XCAT-AIS C

COMPACT MULTI-CELL / MULTI-UE
AIR INTERFACE SIMULATOR

ACCUVEr

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XCAT-AIS C is a compact channel emulator designed to replicate real-world signals in a lab, allowing for repeatable playback and analysis. It emulates the mobility of multiple UEs and BS with just a few clicks, making it the simplest solution for conducting handover tests. With its portability and ease of installation, XCAT-AIS C provides a cost-effective lab testing environment that supports a wide range of testing scenarios.

SYSTEM ARCHITECTURE

gNB
gNB
gNB

KEY FEATURES

RF attenuator
Support Path loss of radio wave propagation

Port configuration
4x4, 2x2, 1x1 antenna testing

Ethernet connection
Control with IP configuration

Easy port reversing
One-click BS<->UE Switching menu

Test scenairos
Support various test scenarios

API interface
SCPI, API for diverse control functions

Easy scenario setting
Scenario manipulation with intuitive interface

Modular design
Enhanced scalability

Why XCAT-AIS C?

The XCAT-AIS C allows you to emulate mobile radio coverage within your test lab environment. It supports various mobile communication standards, including 2G, 3G, 4G, 5G, and any air interfaces. To prevent interference, signals must be directly connected via cables from different signal sources, such as base stations or signal generators, through the XCAT-AIS C to mobile devices.

The XCAT-AIS C is designed to meet the diverse needs of mobile radio coverage emulation in test lab environments. It supports 4x4, 2x2, and 1x1 port configurations, enabling both single and multiple antenna testing to accommodate a wide range of testing requirements. The system features an attenuation range of up to 90dB, facilitating various tests by allowing precise control over signal strength and integration with other testing tools and systems. Its compact configuration ensures easy installation and mobility, making it a convenient choice for multiple different lab setups. The XCAT-AIS C also offers easy scenario manipulation through an intuitive interface-based Test Manager, enhancing efficiency and user experience. For those requiring advanced control functions, the system provides API and SCPI interfaces, enabling seamless integration with other systems.
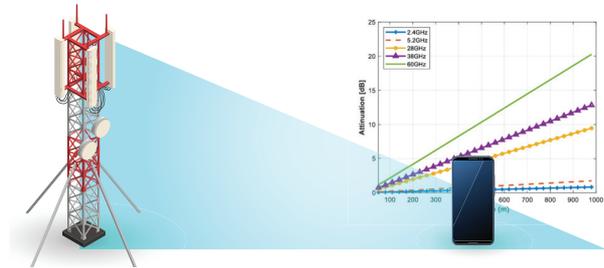
What XCAT-AIS C do?

HANDOVER TEST

SIGNAL ATTENUATION TEST

A 'handover test' in telecommunications assesses how mobile devices transition between network cells, ensuring uninterrupted calls and data sessions. XCAT-AIS C supports Multi-Cell / Multi-UE testing with up to 4x4 path ports, facilitating efficient switching between cells or devices. Moreover, XCAT-AIS C effectively manages complex RF signals found in modern networks, including MIMO and Carrier Aggregation technologies. It offers advanced automation features for reliably simulating complex handover scenarios repeatedly.

Assesses how effectively a communication signal can maintain its strength and quality over a specified distance or under varying conditions, providing crucial insights into the performance and reliability of communication systems.
XCAT-AIS C enhances signal attenuation testing with precise RF attenuation control. It supports various configurations like 4x4, 2x2, and 1x1, and operates in normal and reverse modes, switching between UE and Cell with simple clicks. By accurately simulating real-world signals in lab environments, XCAT-AIS C automates adjustments, integrates seamlessly into test setups, speeds up testing, improves accuracy, and ensures robust performance across Wi-Fi, LTE, 5G, and other technologies.

Scenario setting using TM

Depending on the test intent, scenarios can be created using "Path Setting" or "Time Based Control". In Path Setting, the positions of BS and UE can be intuitively set using Cartesian coordinates. For UE movement scenarios, it supports functions such as UE movement speed, movement delay, and movement repetition. In Time Based Control, attenuation can be adjusted in 1-second intervals, allowing for precise control. Additionally, it provides API and SCPI support for various control functions.

