2-Port PIM Testing for MIMO DAS Systems



ECSite Introduces the next leap forward in PIM Testing & Mitigation for DAS systems. This innovative process utilizes 2-Port PIM test equipment to dramatically reduce test time and increases accuracy by rapidly identifying all internal & external PIM sources from a single test location.

The Problem

PIM is the most significant and challenging factor contributing to poor DAS performance. Current processes to troubleshoot & mitigate PIM are time consuming, labor intensive & expensive. Current processes utilize 1-Port PIM test equipment along with labor intensive methods to temporarily remove branches & antennas from the system to isolate a single PIM source. This process is repeated for every PIM source in an antenna system, and often takes days or weeks of time with highly skilled, multi person teams. The reporting process from this troubleshooting is further complicated and time consuming.

About ECSite

Launched in 2019, ECSite has worked with Network Operators, 3POs, Integrators, and GCs in providing advanced automation solutions for highly technical site data collection and management of DAS, small cells, Public Safety, Macros, and OSP projects. Automating field test instruments for sweeps, PIMs, fiber, CW, and CAT6 is the cornerstone of ECSite software.

Our Mission

To Provide End to End enterprise SaaS solutions for automated Infrastructure deployment through highly technical data collection, analysis, and reporting during Construction, Installation, Commissioning, and Ongoing performance operations of digital infrastructure leading into 5G and beyond

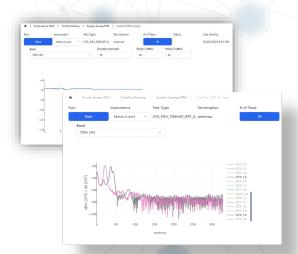
The ECSite 2 Port PIM Test Solution

ECSite has partnered with Kaelus to bring together an automated PIM Test solution to address PIM in MIMO DAS Systems. ECSite's innovative PIM testing & troubleshooting approach utilizes 2-Port PIM test equipment to provide a "PIM Map" to every PIM source in an antenna system in minutes instead of hours, days, or weeks with automated reporting.

2-Port PIM Test Equipment

2-Port PIM Test Equipment is much more flexible and capable than traditional 1-Port PIM test gear. The unique 2-Port Mode sends each test tone out a different RF Port, thereby only exciting sources of EXTERNAL PIM. Coupled with traditional 1 Port PIM measurement capabilities & enhanced Distance to PIM capabilities, the Kaelus iXA 2 Port PIM test set, along with ECSite's Cloud platform allows for rapid identification of PIM sources in complex systems





Why is 2-Port PIM Data Important?

2-Port PIM data solves the puzzle of determining the sources of all PIM signals. 2-Port test only excites external PIM sources, while 1 Port PIM data excites both Internal & External PIM sources. ECSite's innovative algorithms use PIM, 2-Port and 1-Port DTP measurements to separate INTERNAL from EXTERNAL PIM signals, which is the key to reveal the source of all PIM signals.

The ECSite 2 Port PIM Test Process

At the touch of a button, ECSite software directs a series of 1-Port & 2 Port tests. Data is processed & combined with distance to component data to produce a "PIM Map" showing all sources of PIM in the antenna system including suspect components.

	PIM		Level	
PIM ID	Туре	Dist (ft)	(dBc)	Comp
1	Internal	195	-135	Splitter1
2	External	215	-138	Ant3
3	External	283	-128	Ant2
4	Internal	322	-137	Cable7
5	External	353	-141	Ant9
	1 2 3 4	PIM ID Type 1 Internal 2 External 3 External 4 Internal	PIM ID Type Dist (ft) 1 Internal 195 2 External 215 3 External 283 4 Internal 322	PIM ID Type Dist (ft) (dBc) 1 Internal 195 -135 2 External 215 -138 3 External 283 -128 4 Internal 322 -137



