PIMForensics™ Datasheet

Mechanical Specifications

PIMForensics component	Metric
PIMForensics sensor	4 SFP unit, supports rate 1 to rate 8 CPRI, power consumption 30W AC powered (100-240V AC,50/60Hz) Operational temperature range 0c to +45c
	Unit dimensions 185mm*133mm*55mm (2.1"*7.3"*5.2"), unit weight 1kg, 2.2lbs
PIMForensics Tap	50/50 tap split, 3 fibre taps
	Unit dimensions 185mm*133mm*55mm (2.1"*7.3"*5.2"), unit weight 0.75kg, 1.6lbs
PIMForensics Control (software to analyse PIM runs on personal computer)	Specification of PC required (PC is not supplied) Minimum specification Intel core i3-6100 or AMD FX4350 processor, 8GB of RAM to USB 3.0 ports, an HDMI 1.3 port and Windows 7 or higher

Supported Configurations

Configuration	Connectivity	IM Order	MIMO Modes
Multiband Dual Carrier	1xDL, 1xUL carrier per antenna on RRH1, 1xDL carrier per antenna on RRH2	IM3-5	1x2 2x2 2x4 4x4
Single Carrier "self PIM" Measurement	1xDL, 1xUL carrier per antenna single RRH	IM3-5	1x2 2x2 2x4 4x4
Single Carrier Harmonic PIM Measurement	1xDL carrier per antenna, low band RRH1, 1xUL carrier per antenna, high band RRH2	Harmonic 2, Harmonic 3	1x2 2x2 2x4 4x4
Multiband Triple Carrier (future software upgrade)	1xDL, 1xUL carrier per antenna on RRH1, 1xDL carrier per antenna on RRH2 1xDL carrier per antenna on RRH3	IM3-5	1x2 2x2 2x4 4x4

Measurement Performance

Measurement	Capability
PIM Power level	PIM Power measurement sequentially on each UL antenna line. PIM measurement in dB relative to thermal noise floor.
PIM Power level accuracy	± 1dB (RMS level of digital PIM power on CPRI) Absolute (dBm) PIM accuracy will depend also on UL gain accuracy of RRH.
PIM Power Level range	PIM Levels from -10dB below to +50 dB above RRH thermal noise: so -112dBm to -52dBm for LTE10 RRH with 2.5dB NF.
Measurement time - Acquisition	One minute acquisition (typical)
Measurement time-Subsequent measurements	4 seconds per UL (typical)
Off-Site Distance to PIM	Measure distance to two dominant PIM sources relative to antenna+mounting PIM signature Fine resolution, no calibration required.
Off-Site Distance to PIM - Accuracy	±2m (typical) PIM 10dB or more above UL noise; quiet channel
Off-Site Distance to PIM - Range	0-1000m (free space, typical)
Off-Site Distance to PIM - Measurement time	One minute typical per UL
Off-Site Distance to-PIM - Calibration	Additional mode where strong PIM source is introduced in front of antenna to force a calibration point. Measurement accuracy ±1m.
Cross-sector PIM	Yes/No indication of PIM contribution from adjacent sector.
PIM Check (future software update)	Indicate significant PIM contribution from any downlink (>-10db PIM contribution with respect to primary sector DL)
PIM Heat Map	Visual tool to show dominant PIM source at cell site.