Datasheet: MicroScanner²

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For more than a decade, **cabling installation and maintenance** technicians have relied on MicroScanner to verify terminations and troubleshoot continuity faults. A lot has changed in the cabling world since the original MicroScanner was introduced. Industry economics require that installations be done fast and accurately with no callbacks. And converging voice, data, and video technologies have given rise to new requirements for service testing and multimedia support.

MicroScanner² recognizes these trends the way testing is done. It streamlines every aspect of the verification job. From its time-saving user interface and integrated multimedia support to its expanded service detection capabilities, MicroScanner² gives technicians the power to perform their jobs faster and more accurately than ever.

High power vision to verify voice/data/video cabling and services. That's Fluke Networks' promise to you.

MicroScanner² Cable Verifier
Raising cable verification to a higher power

Reduce test time and user error

Yesterday's **cable verification testers** force users to toggle between different modes (up to four) to view all test results. This not only slows the test process, but also causes user frustration and error. MicroScanner² has defied this convention by displaying key test results – wiremap, pair lengths, distance to fault, cable ID, and far-end devices – all on one screen.

Eliminate awkward test adapters

Tired of losing or breaking all the adapters needed for testing the various voice, data, and video media types? MicroScanner² makes these adapters things of the past with builtin RJ11, RJ45, and coax support. Both the main unit and the far-end identifiers can be used to test telephone jacks, Ethernet jacks, and CATV outlets right out of the box.

Rule out service problems fast

Today's communications technicians have more problems to deal with than just the cabling. They have to rule out a whole host of cable and service issues before determining the cause of a connectivity problem. Is there telephone voltage? What's the polarity? Is there a switch at the far end? Is PoE available? MicroScanner² gives technicians high power vision to verify today's most common voice, data, and video services.
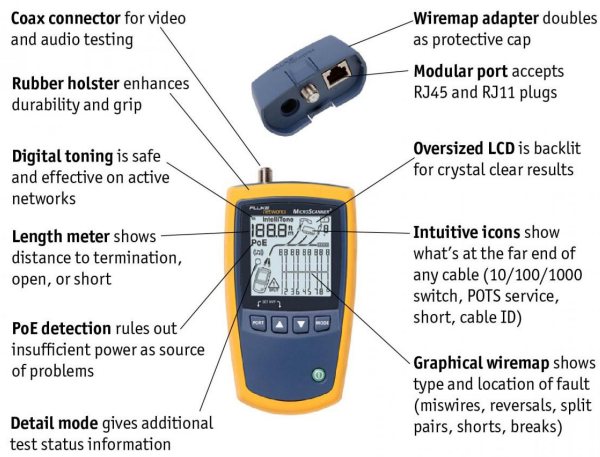
Locate elusive cables in seconds

MicroScanner[2] features built-in IntelliTone digital and analog toning to precisely locate virtually any cable or wire pair, regardless of work environment. Use digital mode to locate high-grade data cabling (Cat 5e/6/6a) in bundles, or at switches, patch panels, or wall outlets. Or, use analog mode on voice-grade cabling (Cat 3 and below), as well as coax, security/alarm, and speaker wiring.

Repair or replace tools less often

With all the abuse you put your tools through, you can't afford for them to be delicate. MicroScanner[2] features a rubber wrap-around holster that makes it the right tool for even the toughest jobs. Toss it into your toolbox. Drop it from a ladder. It can handle it. Plus, it now comes standard with a vinyl carry pouch for enhanced protection and convenience.

MicroScanner[2] Cable Verifier

Coax connector for video and audio testing

Rubber holster enhances durability and grip

Digital toning is safe and effective on active networks

Length meter shows distance to termination, open, or short

PoE detection rules out insufficient power as source of problems

Detail mode gives additional test status information

Wiremap adapter doubles as protective cap

Modular port accepts RJ45 and RJ11 plugs

Oversized LCD is backlit for crystal clear results

Intuitive icons show what's at the far end of any cable (10/100/1000 switch, POTS service, short, cable ID)

Graphical wiremap shows type and location of fault (miswires, reversals, split pairs, shorts, breaks)

Ordering Information	
Model	Description
MS2-100	MicroScanner[2] Cable Verifier with main wiremap adapter, multi-language Getting Started Guide, batteries, and Fluke Networks carry pouch
MS2-KIT	The MicroScanner[2] Professional Kit Includes MicroScanner[2], Cable Verifier with main wiremap adapter, **IntelliTone™ Pro 200 Probe**, Remote Identifiers #2-7, patch cords (shielded RJ45, RJ11, coax), multi-language Getting Started Guide, batteries, Magnetic Strap Attachment, and deluxe Fluke Networks carry case
MS2-TTK	The MicroScanner[2] Termination Test Kit Includes MicroScanner[2] Cable Verifier with main wiremap adapter, IntelliTone™ Pro Probe, IS60 Pro-Tool™ Kit, multi-language Getting Started Guide, batteries, Magnetic Strap Attachment, and deluxe Fluke Networks carry case
MS2-FTK	Includes MicroScanner[2] Cable Verifier with main wiremap adapter, Simplifiber Pro optical power meter, 850/1300 multimode source, SC power-meter adapter, multi-language Getting Started Guide, batteries, Magnetic Strap Attachments and carrying case

