IDEAL NETWORKS



NaviTEK IE

Copper and Fibre Troubleshooter
for PROFINET Industrial Ethernet Networks

Proof of Performance

NaviTEK IE

Copper and Fibre Troubleshooter for PROFINET Industrial Ethernet Networks



The NaviTEK IE is a tester for commissioning, preventative maintenance and troubleshooting of PROFINET Industrial Ethernet networks as well standard Ethernet IP networks.

Designed to simplify the process, the NaviTEK IE identifies network nodes and configuration without requiring a PC and speciality software.

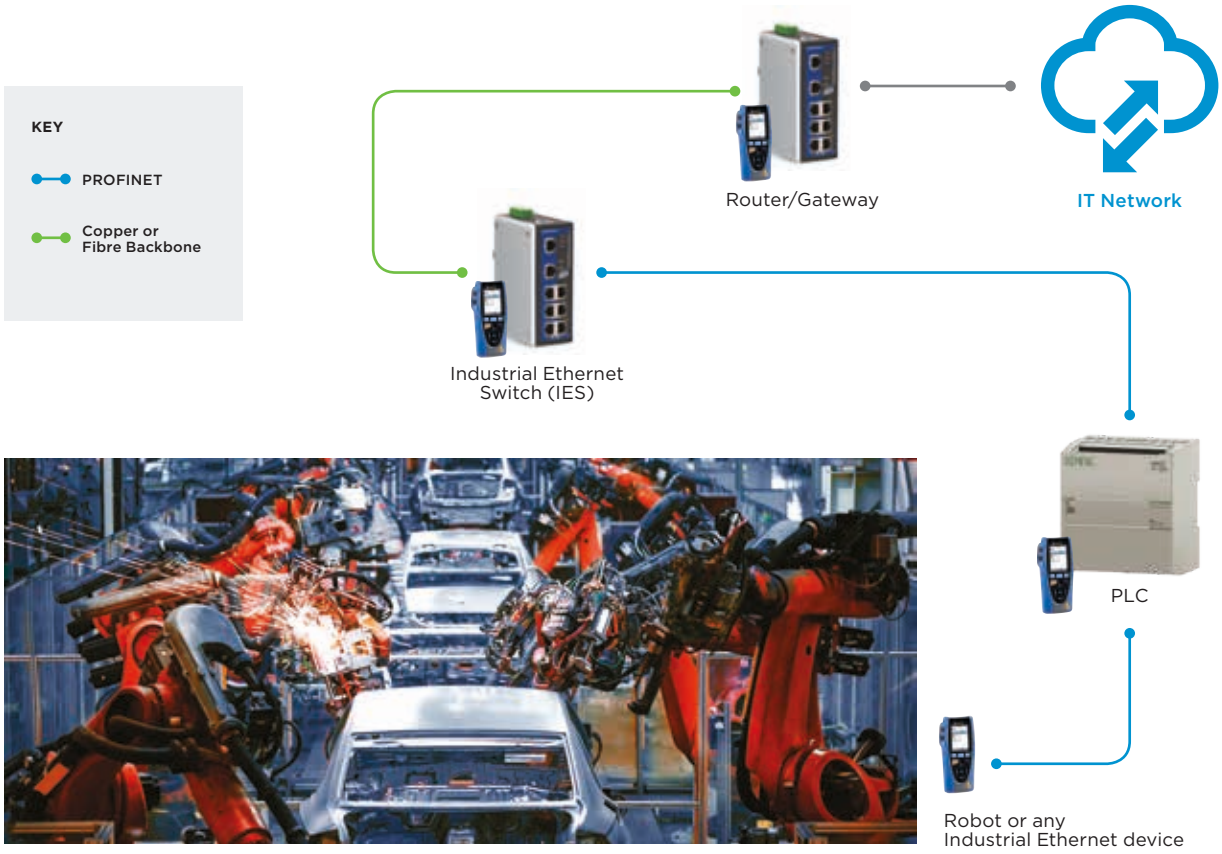
An easy to understand system health check pinpoints potential issues before they become network failures. Automatically discover cable, network or device configuration/faults with the touch of a button.

To prove the network has been commissioned successfully, NaviTEK IE provides professional PDF reports that can be shared with colleagues and clients using the free IDEAL AnyWare™ mobile app.

What does the NaviTEK IE do?

