



# OptiScan

MEASUREMENT TOOL FOR TACTICAL COMMUNICATION



# EASY QUALITY ASSURANCE

Optical fiber is the leading transmission technology for tactical communication – from command and control to radar guidance for advanced air defence systems. This makes fiber networks mission-critical for field units – and OptiScan essential for reliable operation.

## Fast performance check

Fiber-optic networks play a crucial role in tactical communication. Despite this, their performance isn't always verified in the field – whether before, during or after deployment. One reason is the lack of field-compatible measurement tools – at least until now.

OptiScan, Micropol's optical fiber measurement tool, offers simple and reliable performance verification for communication networks. This rugged device checks that each fiber channel meets acceptable attenuation levels, ensuring safe deployment and use.

## 12 channels simultaneously

Simultaneous testing of up to 12 channels is easily performed by a single operator and takes only 30 seconds, compared to typically 20–25 minutes with conventional optical power meters (OPMs).

OptiScan is a smart and simple assurance for continuous operation and optimal performance in tactical communication networks.

## OptiScan in brief:

- Fast and reliable functional control of fiber links
- Measure multiple serially connected cables
- Measure up to 12 channels simultaneously
- Supports most popular optical connectors
- Developed and tested together with the Swedish Armed Forces



OptiScan is a proven measurement tool used by the Swedish Armed Forces – one of the most digitalized in the world – alongside Micropol's passive fiber-optic solutions.

German-based Diehl Defence uses Micropol's fiber-optic solutions to connect its air-defence equipment.

Image: Diehl Defence GmbH & Co. KG





# HOW IT WORKS

OptiScan uses proven and reliable laser technology to measure the attenuation of a fiber link. The tool supports two different measurement methods – Loop mode and Link mode depending on the specific need.

## Loop mode – For functionality checks

This mode is suitable for checking the functionality of fiber links. OptiScan measures and returns the total attenuation over a link pair. If the attenuation is below a certain threshold, the tool displays “Approved”; otherwise, it displays “Failed.” Testing is simple to perform by one person, requires no interpretation of results, and should be repeated regularly to ensure the integrity of your tactical communication.

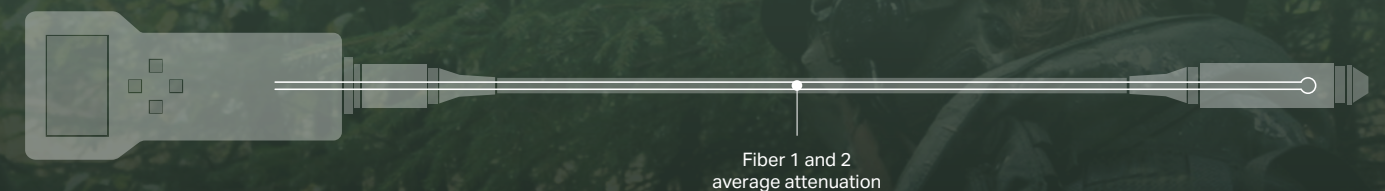
## Link mode – For troubleshooting

In Link mode, the attenuation of each individual fiber is measured separately. This type of measurement requires two OptiScan units since light is sent in both directions for this process. The result is displayed as the attenuation (in dBm) for each fiber. Link mode is ideal for troubleshooting cables and for measurements where precise attenuation values are critical.



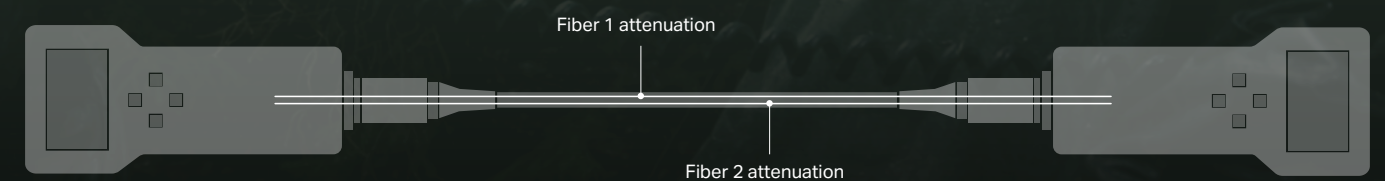
OptiScan measures the signal strength of optical fiber lengths, providing quick confirmation of link attenuation to secure optimum function. Field measurements are easy to carry out and deliver fast, reliable results.

## LOOP MODE



Use OptiScan and a loopback plug (included) to measure the total attenuation of a fiber pair.

## LINK MODE



Use two OptiScan units to measure the attenuation of each fiber in a fiber-optic cable.



# A COMPLETE FIELD KIT

OptiScan is a comprehensive measurement solution packed in a rugged field case. The kit includes a charger, loopback plug, cleaning kit, and instruction manual. It's fast and easy to use, designed for operation by a single person.

### Test regularly

OptiScan can be used to test fiber cables while they're still on the reels, saving valuable time in the field. In fact, the tool can be used to measure the total attenuation of up to ten reels connected in series. After deployment, test the link again to confirm optimal performance. Scanning is also recommended before storage. The instrument supports most common optical connectors on the market, including expanded beam connectors such as Micopol's FALCON™ and PROCON™.

### Clean before servicing

A failed test may be due to dirty connectors. Before sending the cable reel for service, clean all connectors using the included cleaning kit. Then re-test to confirm that the link is approved for re-deployment or ready for service. It's recommended to calibrate OptiScan approximately every 24 months. Micropol offers calibration services – contact Micropol for details.



Activate Night mode to turn the display text red, making it less visible in low-light conditions.



LOOP MODE

Micropol's fiber-optic cables and connectors feature inherently low attenuation, enabling the attenuation measurement of combined lengths of up to ten cable sections connected in series – even while they are still on their reels.



LINK MODE

### SPECIFICATION

<b>Battery time</b>	30 hours continuous use (supports simultaneous use and charging)
<b>Max link no</b>	Up to ~10 cable reels connected in series
<b>Channels</b>	Up to 12 channels simultaneously
<b>Adapters</b>	2, 4, or 12 channels
<b>Protection</b>	IP65
<b>Temperature range</b>	0°C to +50°C / +32°F to +122°F
<b>Modes</b>	Loop mode (fiber-pair total attenuation) or Link mode (individual fiber attenuation)
<b>Supported connectors</b>	Most popular technologies including Micropol's FALCON™/PROCON™, other optical connectors such as HMA, HMC, etc.





## FIBER OPTICS FOR TACTICAL COMMUNICATION

[micropol.com](https://micropol.com)