Accessories	Description
MS2-IDK27	MicroScanner[2] Remote Identifier Kit #2-7
MT-8200-63A	IntelliTone Pro 200 Probe
CLIP-SET	RJ45 to 8 – Clip MT-8200-63A Test Lead
CIQ-RJA	RJ45/11 Modular Adapter
CIQ-COAX	Coax Adapter Kit for RCA, BNC
MICRO-DIT	MicroScanner[2] Kit Soft Carry Duffel
MS2-MAG-KIT	Magnetic Strap Attachment and Spare Holster

Specifications and availability subject to change

MS2-KIT

MS2-TTK

Copper and Fiber Basic Technician's Kit

As project requirements grow to include both copper and fiber cabling, the Copper and Fiber Basic Technician's Kit (MS2-FTK) provides the right set of tools to manage your network and keep it running smoothly. Along with the features of the Microscanner2, the MS2-FTK provides the fiber testing instruments needed to: Quickly verify optical loss and power levels with single-port simultaneous dual wavelength testing over six wavelengths(850, 1300, 1310, 1490, 1550, 1625)

- Conduct efficient cable routing identification with **SimpliFiber Pro's FindFiber®** capability
- Save up to 1000 test results and upload and manage them on your personal computer via Fluke Networks' popular **LinkWare Cable Test Management Software**
- Track intermittent power fluctuations with the Min/Max feature

MS2-FTK

Specifications

Test Connectors	Twisted-pair: UTP, FTP, SSTP 8-pin modular jack accepts RJ45 and RJ11 Coax: F-connector for 75 Ω, 50 Ω, 93 Ω cables
Cable Tests	Tests for open circuits, short circuits, cross-wired pairs, wiremap to TIA-568A/B standards, remote ID locators
Length Measurement	Length (up to 460 meters or 1,500 feet) using Time Domain Reflectometry (TDR) Technology
Tone Generator	IntelliTone digital tone: [500 KHz]; analog tones:[400Hz, 1KHz]
PoE Detection	Solicits and detects the presence of 802.3af compatible PoE devices
Ethernet Port Test	Advertised speed of 802.3 Ethernet ports (10/100/1000)
Power Source	Battery type: 2 AA alkaline batteries
Dimensions	3 in x 6.4 in x 1.4 in (7.6 cm x 16.3 cm x 3.6 cm)
Weight	13 ounces; 363 grams (batteries included)
Warranty	One year

M12/ RJ45 Cable Specifications:

Cable type	Ethernet cable, Cat5e, 6, 6a, shielded, 2 Pair AWG 26 stranded (7 wire), RAL 5021 (water blue), M12 4 pos. D- coded on RJ45 connector
Number of positions	4
Fixed cable length	2m
Volume resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Ambient temperature	-20 oC to 50 oC
Inflammability class acc to UL 94	V0
Surge voltage category	II
Pollution degree	3
Degree of protection	IP20/IP67
External cable diameter	6.7 mm
Transmission characteristics	Cat 5 (IEC 11801:2002), Cat 5e (TIA 568B:2001)

Simplifiber Pro Specifications (included in MS2-FTK)

General Specifications:	
Temperature range	Operating: -10°C to 50°C Storage: -20°C to 50°C
Humidity range	95% (10°C to 35°C) non-condensing; 75% (35°C to 40°C) non-condensing; uncontrolled <10°C
Certifications	CE, CSA, N10140, Class 1 laser-safe
Dimensions	Power meter: 6.4 in x 3.2 in x 1.5 in (16.5 cm x 8.0 cm x 3.9 cm) MM/SM sources: 5.6 in x 3.2 in x 1.6 in (14.2 cm x 8.1 cm x 4.1 cm)
Weight	Power meter: 11.5 oz (325 g) MM/SM sources: 9.8 oz (278 g)

Optical Sources	
Optical output connector	Fixed SC
Emitter type	850/1300: LED 1310/1550: FP Laser FindFiber: Laser
Emitter wavelengths	CE, CSA, N10140, Class 1 laser-safe
Power output (minimum)	MM: ≥ -20 dBm SM: ≥ 8 dBm minimum; -7 dBm nominal
Power output stability (8 hours)	MM: +/- 0.1 dB over 8 hours SM: +/- 0.25 dB over 8 hours
MM battery life (2 x AA IEC LR6)	40 hours typical
SM battery life (2 x AA IEC LR6)	30 hours typical
FindFiber battery life (2 x AA IEC LR6)	80 hours typical

Optical Power Meter	
Power measurement accuracy	+/-0.25 dB
Optical connector	Removable adapter; SC adapter standard; Optional adapters include LC, ST
Detector type	InGaAs
Calibrated wavelengths	850, 1300, 1310, 1490, 1550, 1625
Power measurement linearity	850 nm: +/- 0.2 dB; +/- 0.2 dB for power from 0 dBm to -45 dBm, +/- 0.25 dB for power < -45 dBm; 1300 nm, 1310 nm, 1490 nm, 1550 nm, 1625 nm: +/- 0.1 dB; +/- 0.1 dB for power from 0 dBm to -55 dBm, +/- 0.2 dB for power > 0 dBm and <-55 dBm
Resolution	0.01 dB
Battery life	>50 hours typical
Memory	1000 loss or power measurements
Serial communication physical interface	USB