

BlueScope BL400A

- Handheld 1G Ethernet Tester



Benefits

- Accurate and Reliable Test and Measurement
- Comprehensive Ethernet and IP Testing Capabilities
- Easy to Learn and Operate
- Low Cost of Ownership
- Easy Expansion of Features (Future Proof)
- Hands Free Upgrade
- Multi-Testing Capability
 - 10M ~1G Ethernet
 - VoIP
 - Fibre Channel ※
 - IPTV
- Wide Applications
 - Assurance
 - Activation/Turn Up Services
 - Cloud Computing Network Test
 - Network Installation
 - Troubleshooting & Maintenance
 - Network Performance Test & Measurement
- Ultra Portability

※ Q4 2010

❖ User-friendly Graphical User Interface (GUI)

- 5.7" High Resolution TFT LCD Touch Screen and Keypad
- Intuitive Menu Structure
- Easy to Operate

❖ Multi-Physical Port Support

- BL400A: 2 port 10/100/1000 & SFP (SX/LX/ZX and 100M-FX)

❖ Multiple Testing Capability

- Ethernet Test
- VoIP Test
- Fibre Channel Test (1x, 2x, 4x) ※
- IPTV Test

❖ Standard Features

- Performance Measurement (Traffic Generation/Throughput Test)
- Packet Filtering
- IP Tools (Ping, DHCP, Trace Route)
- Real Time In-Line Monitoring
- Loopback (Layer 1/2/3/4)
- Framed Bit Error Test (BERT)
- RFC 2544 (Network Equipment Benchmarking Test)
- Cable Faults Measurement (Copper and Optic Cables)
- Remote Operation
- File Management
- Reporting (ASCII, CSV, and PDF)
- System Tools

❖ Optional Features

- Packet Capture and Analyzer
- Packet Flooding
- 32 Multi-Streams
- L1/Unframed BERT
- Network Discovery
- Auto Negotiation Capture (for 1GE)
- 100 FX/LX (for 1GE)
- VoIP (for 1GE)
- IPTV (for 1GE)
- Fibre Channel (1x/2x/4x)

❖ Applications

- Network Assurance, Activation, and Installation
- Network Performance Test and Measurement
- Network Troubleshooting and Maintenance
- Cloud Computing Network Test

❖ Ultra Lightweight

- 1.3Kg (0.3Kg with Battery)
- Battery Life: Up to 4 Hours in Operation, 8 Hours in Standby

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Feature Specifications

❖ Performance Measurements

(Traffic Generation/Throughput Test)

- Configure:
 - Up to 32 Streams Per Port
 - Layer 1/2/3/4 Packet Frames (Continuous, Burst-Once, Ramp, Random Length)
 - MAC/VLAN/MPLS/ICMP/TCP/UDP Setup
 - Payload (PRBS, Increment, Decrement, User Pattern)
 - Frame Size (Runt to Jumbo)
 - Frame Rate (% , BPS, FPS)
 - VLAN Tags (3 Q-in-Q: TPID, Priority, CFI, VLAN ID)
 - MPLS Label (3 Stacks: Label, Exp., EoS, TTL)
 - Pause Injection with Delay Control
 - Error Injection (FCS, Duplicated, Lost, Late Frame, L3/L4 Checksum, Bit Error)
 - Ping, ARP, Trace Route, DHCP

❖ Packet Filtering

- Source/Destination Addresses (MAC/IP/Port)
- VLAN (Q-in-Q, TPID, Priority, CFI, VID)
- MPLS (Label, Exp., EoS, TTL)
- Packet Fields (TOS/DSCP, Protocol, User Defined)
- Advanced Pattern Matching Based on User Defined Pattern Filters

❖ IP Tools

- IP Setup (MACP, IP, Netmask, Gateway, DNS)
- Static and DHCP Support
- Ping (Destination, Frame Length, Ping Rate, Timeout, Number of Pings)
- Trace Route (Destination IP, Max Hop, Timeout)

❖ Real Time In-Line Monitoring

- In-Service Traffic Monitoring (BL400A, BL1400A, BL2000A)
- Per Frame/Per Packet Based Measurements
- In-Line Packet Filtering and Capturing
- Error Injection
- Media Conversion (Optic ↔ Copper)

