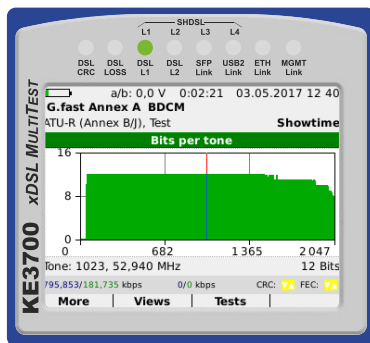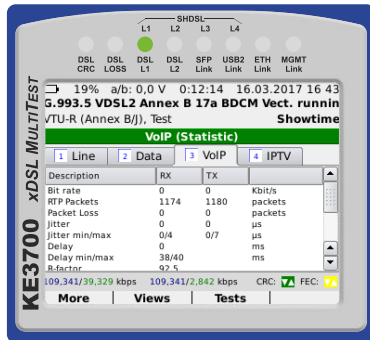# Next-Generation-xDSL Multitester
The **All-in-One solution** for all broadband technologies

KE3700

At a glance

- New handheld tester with all important interfaces
- DSL Service autodetection
- ADSL-VDSL2 , Vectoring, BP 35 and G.fast Autodetection
- Supports Annex A/B/J/L/M/Q
- Intuitive operation and large, clear sunlight readable display
- Web browser
- Several Gigabit Ethernet ports
- Dial-in test, ping and trace route with IPv6 and IPv4
- Modem, Router and Terminal mode
- Full Triple Play test - Data, VOIP, IPTV
- Multiple FTP and HTTP up/ downloads
- Rubber keypad, fast operation with shortcut keys
- KE3700 Touch: Touchscreen
- High performance LiPO battery
- 4 Gb Memory, expandable
- Bluetooth Data Transfer and Headset
- Manager software with Profile Editor
- Wi-Fi interface 2,4 Ghz with evaluation software
- Transfer test results to tablet via QR Code or Bluetooth (Patent Pending)

The KE3700 xDSL *MultiTest* is the next evolution in the KE-*MultiTest* series. In addition to all established features, it also has brand-new functions and functionalities like Wi-Fi testing, Bluetooth-supported data transfer and touchscreen functionality as well as a optimized rubber keyboard and shortcut keys.

A versatile and revolutionary xDSL tester of DSL services in ADSL1/2/2 + / VDSL2 (Vectoring, Vplus Bandplan 35b and G.fast) and bundled networks and as well in FTTx deployments (GPON, Dark Fiber).

With a variety of interfaces the outstanding KE3700 xDSL Multitester supports many access network technologies. Accelerated fault diagnosis is made possible by its simple operation even for untrained technicians. Interferences in the network, in the outdoor and inhouse cabling as well as in CPE can be narrowed down quickly. Even in FTTH networks the KE3700 carries out measurements at its Ethernet or built-in SFP port.

With the autodetect function of the DSL service, no choice between ADSL and VDSL up to G.fast is necessary. Automated and editable measurements on the copper pair allow fast and efficient work. The universal SFP slot for measurements in FTTx deployments makes the KE3700 the ideal solution for these broadband technologies.

The guaranteed future security by the used module technology makes this broadband tester the perfect tool for all inspection tasks of current and future technologies and sets standards in its class again!

Made in Germany

Options

G.fast / Vplus Bandplan 35b Annex Q

- Supports G.fast ITU-T G series 9700 and 9701 and VDSL2 35b Annex Q

VoIP Tests

- Terminal simulation and call setup
- VoIP connections
- VoIP signaling protocol SIP
- Displays bitrate, packets and packet loss
- Jitter, Jitter min/max, R-Value, MOS

IPTV Tests

- Set-Top-Box emulation
- Review audio and video packets
- Displays bitrate and packet loss, Jitter, MOS
- TV - Preview function

xDSL Bonding

- ADSL2+ and VDSL2 Bonding (ITU-T G.998.1/2/3)

SFP: Copper / Fiber or GPON

- SFP Copper (as second GbE-Port) or SFP Fiber
- GPON detection
- OTDR in preparation

Coppertest with KECT

- **Prequalification of the copper lines:** Impedance, return loss, balance, NEXT measurement, receive level and spectrum, wideband noise and impulse noise
- **Telco Multimeter Measurements for troubleshooting:** Current, voltage, insulation, resitance and capacitance Symmetry
- The **Loop analysis** summarizes the key measurements and automates the configurable measurement process
- **Line Test Assistant functions (Remote):** Sends commands directly to optional remote units, for example KE905, for comfortable remote switching of copper pairs at the far end of the line under test

