

## CPRIAdvisor Increasing RF Visibility in Radio Access Networks

CAP-100/CAE-100/CAM-100

## Introduction

CPRIAdvisor is an interference monitoring solution comprising a stationary cell-site probe (CAP-100), optional expansion modules (CAE-100) to increase monitoring port density for distributed antenna systems (DAS) or centralized radio access network (RAN) topologies, and a remote management program (CAM-100) that controls the probes and monitors test results.



Figure 1. CPRIAdvisor probe (CAP-100 with two expansion modules (CAE-100)

Viavi's CPRIAdvisor probe (CAP-100) is the core element of the solution, containing 16 optical ports that perform RF over fiber (RFoFiber) spectrum monitoring. CAP-100 has the flexibility to analyze RF of any remote radio head (RRH), supporting thousands of CPRI/OBSAI profiles, and capable of monitoring mobile spectrum (uplink) and detect received signal strength indicator (RSSI) or passive inter-modulation (PIM)

Users can set alarm thresholds notifying alarms and saving relevant information for problem tracking and resolution. CAP-100 is also capable of saving spectrum or spectrogram measurements for an extended period of time (e.g., 7 days) to properly detect and characterize intermittent interferences.

CAP-100 can monitor Layer-2 alarms and optical power levels from RRHs with user-definable limits.



For cell sites with distributed antenna systems (DAS) or centralized radio access network (C-RAN) topologies with hundreds of remote radio heads (RRHs) and controlled in a centralized location hosting base band units (BBU), the capacity of CPRIAdvisor can be expanded by adding expansion modules (CAE-100), each supporting 36 optical ports.

CPRIAdvisor probe (CAP-100) can control up to 16 expansion modules (CAE-100) to expand the measurement port density up to 576 fiber ports. CAP-100 can control and manage all the combinations of CPRI/OBSAI link rates and RRH profiles of the site, enabling users to constantly scan and monitor the spectrum of all sectors and determine RF impairments by comparing measurements using the CPRIAdvisor management system (CAM-100).

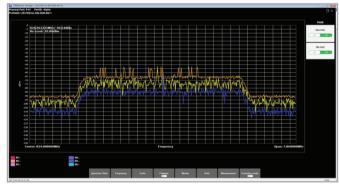
## **Key Features**

- Alarm monitoring and notification
  - CPRI/OBSAI layer-2 alarm monitoring
  - Optical received (RX) power meter
  - RSSI alarm logging (saved with spectrum data and alarm details)
  - PIM detection and alarm logging (saved with spectrum data and alarm details)



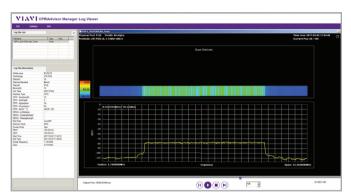
Alarm monitoring and notification

- Real time spectrum measurement
  - RF spectrum analysis with multiple trace and markers



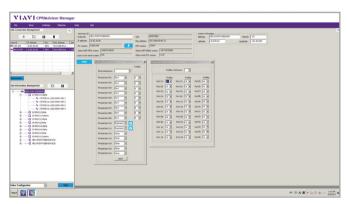
Real time spectrum measurement

- Spectrum logging and replay
  - Spectrum logging for extended measurements (e.g. 7 days up to 12 trace at a time)
  - Spectrum/spectrogram replay capability for post analysis



Spectrum logging and replay

- Easy to set up
  - Stores up to ten thousand CPRI/OBSAI profiles in allowing auto-configuration for proper RF measurements (IQ de-mapping) of any RRH
  - Profile database editing, enabling faster configuration in multi-site topologies



Easy to set up



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