❖ Loopback

- Layer 1 (All), L2 (All), L2/3/4 (Filtered), and Auto Loopback
- Per Frame/Per Packet Based Measurements
- Remote Loopback control

❖ Framed Bit Error Test (BERT)

- Framed (Layer 2/3/4) Test Patterns: (PRBS 31 and Inverted)
- Error Packet Generation (Lost/Duplicate/Late Frame): Single, Burst, Rate

❖ RFC 2544 (Network Equipment Benchmarking Test)

- Per Packet Size Test:
 - Performance Measurement (Throughput Test)
 - Delay Measurement (Latency Test)
 - Packet Frame Loss Measurement (Frame Loss Test)
- Back-to-Back Test
- Packet Jitter Test
- Report Generation (ASCII, CSV, and PDF)

❖ Cable Faults Test and Measurement

- Copper Cable (Twist Pair):
 - TDR (Time Division Reflector)
 - Cable Fault, Length
 - Irregular Impedance of Cable Pair
- Optic Cable:
 - Rx Power Level
 - WaveLength (λ)

❖ Remote Operation

- All features controllable Remotely via Internet or Network
- Windows Based Client Remote Viewer Supplied

❖ File Management

- File Transfer fro/to USB Memory Stick
- Usage of Space (in %)
- File View, Print, Export to CSV, Rename, Delete
- USB Mount/Unmount

❖ Reporting

- Custom Report Generation
- Report Formats: ASCII, CSV, and PDF

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Feature Specifications

❖ System Tools

- Data and Time
- Network Settings:
 - Static vs. DHCP
 - IP Address, Subnet, Gateway, DNS, Remote Control
- License Control
- Display Control (Brightness)
- Auto Power On/Off
- System and User Info:
 - SN, S/W Version, H/W Version, User Info for Custom Report
- Printer:
 - HP Laserjet Compatible
 - Network or USB Connection
- Factory Default Setting
- FTP Upgrade
- USB Upgrade

Status & Measurement Statistics

❖ Link Status

- Connection Link Status (Up/Down), Link Speed, Duplex, Activity, Optical Power Level (Rx Level)
- Auto Negotiation Status (Acknowledgement/Advertisement)

❖ Streams Status

- Frame/Packet Based, Selected Stream, ARP

❖ Measurements

- Time Based Measurement
- Independent Tx/Rx Measurement and Synchronous Tx/Rx Measurement
- Aggregation Status:
 - Tx/Rx Frame Statistics
 - TX/Rx Packet Statistics (Uni/Multi/Broadcast/Extra)
 - FCS Error
 - Tx/Rx Pause Packet Count, Runt/Jumbo Packet Count
 - Tx/Rx Frame Distribution
 - Frame Rate
- Usage:
 - Current Bandwidth Usage (%) - Instantaneous
 - Max/Avg/Min Bandwidth - Cumulative
 - Current Frames Per Sec.. (FPS) - Instantaneous
 - Max/Avg/Min Frames Per Sec. - Cumulative
- Stream Statistics:
 - Tx/Rx Frame Statistics
 - Stream Error Count
 - Runt/Jumbo Frame Count
 - Tx/Rx Frame Size Distribution
- Stream Error:
 - Late Frame Count (Out-of-Sequence)
 - Duplicate Frame Count
 - Loss Frame Count
 - Layer 3 Checksum Error Count
 - Layer 4 Checksum Error Count
 - Bit Error Count/Rate
- Jitter (in Micro Seconds):
 - Latency (Max/Avg/Min)
 - Packet Arrival Interval (Max/Avg/Min)
 - Jitter (Max/Avg/Min)

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Optional Features

❖ Packet Capture and Analyzer

- Filtered Captured
- Event Trigger Captured:
 - VLAN, Pause Frame, Multicast/Broadcast
 - FCS Error, Frame Size, L3/L4 Checksum Error
- Captured Data Decoding
- Compatible with WireShark/EtherReal

❖ Packet Flooding

- Random or Incremental Flooding
- Flooding Based on MAC, VLAN, IP, User Defined Field
- Flooding Controlled by Start and Stop Values

❖ Throughput 32 Multi-Streams

- Generates maximum of 32 Independent Streams (Tx)
- Receive Up To 32 Independent Streams (Rx)
- Ramp,-Continuous,, Ramp-Cyclic, Burst-Continuous, and Burst-Cyclic Modes

❖ L1/Unframed Bit Error Test (BERT)

- Unframed (Layer 1) Test Patterns: PRBS 9, 11, 15, 20 and Inverted

❖ Network Discovery

- Network Status (Up/Down), IP, MAC, Vendor, Port Info, OS, OS Type, SNMP Info.