TDR functions (only in conjunction with KECT)

- TDR functions for precise fault detection and localisation (up to 6 km cable length with ø 0,5 mm)

SHDSL 2- to 8-wire

- Terminal, Bridge and Router Mode
- Ethernet first mile (EFM), TDM and ATM support
- Modem (STU-R) and CO / DSLAM emulation (STU-C)

ISDN / POTS Test Telephone

- Handsfree function
- Port and self-testing call
- Extensive service query
- Detailed information of line status
- BER Test
- High Impedance Line Monitoring

Made in Germany

⬛	Type	Description
0.49840	**KE3700**	xDSL Multitester, 1 GbE Interface, ADSL 1 / 2 / 2+, 4 GB storage, Bluetooth
0.49841	**KE3700 Touch**	xDSL Multitester with touchscreen, 1 GbE Interface, ADSL 1 / 2 / 2+, 4 GB Storage, Bluetooth
0.49830-10	**VDSL**	Upgrade Firmware VDSL2 / Annex A, B (Vectoring ITU-T G.993.5)
0.49830-8GA/B	**G.FAST A+B**	Upgrade Firmware VDSL2 / Annex A, B (Bandplan 35b and more, G.fast ITU-T G9700/G9701) no Bonding
0.49830-8GA	**G.FAST A**	Upgrade Firmware VDSL2 / Annex A (Bandplan 35b and more, G.fast ITU-T G9700) ADSL A Bonding
0.49830-13	**KECT**	Coppertest: xDSL Linie Qualification up to 31 MHz, Telco Multimeter, integrated Remote Control Functions with Line Test Assistants
0.49830-11	**TDR**	TDR up to 6 km (only in conjunction with KECT)
0.49830-25	**ISDN**	ISDN BRI S0-TE, UK0 (4B3T or 2B1Q) and POTS Interface (with additional SFP Port, must be activated with 0.49830-3-Soft)
0.49830-5	**VoIP**	VoIP Tests (terminal simulation) Jittert, MOS, phone function
0.49830-6	**IPTV**	IPTV Tests (Set Top Box emulation) Jitter, MOS, TV preview
0.49830-3	**SFP Port**	SFP Port for SFP-Copper or SFP-Fiber measurement plug-in. Supports e.g. a second GbE-Port or GPON option
0.49830-3-Soft	**SFP Activation**	Activation of the existing SFP Port of the ISDN option (option 0.49830-3 SFP Port is not required)
0.49830-7B	**Bonding**	DSL Bonding Module, Profile 8a / b / c / d, 12a/b, 17a, 30a
0.49830-26	**SHDSL**	SHDSL 8-wire interface
0.49830-15	**Real Time Analysis**	Enables Real Time Analysis (Live View) for evaluation of current running DSL services test
0.49830-27	**S2M**	ISDN S2M Primary-Multiplex-Interface (only in conjunction with SHDSL)
0.49840-41	**Wi-Fi**	Wi-Fi interface with evaluation software

⬛	Type		Description
0.49602	**Earset**		Headset with microphone and 3.5 mm jack for KE3600 / KE3500 Internal speaker and microphone are disabled!
0.49604	**Bluetooth Earset**		Bluetooth Headset with microphone for KE3700 Internal speaker and microphone are disabled!
0.49620-16	**Car**		Car charger 12 V 1,5 A
0.57451-02	**Tempered Glass Screen Protection**		Extremely tempered glass (hardness 9H), protects against scratches and cracks, for KE3700 (not for KE3700 Touch) / KE2500
0.57451-01	**Tempered Glass Screen Protection**		Extremely tempered glass (hardness 9H), protects against scratches and cracks, for KE3600 / KE3600 CT / KE3500
0.57102	**SFP-RJ**		10/100/1000Base-T SFP measuring insert for Gigabit Ethernet with RJ45 plug
0.57103	**SFP-850**		1000Base-SX SFP measuring insert with DDM (Digital Diagnostic Monitoring) for Gigabit Ethernet, 850 nm MMF, 550 m with LC duplex plug
0.57104	**SFP-1310**		1000Base-LX SFP measuring insert with DDM (Digital Diagnostic Monitoring) for Gigabit Ethernet, 1310 nm SMF, 20 km with LC duplex plug
0.57105	**SFP-1550**		1000Base-ZX SFP measuring insert with DDM (Digital Diagnostic Monitoring) for Gigabit Ethernet, 1550 nm SMF, 40 km with LC duplex plug