- ✔ **Pinpoint cable faults** on copper and fibre cabling
- ✔ **Easily configure nodes** to resolve connectivity issues
- ✔ **Prevent network failures** with the health check feature
- ✔ **Locate hard to find devices** using the device blink feature
- ✔ **Find mis-configured devices** using the NetMAP comparison tool
- ✔ **Find rogue devices** using the 48 hour event log
- ✔ **Create professional PDF reports** for your clients
- ✔ **Send reports anywhere** using the free IDEAL AnyWARE app

Where can I use the NaviTEK IE in my network?



Cable Testing

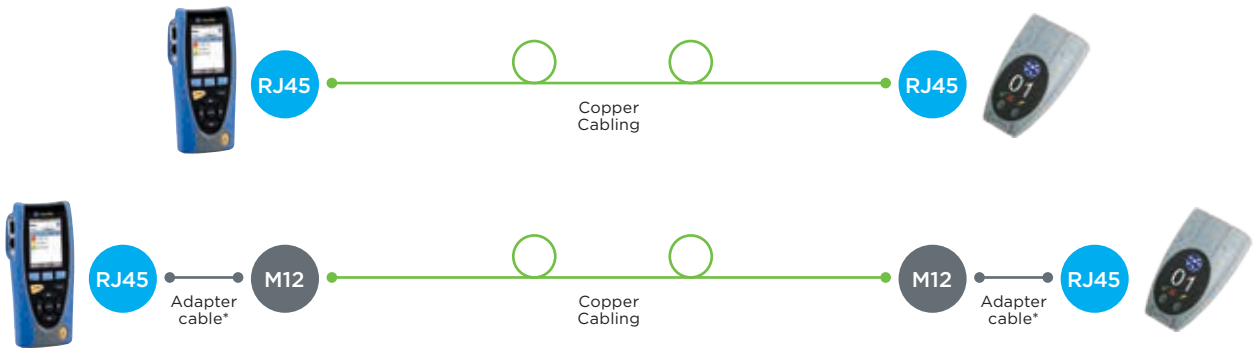
Pinpoint Cable Faults and Minimise Downtime

One of the main causes to network downtime is caused by cable faults. The NaviTEK IE has a series of advanced wiremap tools for PROFINET and standard Ethernet IP network cabling:

Copper Cabling

Using the RJ45 or M12 interfaces the NaviTEK IE offers a wiremap specifically designed for PROFINET Industrial Ethernet networks and Standard Ethernet networks.

- Displays the correct wiring colours for the protocol used
- Supported cable types – 4 twisted wires / 2 twisted pairs / 4 twisted pairs
- Measures the cable length
- Determine where and what the cable fault is including split pairs/opens/shorts/miswires.

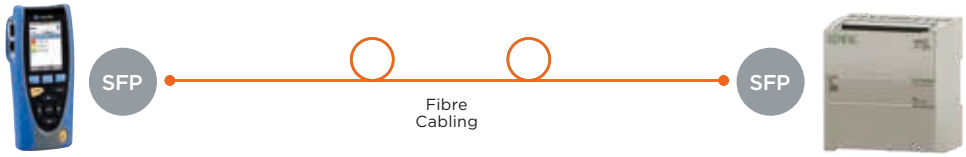


2 x M12 D connector cables supplied as standard.
M12 X connectors available as accessories.

Fibre Cabling

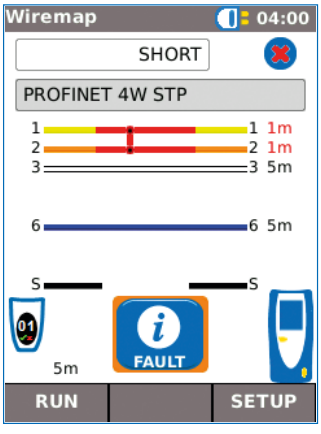
Using the optional SFP module the NaviTEK IE measures optical power and provides a good, satisfactory or poor indication of received power.

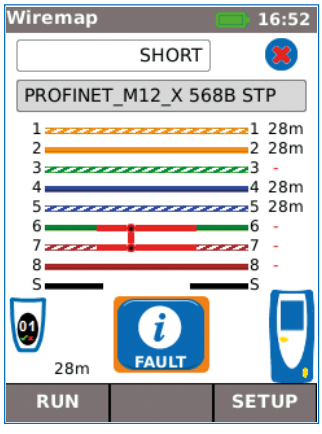
- Poor power levels are a good indication of dirty connectors and kinked or damaged cabling
- An optional 100Mb/s SFP media converter is available to access a 100Mb/s optical link (See back page for details)



Why is NaviTEK IE better than other cable testers?

