TREND NETWORKS

LanTEK IV and FiberTEK IV

The Future of Cable Certification

Technical Specifications

Depend On Us

INTRODUCTION

Product Definition

The LanTEK IV cable certifier features industry leading performance, reliability, durability and time saving functionality. The innovative VisiLINQ™ permanent link adapters allow users to operate the certifier and quickly see the result without holding the handsets. Engineers and technicians can conduct and save a Cat6A test within 7 seconds, assisted by the intuitive user interface and easy to use high resolution touchscreen. Certify links up to Cat 8, including TCL and Resistance Unbalance and sweep to 3000MHz providing room for future ratified ISO and TIA test standards.

Features and Benefits

- 500 and 3000 MHz models for Cat 6A/class EA and class FA, Cat 8 and Class I/II testing.
- Battery life: 8 hr. typical
- 7 second test time for 500 MHz tests
- 25 second test time for 3000 MHz tests
- All autotests perform TCL, ELTCTL, DC resistance unbalance, Time Domain NEXT troubleshooting and Time Domain Return Loss troubleshooting with no extra test time
- Storage for up to 2500 tests internally
- Extremely rugged test adapters that are captured by the instrument to prevent connector damage
- Can operate from AC main power with or without the battery installed
- High-resolution capacitive touch colour display
- Integrated Wi-Fi (2.4/5 GHz 801.11b/g/n) connectivity. Models available with Wi-Fi permanently disabled
- Intuitive user interface to reduce training and testing time
- TREND AnyWARE Cloud and Desktop reporting systems simplify reporting and project management

GENERAL PRODUCT DESCRIPTIONS

R163004 kit contents: **LanTEK IV 500MHz LAN Cable Certifier with VisiLINQ Permanent Link Adapters**

- 500MHz main and remote test handsets
- Hard sided carrying case
- 2 ea., lithium-ion battery packs
- 2 ea., AC-DC switching power supplies with interchangeable plugs for US/EU/UK main power outlets
- USB Cable
- 2 Hanging Straps
- 2 Cat 6A RJ45 VisiLINQ permanent link adapters
- 2 Channel Adapters
- Quick reference guide

R163005 kit contents: **LanTEK IV 3000MHz LAN Cable Certifier with VisiLINQ Permanent Link Adapters**

- 3000MHz main and remote test handsets
- Hard sided carrying case
- 2 ea., lithium-ion battery packs
- 2 ea., AC-DC switching power supplies with interchangeable plugs for US/EU/UK main power outlets
- USB Cable
- 2 Hanging Straps
- 2 Cat 8 RJ45 VisiLINQ permanent link adapters
- 2 Channel Adapters
- Quick reference guide

R163002 kit contents: **Same as R163004 with no Wi-Fi**

R163003 kit contents: **Same as R163005 with no Wi-Fi**

R161050: **Pair of replacement RJ45 tips for permanent link adapter**

R163050: **Category 6A RJ45 VisiLINQ permanent link adapter (single)**

R163051: **Category 8.1 RJ45 VisiLINQ permanent link adapter (single)**

R163052: **Category 6A/6/5e RJ45 Channel Adaptor (Single)**

R163053: **Category 8.1/6A/6/5e RJ45 Channel Adapter (Single)**

R163054: **Category 8.2 TERA Universal Adapter (Single)**

R163056: **Category 8.2 GG45 Universal Adapter (Single)**

R163055: **Category 8.2 EC7 Universal Adapter (Single)**

R163057: **Category 5e / Class D Patch Cord / MPTL Test Adapter (Single)**

R163058: **Category 6 / Class E Patch Cord / MPTL Test Adapter (Single)**

R163059: **Category 6A / Class EA Patch Cord / MPTL Test Adapter (Single)**

R164008: **FiberTEK IV test kit for multimode fibre optic cable, 850/1300nm**

- 2 multimode FiberTEK IV modules
- Hard sided carrying case
- SC, FC, ST adapters for modules (2 ea.)
- SC-SC patch cords
- 6x 50µm MMF compliant to ISO/IEC 14763-3 standard
- Quick reference guide

R164009: **FiberTEK IV test kit for single-mode fibre optic cable, 1310/1550nm**

- 2 single-mode FiberTEK IV modules
- Hard sided carrying case
- SC, FC, ST adapters for modules (2 ea.)
- SC-SC patch cords

- 6x 9µm compliant to ISO/IEC 14763-3 standard
- Quick reference guide

R164010: FiberTEK IV multimode & single-mode test kit

- 2 multimode FiberTEK IV modules and 2 singlemode FiberTEK IV modules
- Hard sided carrying case
- SC, FC, ST adapters for modules (2 ea.)
- SC-SC patch cords
- 6x 9µm and 6x 50µm MMF compliant to ISO/IEC 14763-3 standard
- Quick reference guide

