

MaxTester 630G

VALIDATION OF G.FAST AND BROADBAND RESIDENTIAL SERVICES



EXFO Sync



EXFO Connect
Compatible

Install and troubleshoot G.fast, VDSL2 and ADSL2+ broadband deployments up to 1 Gbit/s and validate in-home multiplay performance metrics.

KEY FEATURES

G.fast with backwards compatibility to VDSL2 and ADSL2+, all-in-one test tool

VDSL2 and ADSL2+ bonding enables operators to increase rates and/or reach to subscribers

Spectrally compatible VDSL2 35b support

IPTV and VoIP test suites for automated quality-of-service (QoS) testing

Configurable pass/fail results for automated scripted testing

Upload results to the cloud directly or via the EXFO Sync mobile application for additional post-analytics

High-resolution, 6-inch touchscreen with dual GigE ports

Designed to face the challenges of the outside plant environment, with an IEC IP54 rating

APPLICATIONS

FTTx/MDU G.fast, VDSL2 35b and VDSL2 vectored installations

Bonded VDSL2 and bonded ADSL2+ deployments

Multiplay service assurance

FTTdp deployments

G.fast-based mobile backhaul, DAS or small cell deployments

Cloud-based test asset management available through EXFO Connect

THE MaxTESTER SERIES



MaxTester 600 Series
Copper, VDSL2, Multiplay Test Solutions



MaxTester 700B
OTDR Series



MaxTester 940
Fiber Certifier OLTS

EXFO

FAST VALIDATION OF ULTRA-BROADBAND DEPLOYMENTS

EXFO's MaxTester 630G (MAX-630G) is the perfect tool for any service provider deploying G.fast (ITU-T G Series 9700 and 9701 recommendations for fast access to subscriber terminals) in FTTdp or MDU deployments. For service providers considering G.fast as a future play for their FTTx broadband deployments, the MAX-630G offers key features today, including: VDSL2 35b, vectoring enabled VDSL2, VDSL2 bonding and ADSL2+ and, single pair and bonded pair capability. Field upgradeable software offers the ability to upgrade to G.fast in seconds. The MAX-630G's small form factor, rugged design and easy-to-use menu make it the ideal tool for installation and repair technicians. The large touchscreen display makes it intuitive and user friendly. With the MAX-630G, the testing process is highly automated and technicians can close their jobs quickly and efficiently thanks to clear pass/fail test result conclusions. When it comes to saving results, it provides technicians with many connectivity options for uploading tests and compiling reports.

MULTIPLAY PERFORMANCE MANDATE

Ultra-broadband G.fast and enhanced VDSL2 variants (such as new VDSL2 35b deployments) are driven by subscriber requirements for flawless IPTV and over-the-top (OTT) video, high speed downloads and uploads, social networking push and pulls, and online gaming (e.g., MMORPG), to name a few. The MAX-630G allows technicians to connect subscriber equipment (e.g., a PC, STB or gaming console) to the its LAN port to transfer G.fast data at speeds up to 1000 Mbit/s.

NOISE MITIGATION FEATURES

Ensuring that the highest quality multiplay services are delivered to subscribers is critical for service providers deploying ultra-fast broadband connectivity. With an aging copper plant and the need to maximize the use of all pairs in the cable bundle, it is imperative that the appropriate mechanisms are in place to mitigate the impact of noise. Noise is a key contributor to negative multiplay feedback from subscribers. The MAX-630G supports INP (impulse noise protection), G.INP (impulse noise protection and physical-layer retransmission as defined by ITU-T G.998.4) and vectoring (ITU-T G.993.5) plus a complete set of SELT measurements for attenuation, noise and SNR per tone analysis up to 106 MHz. These techniques are supported by the MAX-630G to ensure consistency with service providers' noise mitigation methods and procedures.