- **Accurate distance to fault** using Time Domain Reflectometry (TDR)
- **Tests every wire in the data cable not every pair** to help isolate issues that other testers cannot find
- **Supports standard and non-standard cabling** as the wiremap can be customised to your specific cabling





Network Testing

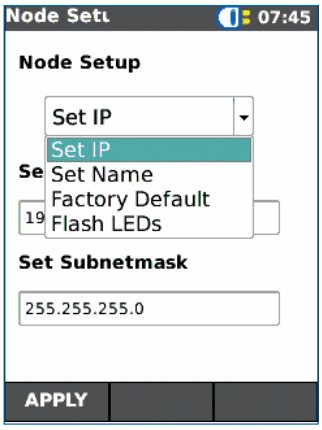
Correct network issues using the discovery and configuration tools

The NaviTEK IE will discover the following list of faults:

- Incorrect device names
- Duplicate IP addresses
- Packet loss

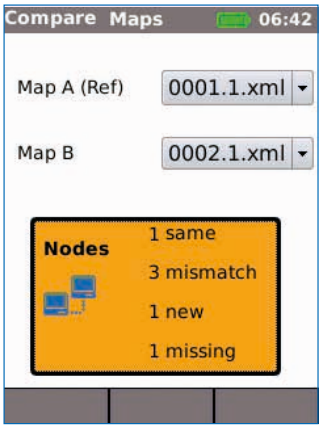
If node configuration faults are found, easily correct them using the simple configure tool.

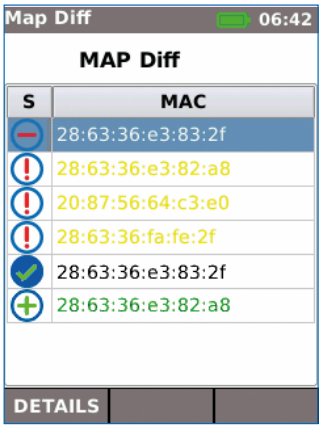




Discover mis-configured devices that cause a network conflict

The NETMAP comparison tool can also perform a scan of the entire network to identify all active devices and save this for comparison to future NETMAPS. This enables easy identification of new or removed network devices, incorrectly configured devices or configuration changes, such as those caused by automatic firmware updates.

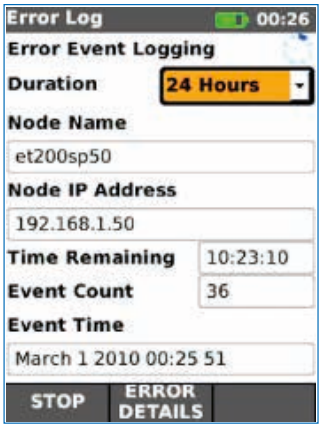


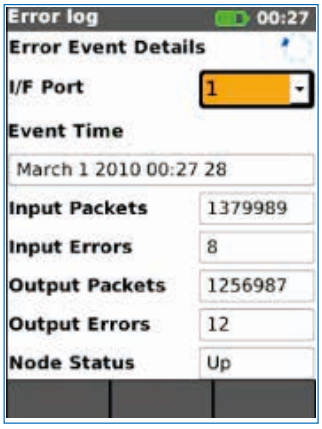


Find intermittent issues with the event log

The NaviTEK IE will record key network errors for up to 48 hours including the following parameters. This will help determine if a problem is with the cabling, node, PLC or the network configuration.

- Device status
- Input/output errors

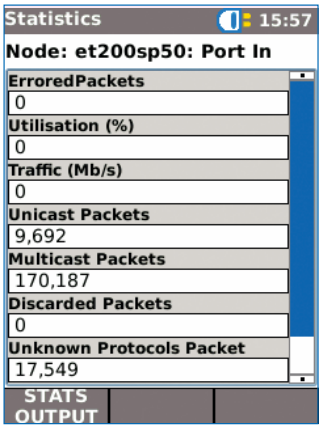


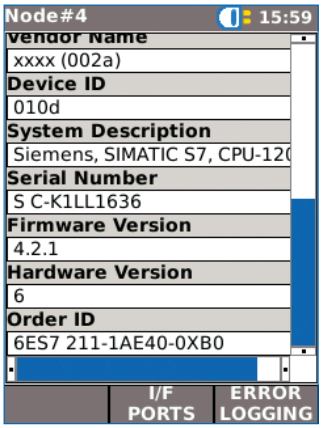


Display and validate network node details quickly

The NaviTEK IE uses the following protocols to display the most important network node parameters.

