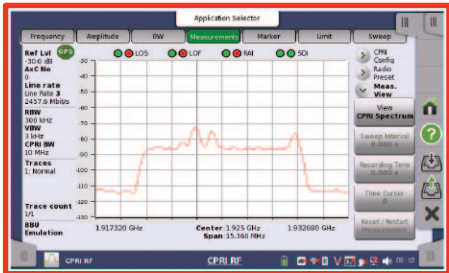


CPRI SUPPORTED WITH ANRITSU MT1000A



✓ RRH Downlink Transmission ✓ RRH Uplink Interference & PIM Testing

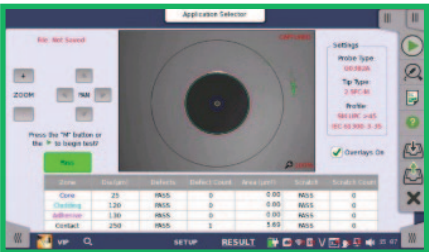
- Initiate the RRH for LTE waveform transmission; confirms RRH radio is working properly by transmitting LTE signal
- By setting the LTE waveform to transmit at maximum power, you can check for PIM and external interference on the Uplink



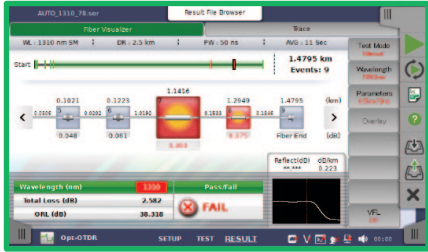
CPRI RF Spectrum Analyzer

✓ VIP Fiber Connection Check ✓ OTDR measurement from BBU to RRH

- Fiber Cleaning/Scope test is performed to ensure that each individual fiber end or SFP fiber port is clean and has no damaging scratches or pits that might impact circuit performance
- FTTA (Fiber To The Antenna) Measurements: Optimized for measurement parameters such as distance range used for short optical fibers used in RRH base stations
- Measurement results displayed as Fiber Visualizer and waveform eliminating analysis parameter settings



Video Inspection Probe (VIP)



FTTA Fiber Visualizer

✓ CPRI BERT measurement from BBU to RRH

- Testing to the “Passive Link” – validate the RRH and fiber:
 - BBU and RRH are able to communicate with each other & L1 In-Band Protocol is working correctly
 - No L1 errors, alarms or lower layer issues
 - Fibers are installed properly
 - BERT (Requires loopback)
- Ensures the transport network operates at desired CPRI rate



CPRI BERT L1 Measurement

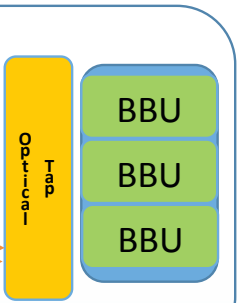


Anritsu Network Master Pro Single Test Solution

- ✓ Easy one-button operation of Tests
- ✓ GUI Front-end and report management are embedded
- ✓ Ideal for Novice Users with repeatable Test Requirements

Antenna
RF Jumper Cables

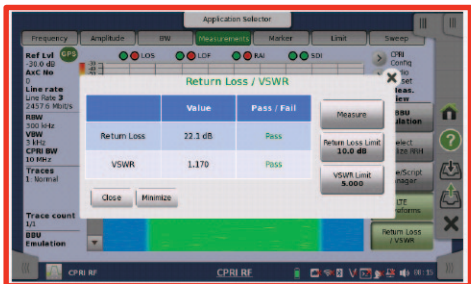
Optical Fibers



Equipment Room

✓ RRH Transmitter Return Loss ✓ VSWR measurements

- Once an LTE Waveform is being transmitted, the MT1000 can read from the RRH Return Loss and VSWR. The results can be judged against user settable limit values
- In example below, the Return Loss Limit Pass/Fail threshold is set to 10.0 db. The Return Loss Value is shown as 22.1 db, and the Pass/Fail indication is PASS (color coded green)



CPRI RF Return Loss / VSWR

✓ Initialize the RRH ✓ Read & Rename the RRH Manufacturer Information

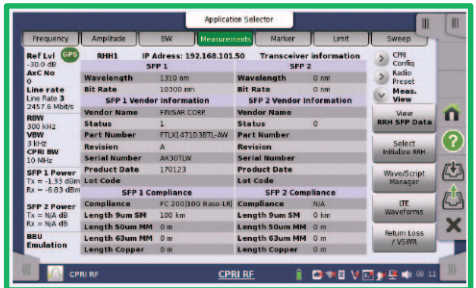
- Once communications with the RRH is established, the MT1000A queries the RRH for the following configuration information:
 - Manufacturer
 - Model Number
 - Serial Number
 - Firmware
 - Frequency Range
 - Power
 - Master / Slave installed SFP's
 - Option to Rename RRH



CPRI RF RRH Initialization

✓ Reading the RRH Master & Slave SFP Data

- Display which type of SFP(s) is/are installed in the two ports on the RRH; Master and Slave.
 - Wavelength
 - Bit Rate
 - Vendor information



CPRI RF RRH Master & Slave SFP Data

✓ Screenshots and Close-out Reports ✓ Fast and easy CPRI site turn-up

No.	Application name	Port	Comment	Status	Result file name
1	OTDR	1-PORT1	MFH OTDR test	Pass	MFH OTDR Trace.SOR
2	CPRI BERT	2-PORT1	RRH SFP(+) CPRI Rate Test	Pass	RRH SFP CPRI Rate Test.res
3	CPRI BERT	2-PORT1	BBU SFP(+) CPRI Rate Test	Pass	BBU SFP CPRI Rate Test.res
4	CPRI BERT	2-PORT1	CPRI Framed BERT Test w/ Loopback	Pass	CPRI Framed BERT Test w/ Loopback.res
5	CPRI BERT	2-PORT1	CPRI Framed RTD Test w/ Loopback	Pass	CPRI Framed RTD Test w/ Loopback.res
6	CPRI BERT	2-PORT1	CPRI Framed Test of RRH to Passive Link State	Pass	CPRI Passive Link Test of RRH.res