Threshold (ms): 1 to 999999;
    - Jitter: based on RFC3550; Call Log: Last 20 calls, Call start time, Destination number, Call length (mm:ss).
- Top ten
    - Refer to Statistic part

- IP
  - Addressing type: IPv4-DHCP or Static; IPv6- static, stateless and stateful; Netmask., Gateway, DNS1: Numerical address only, DNS2: Numerical address only
- VLAN
  - Auto VLAN ID detection, User setup of end point mode on VLAN ID range: 0 to 4094. Priority: 0 to 7 of endpoint test,
- Netmap (endpoint mode only)
  - Scan Network Range: Local, Custom on specific IP address; Address: IPv4, IPv6; Scan Range: Normal (000-255, /24), Wide (015-255, /20);
  - Hosts category count: All Hosts, Server Hosts (differentiation based on services / ports), Printer Hosts (differentiation based on services / ports).
  - Host details: Host Name, IPv4/IPv6 Address, MAC Address, Services Detected
- NetVerify (endpoint mode only)
  - Netmap comparison: Use previous saved Netmap to compare the difference of IP, MAC address, ports, services and giving new, missing, change, pass or fail indication.
- Conflicts (end point mode only)
  - Detection of the same IP address within the network.
- Ping (end point mode only)
  - Target: IPv4 & IPv6 address, URL. Count: 1 to 999999. Pause: 0 to 5000 ms. Length: 8 to 3000 bytes; Tx Count: 0 to 999999; Rx Count: 0 to 999999. Delay (ms):Minimum, Average, Maximum; Max number of PING at one time: 10
- PoE (Copper only)
  - Type: 802.3af (PoE) & 802.3at (PoE+); Min PoE load Test with Threshold: 1 to 15 watts; Min PoE + load Test with Threshold: 1 to 28 watts; PoE Results Status: READY, FAILED NO POE DETECTED, PASSED; Pair: 12/36, 45/78. Voltage: 0 to 60 volts. Current: 0 to 600 mA. Power: 0 to 36 watts
  - Trace Route (End point mode only)
  - IPV4 & IPv6 address, URL. Max Hops: 1 to 100. Timeout: 1 to 30 sec. Type: ICMP, UDP
  - Trace Route Results Info: READY, IN PROGRESS, PASSED, NO RESPONSE, UNKNOWN HOST. Hop: IPv4 & IPv6 address. Delay(ms): t1, t2, t3
- Loop Back (End point mode only)
  - Type: Wireline (Layer 1), MAC (Layer2), IP (Layer 3), UDP (Layer 4); Loop all traffic: on or off
  - Hub (Port) blink (End point mode only)
  - Test Sequence: Off/10/Off/100/Off/1000 Mb/s (copper) for copper port & Off/1000Mb/s for fibre port
- Optical information (Fibre & end point mode only)
  - SFP availability, SFP vendor name, SFP part number, Tx & Rx power indication in dBm (SFP dependency),
- Autotest
  - Automatic running user selected individual test sequentially: Scan (Wi-Fi), PING (IPv4 & IPv6), TraceRoute (IPv4 & IPv6), NetVerify, Conflicts

Wi-Fi (end point mode)
- Channel Scan
  - Active AP detection, Signal strength indication, SSID, BSSID, Channel #, Mode (802.11b/g/n), Encryption type (None / WEP / WPA-PSK / WPA2-PSK)
- Connectivity
  - Join & leave, Encryption (None / WEP / WPA-PSK / WPA2-PSK), Key : ASCII, Hex; 802.1x authentication
- Tests
  - Netmap, Ping (IPv4 & IPv6), Trace Route (IPv4 & IPv6), Net Verify, Conflicts, Autotest. Details refer to relevant item in wired test category.