KEY CHARACTERISTICS



- 1 Two, 1 GigE RJ45 ports—sealed against the environment
- 2 G.fast, VDSL2, and ADSL2+ RJ11 port—sealed against the environment
- 3 All-round rubber bumper
- 4 Touchscreen color LCD—daylight visible
- 5 Interface connections—water and dirt protected
- 6 Innovative and icon-driven user interface
- 7 Handgrip area
- 8 Simple keypad

ALL THE RIGHT FEATURES FOR INSTALLATION TECHNICIANS

With its small form factor, the MAX-630G can go anywhere the technician does. It is rugged, lightweight and protected from the rain—just what is needed for the demanding outside-plant environment. The user interface was designed with simplicity and efficiency in mind. The large touchscreen display features colored icons and graphics for easy configuration and operation, and is simple to use for both experienced and novice technicians.

AUTOMATED SERVICE TESTING

Customizable profiling makes testing ultra-broadband circuits with the MAX-630G easy. Run routine jobs or setup custom profiles for special projects. Test profiles can easily be transferred between units using a USB or EXFO Connect, ensuring that all technicians from the same organization are testing to the same specifications. In addition, the MAX-630G boasts customizable thresholds allowing all technicians to visualize pass or failed conditions so they can quickly move on to the next job or investigate further.

DATA-MINING OF RESULTS

In today's highly competitive network service provider environment, delivering exceptional quality of service to subscribers is paramount. With EXFO Connect and EXFO Sync combined with the MAX-630G, service providers can manage their fleet of MaxTester units and ensure that they have the most up-to-date software installed and properly configured. Combining these solutions with the MAX-630G makes it possible for service providers to have test results on hand for data mining and post-analytics purposes, enabling them to proactively manage loop plants and ensure that they are of the highest quality.

AUTOMATE ASSET MANAGEMENT. GET CONNECTED.

The EXFO Connect cloud-hosted solution provides an automated, secure environment that links your EXFO test instruments together and enables the management of your deployed inventory of test sets.

EXFO Connect enables automated downloads of latest software versions to all test sets in the field to ensure consistency of testing across the organization. Test profiles and threshold settings may also be deployed to all units, to mandate testing according to the latest procedures. Enable EXFO Connect on your fleet of MaxTester units to improve operational efficiency at all levels of your business.

KEY FEATURES

TEST EQUIPMENT MANAGER
Automated inventory tracking and software download



FILE MANAGER
Download/upload files, work orders, test configurations or procedure documents



CONTRACTOR MODE
Secure, segregated access for test-result upload, and automated file download

Visit EXFO.com/EXFOConnect for details and features compatibility with the MaxTester handheld series.



EXFO Sync

REAL-TIME COPPER TEST RESULTS UPLOAD—STRAIGHT FROM THE FIELD

Working in the field with an Android device?

Download the EXFO Sync Application for Your Android*

EXFO Sync is an Android application that operates together with EXFO's MAX-630G Copper, DSL and IP field test set. This application provides a fully automatic copper test script and Wi-Fi transfer of the results files to a phone or tablet for upload to the customer's server.

With the EXFO Sync application, your copper test results can be uploaded in real-time to a central location for access and further analysis to identify trouble patterns, assess technician performance or target customers for upsell to higher revenue services.

- › Copper test result are uploaded, live from the site
- › GPS tagging gives visibility of location of test for mapping of test history and network performance
- › Ensure compliance to service provider workflow process
- › Flexibility to upload test results to an HTTPS or FTP server
- › Secure, password-protected connection to upload and access results

* Upload to Android devices is supported only over Wi-Fi and only for DSL autotests.