- Discovery and Control Protocol (DCP)
- Simple Network Management Protocol (SNMP)
- Link Layer Discovery Protocol (LLDP)





Perform a health check to identify issues before network failures occur

The health check feature provides a quick indication of how each of your devices are performing with an easy to understand traffic light system. By clicking on each device you will see why your device is categorised as amber or red and corrective action can be taken.

HEALTH CHECK KEY

Green indication

No abnormal events detected

- No errors
- No alarms
- No duplicated IP address or name
- Link traffic load below 10%

Amber indication

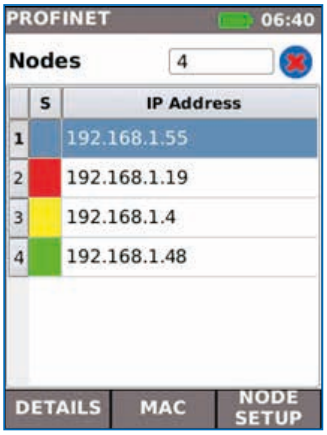
No critical events detected and device is still operational

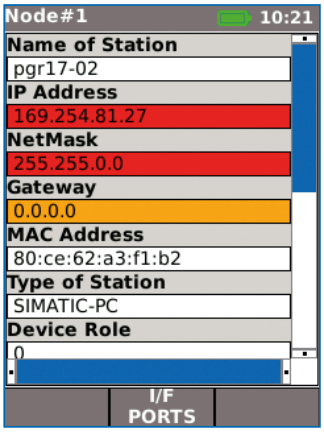
- Packet errors occur but at an acceptable limit
- Link load 10% - 50%
- Another identical device model found but has different firmware / hardware version
- Device speed is 10Mb/s
- Device port half duplex

Red indication

Critical events detected and device may not be operational

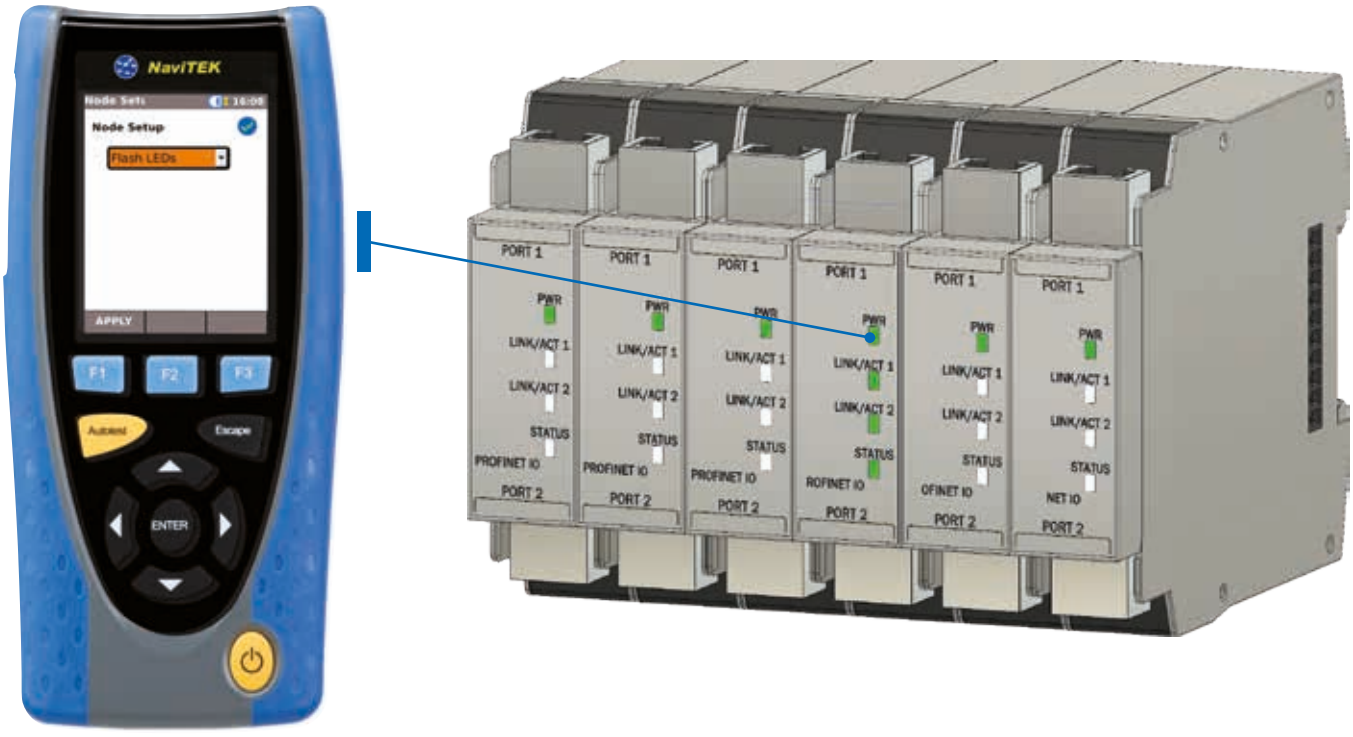
- No or duplicate name set
- Duplicated or wrong IP address set
- No or wrong device subnet mask set
- Device communication failure
- Device IP outside the tester subnet mask
- Packet errors exceeding acceptable limits
- Link load > 50%





