

YOKOGAWA

# AQ7270

The Yokogawa AQ7270 is a high-performance Optical Time Domain Reflectometer (OTDR) designed for the installation, maintenance, and troubleshooting of optical fiber networks. Featuring an 8.4-inch color display, a rapid 10-second boot time, and versatile module options, the AQ7270 provides high-resolution trace analysis and reliability for field technicians.

## SPECIFICATIONS

### General

|            |                                                                                                                   |
|------------|-------------------------------------------------------------------------------------------------------------------|
| Interfaces | USB 1.1 Type A (Host) x 2, USB 1.1 Type B (Function) x 1, PCMCIA Type II Card Slot x 1, RJ-45 Ethernet (optional) |
| Display    | 8.4-inch color TFT LCD, 640 x 480 pixels (VGA)                                                                    |

### Physical

|                       |                                                            |
|-----------------------|------------------------------------------------------------|
| Power Supply          | 100 to 240 VAC, 50/60 Hz (via AC adapter); 19 VDC (3.42 A) |
| Operating Temperature | 0 to 45 °C (0 to 40 °C when charging battery) °C           |
| Dimensions (W×H×D)    | 287 x 197 x 85 mm mm                                       |
| Weight                | 3.0 kg (including battery pack) kg                         |

### Optical Measurement Specifications

|                               |                                                                                              |
|-------------------------------|----------------------------------------------------------------------------------------------|
| Distance Range Settings       | 500 m, 1 km, 2 km, 5 km, 10 km, 20 km, 50 km, 100 km, 200 km, 400 km                         |
| Pulse Width Range             | 3 ns, 10 ns, 20 ns, 50 ns, 100 ns, 200 ns, 500 ns, 1 μs, 2 μs, 5 μs, 10 μs, 20 μs            |
| Event Dead Zone               | 0.8 m (typical)                                                                              |
| Minimum Sampling Interval     | 5 cm                                                                                         |
| Number of Sampling Points     | Up to 102,400                                                                                |
| Distance Measurement Accuracy | $\pm(0.75 \text{ m} + \text{distance} \times 2 \times 10^{-5} + \text{sampling resolution})$ |
| Group Refractive Index Range  | 1.30000 to 1.70000 (0.00001 steps)                                                           |
| Loss Readout Resolution       | 0.001 dB                                                                                     |
| Applicable Fiber Type         | Single-mode (SM) silica fiber (wavelength dependent)                                         |

### Power Supply & Battery

|                            |                                     |
|----------------------------|-------------------------------------|
| Battery Type               | Lithium-ion battery pack            |
| Battery Operating Lifetime | Approx. 6 hours (typical field use) |
| Battery Charging Time      | Approx. 5 hours (from power off)    |

### Display & User Interface

|                     |    |
|---------------------|----|
| Touchscreen Support | No |
|---------------------|----|

**Data Storage & Analysis Software**

|                                |                                             |
|--------------------------------|---------------------------------------------|
| File Formats                   | SOR (Telcordia GR-196-CORE), SET, TRD       |
| Internal Data Storage Capacity | Approx. 1000 traces (internal flash memory) |

**Visible Fault Locator (VFL) Options**

|                  |                                       |
|------------------|---------------------------------------|
| VFL Wavelength   | 650 nm ± 15 nm (optional /VLS module) |
| VFL Output Power | -3 dBm or less (optional /VLS module) |
| VFL Laser Class  | Class 2 (optional /VLS module)        |

**Built-in Light Source Options**

|                               |                                                 |
|-------------------------------|-------------------------------------------------|
| Light Source Modulation Modes | CW, 270 Hz, 1 kHz, 2 kHz (optional /SLS module) |
|-------------------------------|-------------------------------------------------|

**Environmental & Safety Compliance**

|                          |                                  |
|--------------------------|----------------------------------|
| Storage Temperature      | -20 to 60 °C (excluding battery) |
| Operating Humidity Range | 20% to 85% RH (non-condensing)   |

**Optical Performance**

|                            |                                                                    |
|----------------------------|--------------------------------------------------------------------|
| OTDR Wavelengths           | 850 / 1300 / 1310 / 1490 / 1550 / 1625 / 1650 nm (model dependent) |
| Dynamic Range              | Up to 40 dB (model dependent)                                      |
| Attenuation Dead Zone      | 7 m (typical for single-mode, model dependent)                     |
| OTDR Wavelength Accuracy   | ±20 nm                                                             |
| Loss Measurement Linearity | ±0.05 dB/dB                                                        |

**Laser Safety**

|                         |          |
|-------------------------|----------|
| OTDR Laser Safety Class | Class 1M |
|-------------------------|----------|

**Environmental**

|                    |              |
|--------------------|--------------|
| Operating Altitude | Up to 3000 m |
|--------------------|--------------|

**Performance**

|              |            |
|--------------|------------|
| Startup Time | Under 10 s |
|--------------|------------|

**Optional Functions**

|                                               |                                                         |
|-----------------------------------------------|---------------------------------------------------------|
| Optional Power Meter Wavelength Range         | 800 to 1700 nm                                          |
| Optional Power Meter Measurement Range        | -50 to +10 dBm (Standard) / -50 to +26 dBm (High power) |
| Optional Stabilized Light Source Output Power | -5 dBm ±1.5 dB (single-mode, model dependent)           |

**External Interfaces**

|                    |                                                   |
|--------------------|---------------------------------------------------|
| PC Card Slot       | PCMCIA Type II x 1 (supports CF card via adapter) |
| Ethernet Interface | 10BASE-T / 100BASE-TX (option /LAN)               |

**Options**

|                  |                                                      |
|------------------|------------------------------------------------------|
| Built-in Printer | Thermal line printer, 58 mm paper width (option /PF) |
|------------------|------------------------------------------------------|

**Optional Power Meter**

|                               |                                  |
|-------------------------------|----------------------------------|
| Optional Power Meter Accuracy | ±5% (under reference conditions) |
|-------------------------------|----------------------------------|

**Optical Interfaces**

|                        |                                               |
|------------------------|-----------------------------------------------|
| Optical Connector Type | Universal adapter (SC, FC, ST, or LC options) |
|------------------------|-----------------------------------------------|

**Compliance & Safety**

|                  |                                            |
|------------------|--------------------------------------------|
| EMC Standards    | EN61326-1 Class A, EN55011 Class A Group 1 |
| Safety Standards | EN61010-1                                  |

**TECHNOLOGY**

Fiber Optic OTDR

**APPLICATIONS**

Fiber Optic Testing and Maintenance

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.