TECHNICAL DETAILS

Durable Test Adapter Interface System Reduces In-Service Failures

The LanTEK IV features the industry's most durable test adapter interface design that reduces failures caused by mechanical stress on fragile high-frequency connectors. Unlike other designs where the adapter "clips" to the front of the main instrument allowing mechanical stress to be transmitted to the RF connector system, the LanTEK IV fully encapsulates the RF connector within the housing of the test instrument. This design prevents the fragile connector on the instrument and test adapter from engaging until the plastic housings are engaged together, taking the load off the connector. With this design, the test instrument can sustain typical impact from dropping without damage to the RF connector system. Other instruments suffer damage to this critical system with minor bumps and drops.

Universal Test Adapters Eliminate Proprietary Wear Items (Class F/FA/I/II)

The LanTEK IV features a unique system that allows it to achieve industry standard levels of accuracy with off-the-shelf patch cords when testing Class F/FA/I/II cabling. Any manufacturer who tests permanent link cabling systems must remove the effects of their test equipment cords from the results of the cabling under test. While other manufactures implement costly and proprietary hard-wired adapter systems, the LanTEK IV utilises a field compensation process that allows the operator to use standard off-the-shelf TERA, GG45 and EC7 patch cords to interface the test instrument to the cabling under test. The key advantage is that when the cords wear out from normal use, the LanTEK IV operator simply replaces the cords with off-the-shelf patch cords, while operators of other brands must order custom parts from the test equipment manufacturer.

Power Management Designed for Any Situation

The LanTEK IV features a high capacity lithium-ion battery with a typical operation life of 6-8 hours between charges. The battery can be charged at a normal rate by connecting the power supply directly to the tester with the battery pack installed (8 hours for a completely discharged battery) or fast charged by removing the battery from the instrument and plugging the power supply directly into the battery (3.5 hours typical for a completely discharged battery).

Most importantly, the LanTEK IV can be powered from AC power with or without the battery pack installed. This advantage is critical if the battery pack is damaged or has reached the end of its service life. The LanTEK IV remains operational while some other competitive testers require the battery to be installed and able to hold a charge to operate from AC power.

Touch enabled User Interface

The LanTEK IV features a 480x854 capacitive touch LCD with a scratch-resistant acrylic screen that resists impacts to reduce unnecessary service costs.

Battery:

Lithium ion, 7.4VDC, 6.6AH (48.84 Wh typical); Input: 12V/2A DC; Typical operating time: 8 hours (new battery running a Cat6 test every 2.5 minutes, full backlight); Charge time: <4 hours quick charge with battery removed from handset, <8 hours inside handset

Input Power:

Handset: DC 12-15V, 2A

Line/mains power adapters:

Input: AC 110-240V, 50/60Hz

Output: 12 ⎓ 2500mA 5.5mm x 2.5mm x 12mm Center positive

Display:

IPS, 480x854 pixel, 5” diagonal

Connectivity:

Test module port: 120 pin ultra-low crosstalk module interface USC C (USB 2.0), USB A (USB 2.0), 3.5mm talk set jack, power/charging jack, integrated Wi-Fi (2.4/5 GHz bands)

802.11a/b/g/n (model available with Wi-Fi disabled).

Input Methods:

Capacitive touchscreen, USB keyboard, USB mouse

Frequency Range:

1-500 or 1-3000 MHz, sweep defined by selected test standard

CPU Module (Main Handset):

CPU: 1.0 GHz, 32 bit Cortex™ A9 processor, ARM 7 core.

System memory: 512 MB RAM

System storage: eMMC Flash 8 GB

CPU Module (Remote Handset):

CPU: 900 MHz, 32 bit Cortex™ A7 processor, ARM 7 core

System memory: 128 MB RAM

System storage: eMMC Flash 8 GB

Test Storage:

Non-volatile flash, storage capacity for 2500 tests with graphs

Data Transfer:

Network transfer to cloud via Wi-Fi

Export to USB flash drive. Supports drives up to 256 GB (FAT32 format required)

Measurements:

Twisted Pair Copper Cabling:

Wire map, DC loop resistance length, capacitance, NEXT, insertion loss, ACR-N, return loss, average impedance, propagation delay, delay skew, power sum NEXT, power sum ACR-N, ACR-F, power sum ACR-F, TCL (Transverse Conversion Loss), ELTCTL (Equal-Level Transverse Conversion Transfer Loss, DC loop resistance, DC resistance unbalance (pair-to-pair/intra-pair),Time Domain NEXT and Time Domain Return Loss fault finding identifies the location of NEXT and RL events.

Fibre Optic Cabling (optional FiberTEK IV test modules):

Dual wavelength insertion loss (each fibre), length.

