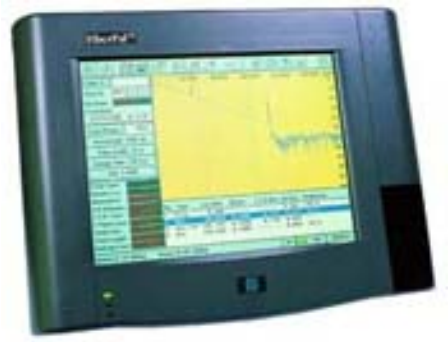
# FiberPal™ MINI OTDR



FiberPal is a compact, cost-effective portable Optical Time-domain Reflectometer (OTDR), designed for full-range fiber fault detection. It delivers the same features as desktop model. Designed specifically with fieldwork in mind it is ideal for optical fiber installation/maintenance, field construction, and other in-situ fault-locations analyses. Its outputs are formatted to ease planning and documentation efforts and to minimize time spent on-site.

**Application**

The FiberPal encompasses two parts: a plug-in module (MMO) which perform all OTDR functions, and a Mainframe Interface (MFI) console which provides power, data interfaces, and LCD display, a touch-screen input, and a thermal printer.

On the MMO, a short laser pulse is injected to the fiber under test and an avalanche photodiode (APD) picks up any scattered and reflected optical signals. This process is repeated again and again and an integration process is also invoked to suppress the noise. The MFI Console (MFI-001) is a miniature 80486-based computer that is powered by 4 Rechargeable Li batteries or AC. The application (AP) execution sequence is done automatically using the touch-screen commands, and the digitized waveform is displayed in 3 seconds.

The AP consists of two windows. The Event Handling window (default) allows for parameter setting, measurement data storage and event analysis processing. The Event Mapping window provides mapping of a measured trace to a predefined landmark table, and subsequently the actual fault location, instead of pure distance, can be shown.

## Application

- Splicing Loss detection
- Fiber Attenuation
- Acceptance Test
- Break Point Location
- Fiber Length
- On-line Monitoring

## Features

- Fault event analysis software
- Real-time display
- Touch LCD, high resolution screen
- Mapping function with actual position display
- Rugged, handheld and easy to use
- RS-232 output port for a PC interfaces
- Powered by either rechargeable Li-Ion battery or AC
- Emulation program for data analysis PC

## Specifications: MFI-001

| | |
|---|---|
| Processor | Am486DX5 133MHz |
| Memory | 16 MB DRAM |
| Storage | 1. Compact Flash Card 32 Mbytes<br>2. 3.5" Floppy disk |
| Display | 10.4" TFT VGA (VRAM 1MB /256 Color) |
| Pointing Device | Touch screen |
| Printer | Build-In |
| Dimensions (LxWxH) | 320x240x60 mm |
| Weight | 3.6 kg |
| Continue working | 3 hours |
| Power supply | Lithium Ion Battery (10.8 VDC) &<br>AC charge adaptor (100~240 V. 50~60 Hz) |

There are three optional, interchangeable, plug-in MMO modules with distinct dynamic ranges, dead zones, pulse widths, sampling resolutions, and dual wavelengths, respectively. The AP can automatically detect the model number of the module and set the corresponding parameters when a module is plugged in and the MFI is powered-on.

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# Specifications: MMO Modules

| Model | | MMO-320 | MMO-321 |
|---|---|---|---|
| Wavelength (nm) | | 1310/1550± 20 nm | 1550/1625± 20 nm |
| Fiber | | 9/125µm single mode fiber | |
| Optical Connector | | FC/PC | |
| Pulse width (ns) | | 10, 30, 100, 300, 1000, 3000, 10000, 20000 | |
| Dynamic Range (dB) | Effective | 35/33 | 33/31 |
| | SNR=1 | 38/36 | 36/34 |
| Event Dead Zone | | 5m | |
| Attenuation Dead Zone | | 30m | |
| Sampling Resolution (m) | | 0.25, 0.5, 1, 2 | |
| Max. Sample Points | | 128 k | |
| Distance Accuracy | | ±( 2m + 3 x$10^{-5}$ distance + marker resolution)<br>(Fiber index error not included) | |
| Loss Accuracy | | ± 0.05 dB /0.1 dB (whichever greater) | |
| Return Loss Accuracy | | ± 4 dB | |
| Max. Display Range | | 240Km | |

| Model | | MMO-220 |
|---|---|---|
| Wavelength (nm) | | 1310/1550± 20 |
| Fiber | | 9/125µm single mode fiber |
| Optical Connector | | FC/PC |
| Pulse width | | 20, 120, 440, 1000, 4000, 10000 ns |
| Dynamic Range (dB) | Effective | 30/28 dB |
| | SNR=1 | 33/31 dB |
| Event Dead Zone | | 10m |
| Attenuation Dead Zone | | 30m |
| Sampling Resolution (m) | | 2, 4, 8 |
| Max. Sample Points | | 24 k |
| Distance Accuracy | | ±( 2m + 3 x$10^{-5}$ distance + marker resolution)<br>(Fiber index error not included) |
| Loss Accuracy | | ± 0.05 dB /0.1 dB (whichever greater) |
| Return Loss Accuracy | | ± 4 dB |
| Max. Display Range | | 200Km |

**Order Information:**

**Package**

- FPL-220: MFI-001 x1 + MMO-220 x1 + all accessories x1
- FPL-320: MFI-001 x1 + MMO-320 x1 + all accessories x1
- FPL-321: MFI-001 x1 + MMO-321 x1 + all accessories x1

**Module**

- MFI-001: Mainframe interface of the FiberPal OTDR
- MMO-220: 33 dB 1310/1550 nm OTDR module
- MMO-320: 38 dB 1310/1550 nm OTDR module
- MMO-321: 38 dB 1550/1625 nm OTDR module

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