Path setting scenario

Various control functions using API and SCPI

Time based control

Specification

Model 0408	Model 0808	Model 0412
- Normal mode / Reverse mode	- Normal mode / Reverse mode	- Normal mode / Reverse mode
- Path Port: 4x4, 2x2, 1x1	- Path Port: 4x4, 2x2, 1x1	- Path Port: 4x4, 2x2, 1x1
- 0408 : eNB/gNB 4 Path to UE 8 Path	- 0408 : eNB/gNB 4 Path to UE 8 Path	- 0408 : eNB/gNB 4 Path to UE 8 Path
- 0804 : eNB/gNB 8 Path to UE 4 Path	- 0804 : eNB/gNB 8 Path to UE 4 Path	- 0804 : eNB/gNB 8 Path to UE 4 Path

Titles			Spec	
Frequency			600 ~ 6,000 MHz	
RF Signal Input Range			< +20dBm	
Attenuation Range			< 90dB	
Minimum Step Size			0.5dB	
Minimum Setting Time			< 0.5s	
Power Consumption			9V / 200mA Below	
Size			216 x 82 x 310.3 (W x H x D, mm)	
Weight	0808		4.5 kg	
	0408		5.0 kg	
	0412		6.5 kg	
Insertion Loss	0808	1GHz	-6 dB	
		2GHz	-7 dB	
		3GHz	-8 dB	
		4GHz	-9 dB	
		5GHz	-10 dB	
		6GHz	-11 dB	
	0408	1GHz	-9 dB	
		2GHz	-10 dB	
		3GHz	-11 dB	
		4GHz	-13 dB	
		5GHz	-14 dB	
		6GHz	-15 dB	
	0412	1GHz	-12 dB	
		2GHz	-13 dB	
		3GHz	-15 dB	
		4GHz	-16 dB	
		5GHz	-18 dB	
		6GHz	-19 dB	