	KE3700	
Compliance ADSL1/2/2+	ITU-T G.992.5 (ADSL2+ incl. Annex A, B, J, M), ITU-T G.992.3 (ADSL2 incl. Annex A, B, J, L), ITU-T G.992.1 (G.DMT incl. Annex A, B, J) ATIS/ANSI T1.413 Issue 2 IEEE 802.3ah (PTM) ITU-T G.998.1/2/3 (Bonding)	
VDSL2	ITU-T G.993.2 Annex A, B (Vectoring) ITU-T G.998.1/2/3 (Bonding with Profile 30a) Profiles: 8a/b/c/d, 12a/b, 17a, 30a and 35b (Annex Q) optional Band Plan: 997, 998, US0 IEEE 802.3ah (PTM)	
G.fast	ITU-T G.9700/ G.9701	
DSL parameters	Maximum attainable bit rates Actual achieved bit rates Actual bonded achieved rates Latency modes: fast, interleaved Data modes: ATM, PTM Capacity (%) Signal-to-noise ratio (SNR) margin Output power Attenuation Bits/bin	ttenuation/bin (Hlog/bin), QLN/bin, SNR/bin Vendor code, revision Interleave depth Interleave delay INP G.INP Vectoring Modes: PTM, ATM LOS, FEC, CRC, HEC, LOF, LOM, SES, ES LATN per band, SATN per band
Test interfaces	G.FAST, VDSL2, ADSL 1/2/2+ with autodetection Ethernet 10/100	Ethernet 10/100/1000 Webbrowser applicable for test interfaces
Encapsulation	RFC 2684 supporting bridged Ethernet (IPoE), IPoA (RFC 1577), PPPoE (RFC 2516), PPPoA/LLC and PPPoA/VC-MUX (RFC 2364)	
Operating modes	DSL Terminal, Router and Modem Mode Modem replacement (DSL to Ethernet) Ethernet Terminal-Mode	
Login format	Username and password using PAP/CHAP	
Connectivity support	TR69 / BNG LAN/WAN status DNS, gateway DHCP client / server, DHCP vendor class NAT	VLAN ID, VLAN tagging VPI/VCI IPv4 and IPv6 Signal Strength
Ping test*	Ping destination: Gateway, IP-Address or URL Number of Pings: 1 to 9999 Packet size: 56 to 2048 Bytes (default is 56) Timeout: 1 to 2000 seconds Results: Packets sent/received, average round-trip delay (ms)	* Run any number of tests simultaneously
Traceroute test*	Traceroute destination: Gateway, IP-Address or URL Timeout: in seconds, maximum is 120 s Packetsize: 32 Bytes Number of hops: 1 to 100 (default is 30) Results: Indicates IP address of hop and round trip time in milliseconds (ms)	* Run any number of tests simultaneously
FTP/HTTP-throughput test*	Address: IP or URL Direction: Upload and/or Download up to 700 MBit/s Results: Time, kB transferred, speed in kBit/s Bookmarks: User-definable	* Run any number of tests simultaneously
Software options	**VoIP test:** SIP protocol support, DSL and Ethernet Codecs: G722, GSM, L16, A-Law, µ-Law, Speex Results: MOS, R factor, Latency. Jitter, Packets (loss, sent)	**IPTV test:** Video standards: MPEG2, MPEG4 part 2 and 10, DSL and Ethernet Programmable channel list, analyzes up to 10 streams simultaneously Results: MOS, R factor, Latency. Jitter, Packets (loss, sent)
Interface options	xDSL bonding module SHDSL 2 - 8 wire interface KECT copper qualifying up to 31 MHz and Telco Multimeter TDR fault detection / localization SFP-Port for copper, fiber (second GbE-Port) or GPON, transceiver optional* ISDN BRI Uk0 / S0 / POTS interface ISDN PRI S2m interface Wi-Fi interface with software, 802.11b,g,n	
Bluetooth	Bluetooth module for headset connection and data transfer, class 2	
Display	3,5" TFT Display, RGB 240 x 320 sunlight readable	
Power supply	High performance LiPo battery	
Dimensions	230 x 110/90 x 70 mm	
Weight	1100 g	
Housing	Impact-resistant ABS case with protective and high impact plexiglass as display cover	
Menu languages		