❖ Auto Negotiation Capture

- Direction
- Real Time, Delta Time
- Start of Auto Negotiation
- Auto Negotiation Code
- Data

❖ 100-FX/LX

- 100-FX/LX Support (Optical)

❖ VoIP

- Supported Features:
 - ITU-T G.107 Based Scalable Quality Measurement and Analysis
 - Analysis of Sudden Packet Loss Based on ETSI TS 101 329-5 Annex E
 - RTCP XR (RFC 3611) VoIP Measurement; Payload Sampling and Analysis
 - Japan TTC JJ20101 VoIP Monitoring Specifications
- VoIP Measurement:
 - H.323 QoS Reporting (ITU-T H.460.9 Annex B)
 - Megaco QoS Reporting (ITU-T H.248.30)
 - VoIP Trunking Gateway (ITU-T G.799.1)
 - IETF SIP RTCP Summary draft
 - IETF RTCP XR MIB draft
- Quality Measurement:
 - Call Calling and Receiving Quality Check (ACR Included) (ITU/TTC Scaling, MOS-LQ, MOS-CQ)
 - Call Calling and Receiving Quality – R Value Check (R-LQ, R-CQ)
 - R Value Checks for R-Burst and R-Gap
- IP/RTP Measurement:
 - Packet Loss Ratio, Packet Abandonment Ratio, Burst Length/Density, Gap Length/Density
- Quality Degradation Factor Measurement:
 - Quality Degradation Rate due to Loss, Jitter, Codec, Delay, Signal Level, Noise Level, and Echo

❖ IPTV

- IP Scan
- Per IP Address Statistics
- MPEG-TS Analysis (PAT/PMT/PID)
- MPEG Analysis (Q1 2011)

❖ Fibre Channel

- User settable frame length (28-2410 bytes), test pattern, error injection
- Programmable FC-2 header
- Round trip delay measurement
- FC buffer –to-buffer credit management
- Manually programmable and auto-loopback
- Performance, frame, link statistics

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Hardware Specifications

❖ Port Configurations by Model

- BL400A:
 - 2 x 1GE SFP (SX/LX/ZX and 100-FX/LX/SX)
 - 2 x 10/100/1000Base-T

※ Common Port Interface for All Models:

- 1 x Auxiliary RJ45 10/100/1000Base-T
- 1 x USB (Universal Serial Bus)

❖ **Dimension:** 172.5 (W) x 227 (H) x 58.5 (D) mm

❖ **Operating Temperature :** -10°C to 50°C

❖ **Storage Temperature:** -20°C to 70°C

❖ **Humidity:** 5% - 95% non-condensing

❖ **Weight:** 1.0Kg (Chassis), 0.3Kg (Battery)

❖ **Display:** 5.7" Color TFT LCD, Touch Screen

❖ **Power:** DC 14V ~ 21V

❖ **Battery:** Standard Li-Ion Battery
(4 Hours Typical, approx. 8 Hours Standby)

❖ **Internal Storage:** 2GB SD card



Accessories

❖ Cable and LAN Tester Kit

- RJ11 / RJ 45 Cable Measurement
- T568A/B Standards Based Cable Measurement
- Shielded or Unshielded Cat3, Cat4, Cat5, Cat5E Cable Test
- Disconnect, Short, Miswire, Split Pair Sensing
- Per Pair Cable Length Measurement
- Cable Length Measurement Range: 0 ~ 457 meters (0 to 1500 Feet)
- Wiremap Display
- Measurement Time (Within 10 Seconds)

※ Common Accessories: AC/DC Power Adapter, Carry Bag, Rubber Boot, Manual CD

※ Optional Accessories: 1G SFP, 100-FX SFP, 10G XFP and Optical Patch Cords

Contact your Bluelight Technology representative for more information.

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