Locate hidden or poorly labelled devices

Quickly identify a specific device with the NaviTEK IE by flashing its LEDs.



NaviTEK IE

Share test data
Provides mobile device connectivity using USB Wi-Fi adapter and free IDEAL AnyWARE app

Ports for copper, fibre
Save money by employing a single device to test entire networks

User-exchangeable RJ45 Inserts
Field replaceable RJ45 contacts reduce downtime



Colour touch screen
Reduce the chance of false readings with a clear, bright backlit screen

Virtual keyboard
Work efficiently, quickly and easily input data

Durable rubber moulded housing
Rubberised housing protects the tester from accidental damage and reduces cost of ownership

Autotest function
Predefine common tests under one Autotest button to improve productivity

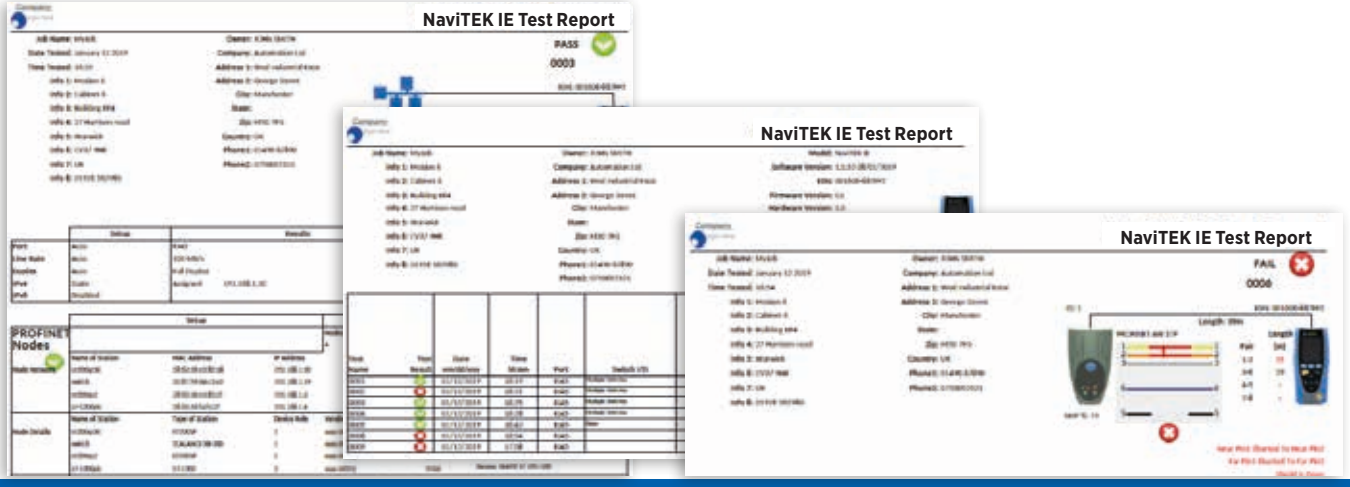
A choice of power supply
Choose between mains power or rechargeable batteries to suite your environment

Test Reporting

NaviTEK IE automatically generates test reports in PDF or CSV format.