Supported wavelengths: Multimode 850/1300nm, Single-mode 1310/1550nm.

Fault location with integrated laser visual fault locator.

Supported Cable Types:

- TIA/EIA Category 3, 4, 5, 5E, 6, 6A and 8: 100Ω
- ISO/IEC Class C, D, E, EA, F, FA and 8: 100Ω
- OM1-OM5 multimode and OS1-OS2 single-mode fibre optic cable

Test Interface:

- 120 pin ultra-low crosstalk connector

Supported Connectors:

- TIA Cat 6/6A, ISO Class E/EA RJ-45 permanent link adapters
- TIA Cat 8.1, ISO Class I/II RJ-45 permanent link adapters
- TIA Cat 6/6A, ISO Class E/EA RJ-45 channel adapters
- TIA Cat 8.1, ISO Class I/II RJ-45 channel adapters
- TERA/GG45/EC7 (MMCPRO3000) Cat 8.2 universal adapters for channel and permanent link testing
- SC/FC/ST fibre optic connectors included with FiberTEK IV kits. LC adapter kit optional

Test Times:

Copper: 7 sec to 1000 MHz, 23 sec to 3000 MHz including required/optional tests.
Fiber: 14 sec dual-wavelength, one direction. 28 sec, dual-wavelength, bi-directional.

Wiremap distance to fault display resolution:
10cm/3.9in

Length Measurement:

Copper - Measurement range: 0-600m/0-1,960ft

Fiber - Measurement range 0-10km/0-32,808ft

Display resolution: 0.1m/1ft

DC Resistance:

Measurement range: 0.02-200 ohms

Display resolution: 0.1 ohms

Propagation delay:

Measurement range: 1ns-1s

Display resolution: 1ns

RF measurements:

Accuracy: ISO/IEC 61935-1 Ed 5, ANSI/TIA-1152-A

Display resolution: 0.1dB

Optical Characteristics:

Typical output power: -20dBm 850nm, -15dB 1300nm, -7dBm 1310/1550nm
Receiver sensitivity: -60dBm loss measurement, -45dBm loss & length measurement

Encircled flux test cord insertion loss: <3.0dB each

Operating Temperature:

0°C to 45°C, non-condensing

Storage Temperature:

-20°C to 70°C, non-condensing

Vibration/Shock:

MIL-PRF-28800 F, Class 3 (met by design)

User Interface Languages:

Chinese, English, French, German, Italian, Portuguese, Russian and Spanish

Accuracy:

Certified by ETL to meet ANSI/TIA-1152-A Level 2G, IEC 61935-1 Level VI (3000 MHz model)

500 MHz model certified to Level IIIe

Warranty:

Instrument: one (1) year from date of delivery

Accessories: one (1) year from date of delivery

Batteries: six (6) months from date of delivery

PC Software:

TREND AnyWARE Cloud Web client – requires HTML 5 compatible browser

TREND AnyWARE Desktop software;

Requirements: Microsoft Windows 10 or higher, 2 GB RAM, 500MB hard disk + 1GB for every 1,500 Category 6 tests

Dimensions:

Height/Width/Depth: 10in/5in/2.1in (25.4cm/12.7cm/5.3cm)

Weight w/ Battery Installed:

Display: 2.35 lbs/1.1kg

Remote: 2.30 lbs/1.0kg

Conformance:

- IEC 61010-1:2010 Ed 3 - Safety requirements for electrical equipment for measurement, control and laboratory use.
- EN61326-1:2013 – Electrical equipment for measurement, control and laboratory use. EMC requirements.
- EN55011:2009 + A2:2010 – Industrial, scientific and medical equipment. Radio frequency disturbance characteristics.
- ENGl000-4-2:2009 - Electrostatic Discharge Immunity Test
- EN61000-4-3:2006+A2:2010 - Radiated, radio-frequency, electromagnetic field immunity test
- EN61000-4-4:2004+Al:2010 - Electrical Fast Transient / Burst Immunity Test
- ENGl000-4-5:2006 - Surge Immunity Test
- EN61000-4-6:2009 - Immunity to conducted disturbances, induced by radio-frequency fields
- EN61000-4-11:2004 - Voltage dips, short interruptions and voltage variations immunity tests
- Instrument: CE, C-Tick, FCC Part 15, Class A
- Battery: DOT 49 CFR 173.185, UN Part IV – section 38.3

Approvals:

Please visit www.trend-networks.com to view all LanTEK IV partner and ETL approvals

TREND NETWORKS

TREND NETWORKS
Stokenchurch House, Oxford Road, Stokenchurch,
High Wycombe, Buckinghamshire, HP14 3SX, UK.
Tel. +44 (0)1925 428 380 | Fax. +44 (0)1925 428 381
uksales@trend-networks.com

www.trend-networks.com

CE

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