Download from
 Google play



G.FAST/DSL SPECIFICATIONS

DSL chipset	Broadcom 63138	
Standards compliance	ADSL1/2/2+	<ul style="list-style-type: none"> › ITU-T G.992.5 (ADSL2+ including Annexes A and M) › ITU-T G.992.3 (ADSL2 including Annexes A and L) › ITU-T G.992.1 (G.DMT including Annex A) › ITU-T G.994.1 › ATIS/ANSI T1.413 Issue 2 › IEEE 802.3ah (PTM) › ITU-T G.998.1, 2 (ATM, Ethernet bonding) › ITU-T G.998.4 (G.INP) › ITU-T G.992.5 (INP Amendment)
	VDSL2	<ul style="list-style-type: none"> › ITU-T G.993.2 Annex A, B, Q, Y › Profiles: 8a/b/c/d, 12a/b, 17a, 30a, 35b › Band Plan: 997, 998, US0 › IEEE 802.3ah (PTM) › ITU-T G.998.2 (Ethernet bonding) › ITU-T G.998.4 (G.INP) › ITU-T G.993.5 (G.vector)
	G.fast	<ul style="list-style-type: none"> › ITU-T G.9700, G.9701
DSL parameters	<ul style="list-style-type: none"> › Maximum attainable bit rates › Actual achieved bit rates › Actual bonded achieved rates › Latency mode: fast, interleaved › Data modes: ATM, PTM › Capacity (%) › SNR margin › Output power › Attenuation › Bits/bin › Hlog/bin (attenuation/bin) › QLN/bin and ALN/bin › SNR/bin › Vendor code and revision 	<ul style="list-style-type: none"> › Interleave depth › Interleave delay › Trellis coding › Bit swapping › INP value › PhyR, G.INP state, performance counters › Vectoring state, performance counters › LOS, FEC, CRC, HEC › LATN per band › SATN per band › EWL › KLO

MULTIPLAY TESTING SPECIFICATIONS

Test interfaces	<ul style="list-style-type: none"> › G.fast › VDSL2 	<ul style="list-style-type: none"> › ADSL1/2/2+ › Ethernet 10/100/1000 BT
Encapsulation methods	<ul style="list-style-type: none"> › RFC 2684/Bridged Ethernet/IPoE (IPv4 and IPv6) › IPoA (RFC 1577) 	<ul style="list-style-type: none"> › PPPoE (RFC 2516) › PPPoA/LLC and PPPoA/VC-MUX (RFC 2364)
Operating modes	<ul style="list-style-type: none"> › DSL Terminate › DSL to Ethernet pass through 	<ul style="list-style-type: none"> › Ethernet Terminate › Ethernet to Ethernet bridged pass through
Login format	User name and password using PAP/CHAP	
Connectivity support	<ul style="list-style-type: none"> › IPv4 and IPv6 LAN/WAN status › IPv4 and IPv6 DNS, gateway › IPv4 DHCP client/server, DHCP vendor class › IPv6 DHCP client › NAT 	<ul style="list-style-type: none"> › VLAN ID, VLAN tagging › VPI/VCI › IP release › Multi-VLAN support
Ping test	<ul style="list-style-type: none"> › Ping destination: Gateway or, IPv4 or IPv6 address, or URL › Number of pings: 1 to 99 › Packet size: 32 to 1200 bytes (32 is default) › Timeout period: 1 to 10 seconds › Results displayed: Packets sent/received and average round-trip delay (ms) 	
Traceroute test	<ul style="list-style-type: none"> › Traceroute destination: Gateway or, IPv4 address or URL › Timeout period: In seconds with default = 1 s and maximum = 10 s › Packet size: 32 bytes › Number of hops: 1 to 32 (default is 30) › Results display: Indicates IPv4 address of hop and round-trip time in milliseconds (ms) 	
FTP test	<ul style="list-style-type: none"> › Address: IPv4 address or URL › Direction: Upload and/or download › Results displayed: Time, kB transferred, bit rate in kbit/s 	
Web browser (software option)	<ul style="list-style-type: none"> › Address: IPv4 address or URL › Bookmarks: User-definable 	
VoIP testing (software option)	<ul style="list-style-type: none"> › Protocol support: SIP (IPv4) › Codecs: G.711 μ-Law, G.711 A-Law › Interface support: ADSL1/2/2+, VDSL2, G.fast, Ethernet › Parameter/functionality: <ul style="list-style-type: none"> – Test duration timer – MOS (current, average) – R-Factor (current, average) – Latency (current, average, maximum) – Jitter (current, average, maximum) – Packets (lost, total) 	
IPTV testing (software option)	<ul style="list-style-type: none"> › Supported video standards: MPEG2, MPEG4 part 2 and 10 (H.264/AVC), Mediarem/WM9/VC1 › Operating modes: DSL Terminate and Ethernet Terminate › IPTV parameters/functionality: <ul style="list-style-type: none"> – IGMP (IPv4) join/leave requests with STB emulation – Automatic tests to join/leave and analyze up to 5 (five) simultaneous streams – Programmable channel list for storage of commonly used channels – Bandwidth usage per channel – IGMP (IPv4) packet and rate information per line and channel – Multicast RTP/UDP IP stream support – Key IP video QoS parameters, packet loss, zap time, PID statistics – Graphical results – Transport 	

