

Reduce DAS Maintenance Time with CellAdvisor Auto-Measure

The DAS Challenge

Installing and maintaining distributed antenna sites (DAS) where the antenna and the base station are not colocated is an issue all operators face. Until now, technicians have relied on manually recording and comparing the RF signal integrity between the base stations and the DAS. This method is susceptible to errors and can result in unnecessary and expensive maintenance recording procedures, including traveling between the base station and the DAS. Deploying the DAS requires technicians to measure the signal level at several points in the design to confirm that the DAS meets the required specifications, as the red circles in Figure 1 indicate. The figure also shows a typical DAS deployment where the base station at point 'A' and the antenna at point 'B' are not colocated.

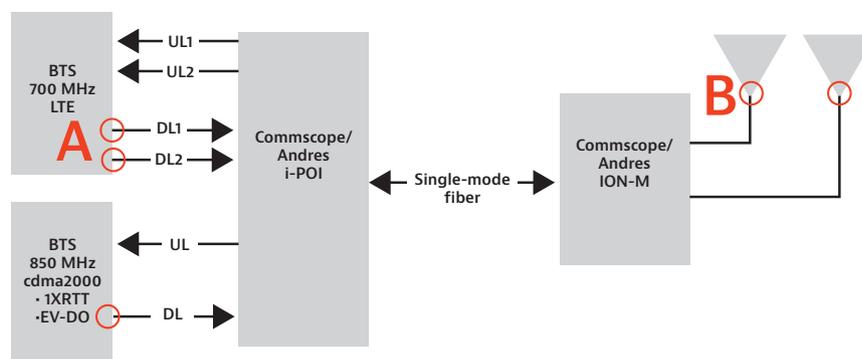


Figure 1. Signal level measurement points

Two Common Problems

DAS Commissioning

The VIAVI Solutions CellAdvisor JD745A/JD785A Base Station Analyzers uniquely automate the validation process to ensure that the RF signal between the base station and the DAS service antenna did not degrade during installation. Technicians can now measure at point A, shown in Figure 1, and then save the measurement to a reference file. They can then move to the antenna site at point B, load the reference file, and repeat the measurement to detect if any faulty equipment or cabling between points A and B caused any degradation.



CellAdvisor Base Station Analyzer

Signal Degradation over Time

Technicians can also use auto-measure to detect signal degradation over time. They simply take a measurement at point A during deployment, save the results to a reference file, and then repeat the measurement during scheduled periodic maintenance to check for degradation.

The Optimal DAS Testing Solution

VIAMI CellAdvisor JD745A/JD785A Base Station Analysers *automate and guide* users in measuring DAS, speeding up the deployment and testing process. As Figure 2 shows, the CellAdvisor guides technicians as they connect to point A and make a reference measurement, which is saved as a *gold-standard reference file*. Taking subsequent measurements at point A can help to detect degradation over time. Measurements taken at point B can help to detect issues between the base station and the antenna. Both measurement methods automatically compare results against the reference file to instantly alert users of any degradation.

Instant Result Analysis

In Auto-Measure mode, VIAMI CellAdvisor JD745A/JD785A Base Station Analysers automatically measure and display the saved reference values, the new measurement, the difference between points A and B, and a percentage difference for all parameters. User-configured limits instantly alert technicians to problems, which eliminates misinterpreting results and saves significant time, and it empowers them to decide when maintenance is really necessary. Also, test results can be saved in .CSV file format for further analysis or report generation.

For more information about DAS Auto-Measure or to request a demonstration, contact your VIAMI account manager or visit www.VIAMISolutions.com/go/mobile.



Point A
Point B
Figure 2. Automated measurements and guiding users speeds deployments and testing

Measurement Description	Low Limit	High Limit	Allowed % Change	Measurement Reference Value	Measurement Value	Difference	Percent Change
Channel Power	42.000	42.000	3.00	42.000	42.000	0.000	0.00
CABW	10.000	5.000	0.00	10.000	10.000	0.000	0.00
TAU	60.000	5.000	0.00	60.000	60.000	0.000	0.00
Frequency Error	-0.000	0.000	0.00	0.000	0.000	0.000	0.00
CPICH EVM	18.500	5.000	0.00	18.500	18.500	0.000	0.00
16-QAM EVM	13.500	5.000	0.00	13.500	13.500	0.000	0.00
64-QAM EVM	9.000	5.000	0.00	9.000	9.000	0.000	0.00
Data EVM HHS	18.500	5.000	0.00	18.500	18.500	0.000	0.00
Data EVM Peak	18.500	5.000	0.00	18.500	18.500	0.000	0.00
PSS EVM	18.500	5.000	0.00	18.500	18.500	0.000	0.00
S-SS EVM	18.500	5.000	0.00	18.500	18.500	0.000	0.00
RSS Power	13.000	10.000	5.00	13.000	13.000	0.000	0.00
P-RSS Power	18.000	22.000	5.00	18.000	18.000	0.000	0.00
S-RSS Power	18.000	22.000	5.00	18.000	18.000	0.000	0.00
P-RCH Power	18.000	22.000	5.00	18.000	18.000	0.000	0.00
S-RCH Power	18.000	22.000	5.00	18.000	18.000	0.000	0.00
CPICH Symbol Error	-15.000	22.000	5.00	-15.000	-15.000	0.000	0.00
Time Error	-2.000	2.000	5.00	-2.000	-2.000	0.000	0.00
TD Origin Offset	-30.000	5.000	0.00	-30.000	-30.000	0.000	0.00

Figure 3. Auto-Measure results



Contact Us **+1 844 GO VIAVI**
(+1 844 468 4284)

To reach the VIAMI office nearest you, visit viasolutions.com/contact

© 2021 VIAMI Solutions Inc.
Product specifications and descriptions in this document are subject to change without notice. Patented as described at viasolutions.com/patents
celladvisor-automeasure-an-cpo-nse-ae
30175847 900 0314