XCAL-ART **LAB AUTOMATION SOLUTION**

XCAT-AIS C can be used as a component of XCAL-ART, Lab Automation solution of Accuver.
With Full package of Lab automation solution, XCAL-ART can produce repeatable results with automated and remote control from a distributed laboratory setup
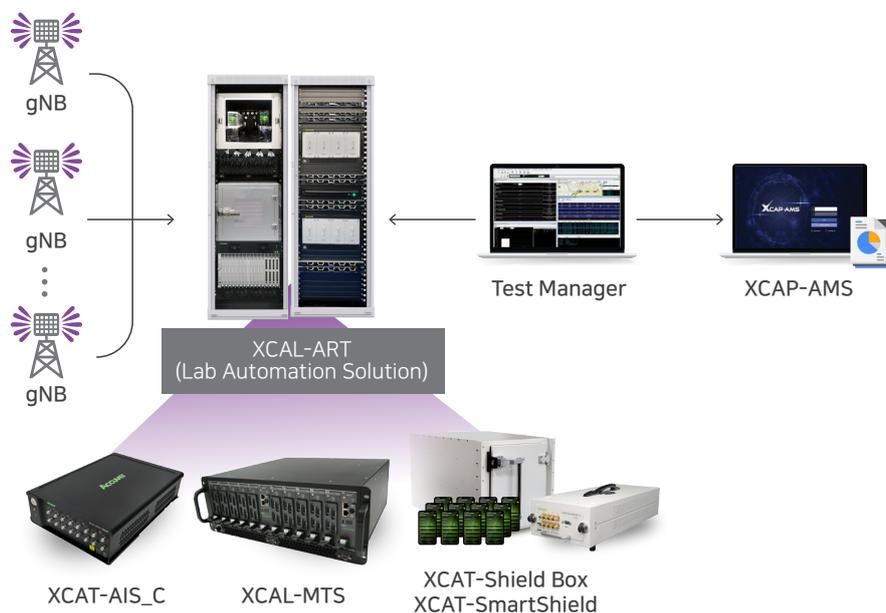
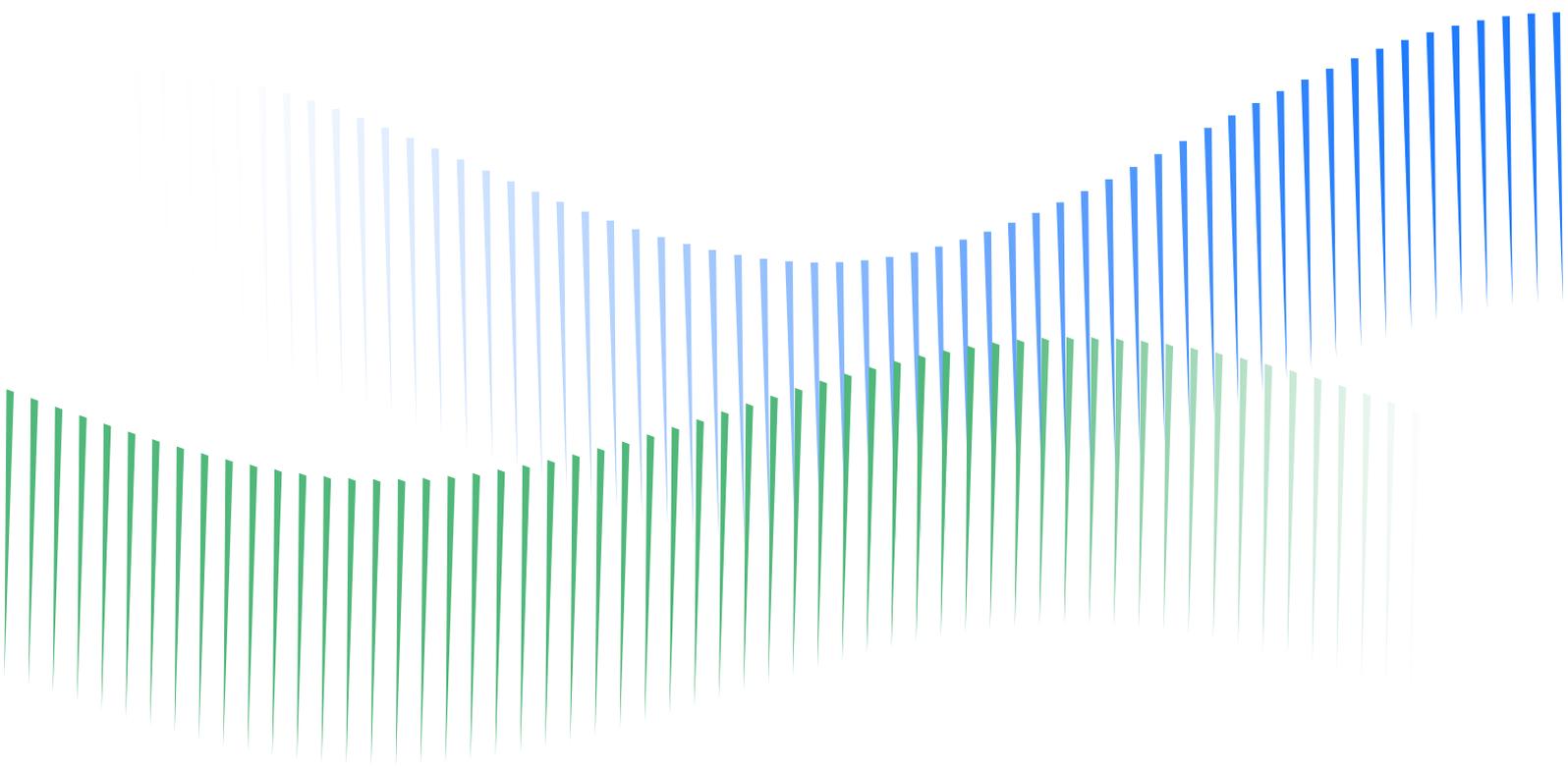| XCAT-AIS C / XCAT-MAIS	Replication of mMIMO and mobility scenarios
XCAL / XCAL-PU12 / XCAL- MO III / XCAL-MTS	Massive UE control and measurement
XCAT-SHIELD BOX / SMART SHIELD	Complete RF isolation and custom spacing
TEST MANAGER	Automated test activation
XCAP-AMS	Integration of analyzed test results, report generation

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