Statistics (in-line & end point mode)

- Top Ten (excluding Wi-Fi)
  - Measuring Period: 1 sec, 30 sec, Peak; Talkers, Listeners, Errors, Protocols; Bandwidth: Average Mb/s; Sort address: IP or MAC;
  - Host: IPv4 & IPv6 address.
- IP Results Info
  - Listening (in-line), IPv4 & IPv6 address, Gateway, Subnet mask, Primary DNS, Secondary DNS, DHCP Server
- VLAN (excluding Wi-Fi)
  - VLAN ID auto detection on Rx & Tx on ports
- 802.1x (end points only)
  - Port Status & log, EAP method (MD5, MSCHAP, GTC, TLS, PEAP, TTLS, Any), Phase2 Method, Key management.
- MAC Results
  - Rx & Tx: Frames, Total Bytes, Unicast, Broadcast, Multicast, Max Frames/sec, Current Rate bps, Average Rate bps, Max Rate bps, Current Utilisation %, Average Utilisation %, Max Utilisation %, Frame size
- Port Discovery Protocol (excluding Wi-Fi)
  - Full decode of LLDP,CDP, EDP
- Link Results (excluding Wi-Fi)
  - PORT: PoE Type, PoE Pair, Speed, Duplex, MDI / MDIX, Signal Level, Polarity; PARTNER: 10M-HD. 10M-FD, 100M-HD, 100M-FD, 1000M-HD, 1000M-FD; ERRORS frame count: Collisions, FCS Errors, Undersize, Oversize, Jabbers, Bad Length

Cable Test (Copper only)

- Wiremap Setup
  - Cable Type: Cat3 UTP, Cat3 STP, Cat5 UTP, Cat5 STP, Cat5e UTP, Cat5e STP, Cat6 UTP, Cat6 STP, Cat7, USOC, ETH S12- 36, ETH S12-78, ETH U1236, ETH U1278, IND. M12, COAX RJ59. Colour Scheme: None, 568A, 568B, USOC, TERA. Cross Over Allowed: Yes, No. NVP: Fixed 72%, Custom 59% - 89%
- Wiremap Termination
  - Type: None – Open, Active Remote - #1 - #12
- Wiremap Tests (No Termination)
  - Faults: Open circuit by pin, Short circuit by pin. Length of pair (open only): Metres / Feet (Set in System Setup), Range 100m / 390ft
- Wiremap Tests (Active Remote Termination)
  - I/D–Remote #: Indications on Remote: Voltage Warning (>±10volts on any pins), Pass/Fail. Faults: Open circuit by pin, Short circuit by pin, Crossed pairs, Split pairs, Bridged shorts, Remote shorts. Length of pair: Metres/Feet (Set in System Setup), Range 100m/ 390ft
- Tone Generator and detection
  - No. of Tones: 3. Wire I/D: Tone applied to one of 8 pins relative to the other 7, Tone applied across one of 4 pairs; Audible tone detected using compatible tone probe

System

- Clock
  - User setup date & time with format MM/DD/YYYY, Internal clock as time stamp lasts 2 days with battery removed
- Language
  - English, German, French, Spanish, Italian, Portuguese, Chinese

- Battery Power saving
    - Auto Off Preferences: Disabled, 3 mins, 10 mins, 30 mins
    - Backlight Preferences: Always on, Switch off after 3 mins

- Measurement unit
    - Metres, Feet
- Software Upgrade
    - Via USB port
- Test report
    - End user and operator info, User logo insert, Format: PDF & CSV (summary only); Size: Summary, Brief, Full; Results: All, Pass, Fail; Wi-Fi password user change; View & Edit individual test report name, client & operator info. Support IDEAL AnyWARE APP for wireless report transfer to mobile devices with iOS or Android used.

General

- Display
    - 3.5" QVGA (320x240) TFT colour LCD touch screen
- LEDs
    - Link & Activity LEDs' indication on each SFP and RJ45 port
- Battery
    - Rechargeable 6 x AA NiMH low self-discharge cell pack, Autonomy: 5 hours, Recharge time:3 hours   (Rechargeable pack only)
- Power
    - Input: AC 110~240V, 0.8A, Plug: UK, EU, US exchangeable
    - Output: DC 12V, 2A with plug
- Dimension
    - Length: 205mm, Width: 98 mm, Depth: 45mm
- Weight
    - Unit: 470g; Batteries: 180g; Total: 650g
- Temperature
    - Operating: 0°C to 40°C, Storage: -20°C to 70°C; Humidity: 5% ~ 90% non-condensing
- Regulation compliance
    - EMC: EN 55022:2006 / A1:2007, EN55024:1998 / A1:2001 / A2:2003, Safety: IEC 60950-1:2005+A1:2009/EN 60950-1:2006+A1:2010

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