

# Quick Fact Sheet

## **IQ Fiber Master™ MT2780A**

### PIM and RF Interference Analyzer

### **PIM and RF Interference Analysis in the Palm of Your Hand**

The IQ Fiber Master MT2780A PIM and RF analyzer is a CPRI-based solution that provides critical PIM diagnosis across multiple bands and sectors using live traffic. Utilizing a non-invasive process that allows cell sites to remain active during testing, this solution uses the CPRI link to analyze RF data and identify PIM levels, PIM location, and conduct RF spectrum analysis. This provides RF engineers with important diagnostic information that will help with PIM debugging and hunting efforts. The small size of the IQ Fiber Master MT2780A and its ability to test any frequency radio without interrupting network traffic make it an ideal, cost-effective solution for cell site technicians and engineers performing PIM and interference analysis.

### **Key Features**

- RF over CPRI for interference measurements
- PIM over CPRI for any frequency PIM measurements
- PIM analytics for long-term PIM monitoring
- 4 SFP ports
- 4x4 MIMO support
- Line Rate 1- 8 support
- PIM Location (DTP = distance-to-PIM)
- Support all Tier 1 LTE base station radio manufacturers
  - Ericsson, Nokia, Huawei, Samsung
  - Other vendors can be added as needed
- Up to 12 AxC traces simultaneously for multiple sectors/carriers
- Uses MX280020A PC software; free download from [Anritsu.com](http://Anritsu.com) website



IQ FIBER MASTER MT2780A FRONT PANEL



IQ FIBER MASTER MT2780A REAR PANEL



2000-1977-R OPTICAL TAP FRONT PANEL

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## IQ Fiber Master™ MT2780A

PIM and RF Interference Analyzer



### Key Specifications

|                                |                                                                                                                                                                                                                                                                           |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Optical Inputs                 | Up to four Small Form Pluggable (SFP) transceivers                                                                                                                                                                                                                        |
| Line Rate                      | Supports Rate 1 to Rate 8 CPRI (SFP dependent)                                                                                                                                                                                                                            |
| Supported Vendors              | Ericsson, Huawei, Nokia, Samsung                                                                                                                                                                                                                                          |
| LTE Bandwidth                  | 5 MHz, 10 MHz, 15 MHz, and 20 MHz                                                                                                                                                                                                                                         |
| LTE RF over CPRI measurements  | Spectral analysis of CPRI IQ streams, absolute or relative frequency LTE UL or DL                                                                                                                                                                                         |
| PIM over CPRI                  | MIMO support: SISO, 1x2, 2x2, 2x4, 4x4<br>Supported PIM configurations: Multi-band dual carrier – IM3-5, Single carrier – IM3-5, Single carrier harmonic – H2, H3<br>PIM power level: PIM measurement in dB relative to thermal noise floor (measurements in dBm or dBsb) |
| Distance to PIM (PIM Location) | ± 1 m typical, 1000 m range                                                                                                                                                                                                                                               |
| PIM Analytics                  | PIM vs. Time, PIM Distribution, PIM Daily, Heat Map                                                                                                                                                                                                                       |
| Results and Reports            | Report Header, Configuration Check, Spectrum, DTP (Distance-to-PIM), Long-Term Monitoring, Pass/Fail                                                                                                                                                                      |
| Operating Temperature Range    | 0° C to 45° C (based on SFP specs)                                                                                                                                                                                                                                        |
| Size                           | 185 mm x 133 mm x 55 mm (2.1 in x 7.3 in x 5.2 in)                                                                                                                                                                                                                        |
| Weight                         | 1 kg (2.2 lb)                                                                                                                                                                                                                                                             |

### Ordering Information

| Part Number  | Description                                                           |
|--------------|-----------------------------------------------------------------------|
| MS2780A      | IQ Fiber Master (requires option 0752, min.)                          |
| MX280020A    | IQ Fiber Master Control Software (no cost; download from anritsu.com) |
| MT2780A-0752 | LTE RF Over CPRI (requires MT2780A)                                   |
| MT2780A-0754 | PIM Over CPRI (requires option 0752)                                  |
| MT2780A-0755 | PIM Analytics (requires options 0752 and 0754)                        |

### Standard Accessories

| Part Number | Description                                              |
|-------------|----------------------------------------------------------|
| 2000-1979-R | SM Fiber Optic Cable Kit, 30 cm, Simplex                 |
| 2000-1980-R | MM Fiber Optic Cable Kit, 30 cm, Simplex                 |
| 2000-1371-R | Ethernet cable, 2 m                                      |
| 40-209-R    | AC power supply (and adapters for local AC line outlets) |

### Optional Accessories

| Part Number | Description                                                   |
|-------------|---------------------------------------------------------------|
| 68-11-R     | SFP+ (optical module), SM 10.5 Gbps, 1310 nm                  |
| 68-12-R     | SFP+ (optical module), MM 10.5 Gbps, 850 nm                   |
| 68-13-R     | SFP+ (optical module), SM 9.83 Gbps, 1310 nm                  |
| 806-16-R    | Fiber optic cable, 3 m, duplex MM 1.6 mm LC/PC LC/PC 50 µm    |
| 806-17-R    | Fiber optic cable, 3 m, simplex MM 1.6 mm LC/UPC LC/UPC 50 µm |
| 806-18-R    | Fiber optic cable, 3 m, ruggedized simplex SM LC/UPC LC/UPC   |
| 806-19-R    | Fiber optic cable, 3 m, ruggedized duplex SM LC/UPC LC/UPC    |
| 2100-29-R   | Fiber optic cable, 3 m, simplex SM LC/UPC                     |
| 2100-30-R   | Fiber optic cable, 10 m, simplex MM LC-SC                     |
| 2100-31-R   | Fiber optic cable, 3 m, duplex SM LC/UPC                      |
| 971-14-R    | Ferrule cleaner, 2.5 mm SC                                    |
| 971-15-R    | Ferrule cleaner, 1.25 mm LC                                   |
| 971-16      | Fiber ferrule cleaner                                         |
| 2000-1849-R | SFP 4-slot ESD box                                            |
| 2000-1977-R | 3-port SM 1310/1550 nm TAP (includes 2000-1979-R)             |
| 2000-1978-R | 3-port MM 850/1300 nm TAP (includes 2000-1980-R)              |
| 2000-1982-R | PIM source                                                    |
| 2000-1981-R | Hard transit case                                             |

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