The summary page of each report can be customised to include logo, company and operator details. Choose between 3 different reports than can show either passed, failed or all test reports in each report:

- Summary
- Brief
- Full



Send test reports from anywhere using the free app

IDEAL AnyWARE



Step 1
Test

- Create job folder
- Enter job site information
- Perform autotest on copper/fibre cabling and copper/fibre networks

Step 2
Connect

- Activate NaviTEK IE wireless hotspot
- Connect your mobile phone or tablet with the IDEAL AnyWARE App
- Transfer test reports to your mobile device
- View test reports

Step 3
Send

- Select reports (PDF or CSV) to send
- Select preferred transfer method – email, ftp, cloud storage etc.
- Send file
- Alternatively save test reports to USB key

Download the FREE app today

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NaviTEK NT Pro

- Display network configuration - IPv4 / IPv6 compatible
- Wiremap for miswires, split pairs, opens and shorts
- Distance to opens and shorts (TDR)
- PoE/PoE+ detection and load test
- Tone generator for cable tracing
- Autotest button performs Ping and Traceroute test (network mode)
- Hub blink for port identification
- DHCP client
- Switch speed detection - 10/100/1000 Mb/s
- User-exchangeable RJ45 inserts
- Support for up to 12 wiremap remotes
- Backlit colour screen
- Autotest button performs a suite of network tests: Internet connectivity (Ping, DNS, Gateway, Traceroute) and NetScan
- Network Probe (NET TEST) provides detailed network information of each device
- Port identification using EDP/ CDP/ LLDP protocols
- VLAN detection
- Traffic utilisation bar graph
- Generate test reports (PDF or CSV)
- Send test reports from your mobile device using the free IDEAL AnyWARE App
- Logon using the 802.1x protocol
- Optical interface with power level and pass/fail indication with supported SFP
- Loopback mode for transmission testing on both copper and fibre interfaces
- Touchscreen
- Custom wiremap

NaviTEK IE

All features of the NaviTEK NT Pro as well as the following:

- M12 PROFINET Cable Testing
- PROFINET Fibre Cable Testing
- Traffic light network health check
- Device LED flash to locate devices faster
- NETMAP compare – identify changes in the network
- Configure node settings without the need for a laptop
- List all network node details ie IP Address, Vendor details, Software version etc
- Ability to reset device to factory defaults
- Device alarm/error detection
- Professional Industrial Ethernet PDF Reports

NaviTEK IE

Copper and Fibre Troubleshooter for PROFINET Industrial Ethernet Networks



Ordering Information

Part No.	Kit Contents
R151010	**NaviTEK IE** – Industrial Ethernet Tester. 1 x NaviTEK IE test unit, 1 x Remote unit No. 1, 1 x Rechargeable Power Module, 1 x PSU EU/UK/US adapters, 2 x Patch cables - 30cm, Cat. 5e STP, USB Wi-Fi adapter, 1 x Quick reference guide, 1 x Carry case, 2 x PROFINET RJ45 (m) - M12 (f) D coded 1m adapter cable (R151058)

Optional Accessories

Part No.	Description
R151058	2 x PROFINET RJ45 (m) - M12 (f) D coded 1m adapter cable
R151059	2 x PROFINET RJ45 (m) - M12 (f) X coded 1m adapter cable
R151060	1 x 100Base-Fx SFP housing Media Converter
62-164	1 x IDEAL amplifier probe
150058	1 x RJ45 insert extraction tool, 10 x lifejack RJ45 inserts
150050	1 x Full remote set (#2 - 12), - for #2 - 6 order set 150059
MGKSX1	1 x 850nm SX MM SFP + fibre patch cord accessories kit
MGKLX2	1 x 1310nm LX SM SFP + fibre patch cord accessories kit
MGKZX3	1 x 1550nm ZX SM SFP + fibre patch cord accessories kit

For a full list of optional accessories, please visit our website.

Basic Specifications

Max. No. of Jobs	Max. No. of Stored Test	Max. Length	Battery Life	Dimensions per handset in mm	Weight per handset
50	5000	181 m/593 ft.	5 hours	175 x 80 x 40	0.4 kg

For detailed specifications, please visit our website.

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