GENERAL SPECIFICATIONS

Display	Touchscreen TFT LCD with backlight 152 mm (6 in) diagonal 800 x 480 resolution, WVGA
Test connections	RJ11 for G.fast/ADSL2+/VDSL2 RJ45 for Ethernet 10/100/1000 WAN RJ45 for Ethernet 10/100/1000 LAN
Results management	1.2 GB internal memory
Temperature	
Operating	0 °C to 40 °C (32 °F to 104 °F)
Storage	-20 °C to 60 °C (-4 °F to 140 °F)
Relative humidity	5 % to 95 %, non-condensing
Shock	1 m (39 in) drop per GR-196-CORE
Altitude	3000 m (9842 ft)
Input power	9-24 VDC, 2 A, 15 W via 90-220 VAC adapter or 12 V vehicle adapter
Battery	Internal rechargeable lithium polymer, with battery-state and level indications, adjustable auto-power down
Safety	CE and CSA marked
Size (H x W x D)	254 mm x 124 mm x 62 mm (10 in x 4 7/8 in x 2 7/16 in)
Weight (with battery)	1.5 kg (3.3 lb)
Water/dust ingress	IP54 compliant
Self-test	Routine on power-up
Connectivity	Two USB 2.0 client ports One USB Type B host port Optional Wi-Fi support
Languages	English, French, Spanish, Polish and Italian

STANDARD ACCESSORIES

DSL test cables: RJ14 to RJ11 and telco clip with bed of nails (ACC-RJ11-TC), or RJ14 to RJ11 and 4 mm plugs with crocodile clips (ACC-RJ11-4MM)
Certificate of compliance
AC adapter (GP-2146)
Soft carrying case (GP-10-061)

OPTIONAL ACCESSORIES

DSL bonded test cables: RJ14 to dual RJ11 (ACC-BD-RJ), or RJ14 to four telco clips with bed of nails (ACC-BD-TC), or RJ14 to four 4 mm plugs with crocodile clips (ACC-BD-4MM)
RJ45 Ethernet cable (ACC-RJRJ-UTP)
USB host/client cable (GP-2053)
12 V vehicle charger (GP-2205)
Form fitting, protective soft glove with shoulder strap (ACC-LGLOVE)

ORDERING INFORMATION

MAX-630G-XX-XX-XX

Model

MAX-630G = ADSL2+ test set

DSL Version

GVXAA = ADSL2+ Annex A

Platform Options

00 = Without software options

FTPUPLD = Result upload via FTP over Wi-Fi, Ethernet or DSL

Software Options

00 = Without software options

BOND = ADSL2+ and VDSL2 bonding support^a

BROWSER = Web browser

GFAST = G.fast modem emulation

IPTV = IPTV analysis

IPV6 = IPv6 support for LAN/WAN connectivity

MOS = MOS/R-factor for VoIP calls^b

VDSL2MOD = VDSL2 modem emulation

VDSL2_35B = VDSL2-35b profile support^c

VOIP = VoIP emulation

Example: MAX-630G-GVXAA-FTPUPLD-VDSL2MOD-GFAST-BOND-IPTV

Notes

- VDSL2MOD option required to enable VDSL2 bonding capability
- VoIP option required
- VDSL2MOD option required to enable VDSL2-35b capability

EXFO Headquarters > Tel.: +1 418 683-0211 | Toll-free: +1 800 663-3936 (USA and Canada) | Fax: +1 418 683-2170 | info@EXFO.com | www.EXFO.com

EXFO serves over 2000 customers in more than 100 countries. To find your local office contact details, please go to www.EXFO.com/contact.

EXFO is certified ISO 9001 and attests to the quality of these products. EXFO has made every effort to ensure that the information contained in this specification sheet is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation. Units of measurement in this document conform to SI standards and practices. In addition, all of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit www.EXFO.com/recycle. Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.

For the most recent version of this spec sheet, please go to the EXFO website at www.EXFO.com/specs.

In case of discrepancy, the web version takes precedence over any printed literature.