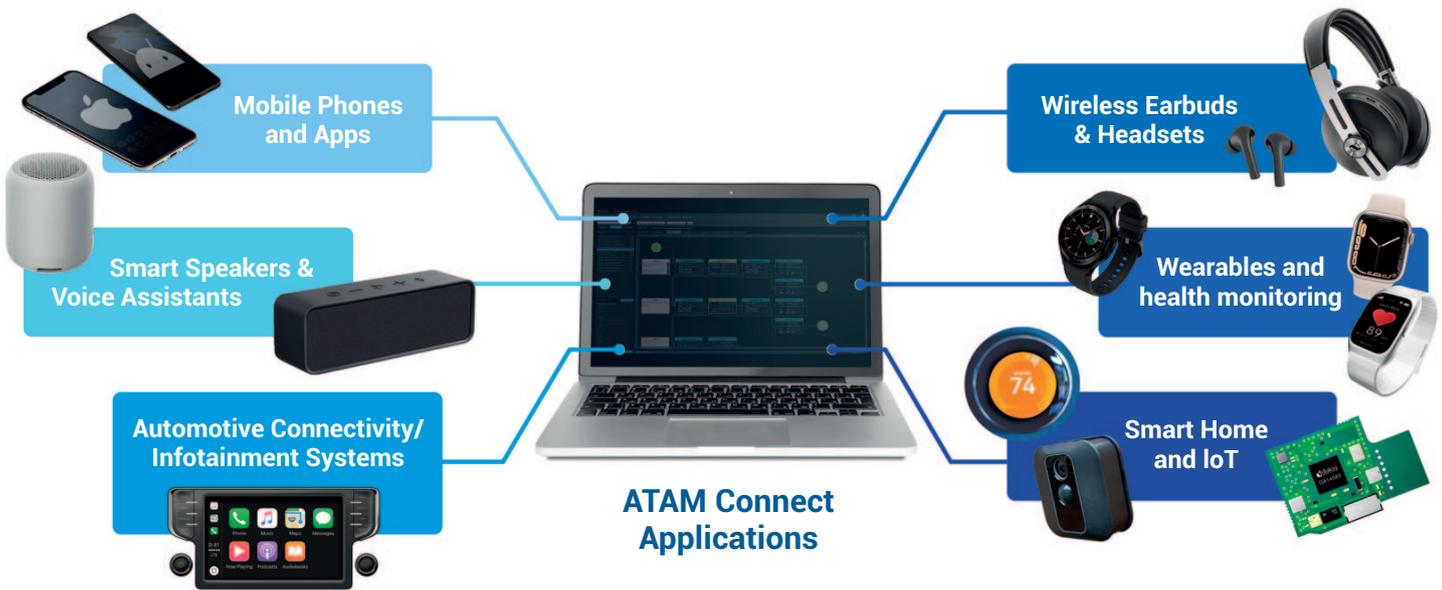




ATAM Connect: Create better connected products with automated testing





ATAM Connect: Test Automation for Connected Products

ATAM Connect tests months of consumer usage and interactions in hours, shortening development cycles and increasing product quality through deeper testing. ATAM Connect allows developers to create test cases that accurately simulate the end user experience, testing multiple product features and functions together.

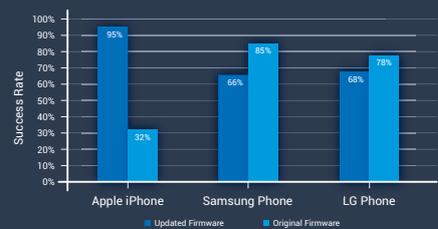
Full end-to-end testing of all product features and functions

Traditional manual test processes identify different elements of functionality and QA engineers test each of these elements separately. This approach ensures each function is thoroughly tested but still requires the complete product to be tested from a user perspective. This complete end user testing ensures any real-world behaviours and more complex interaction issues are captured. ATAM Connect uses test automation to provide a complete view of all product functions in order to test the user experience from end-to-end.

Quicker Time to Market with shorter QA cycles

ATAM Connect test automation shortens QA cycles by rapidly executing tests and potentially enabling 24/7 testing, with no downtime. This approach tests and gathers results fast and generates time-stamped monitoring and trace logs for rapid analysis and fix.

Discovery on First Scan Success Rate



ATAM being used to validate a new firmware release. Performance comparison of new firmware build compared to original firmware. Chart illustrates pass rate for successful Bluetooth discovery on first scan from three different mobile phones.

Bluetooth Reconnection Time

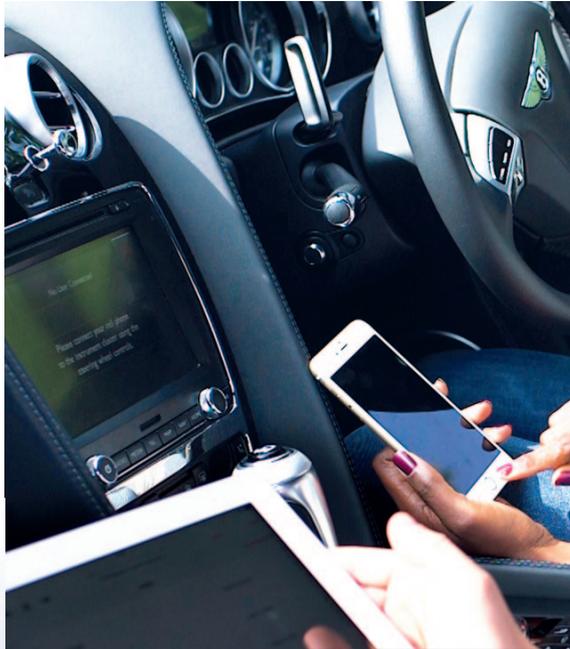


Analysis of Bluetooth Reconnection performance used by an automotive OEM to optimise new firmware build. Bluetooth reconnection time over 1000 cycles showing connection time variances.

Connection time over 100 cycles

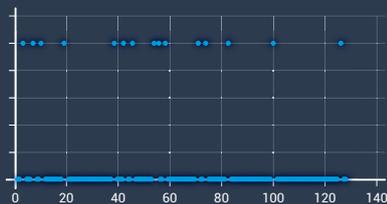


A connection time test cycle used to ensure product performance for a wearable device.



ATAM tests complex, yet everyday, use cases - such as automotive infotainment.

Repeat Bluetooth Pairing Failures



Improving product performance by using automated repeated pairing test metrics. The results show intermittent failures over time, Bluetooth air traces captured concurrently helped to locate the root cause of intermittent pairing failure.

ATAM Audio Analysis



ATAM Audio Analysis showing real time FFT audio spectrum, Total Harmonic Distortion and Signal to Noise calculation. Data can be utilised during automated testing to ensure audio quality and check for signal issues such as noise, distortion and dropouts.

Find and fix connection bugs before your customers

ATAM Connect automation enables advanced product testing techniques that uncover issues that traditional manual testing methods miss. By using continuous high repetition testing ATAM Connect will identify hard to find bugs and capture the conditions for bug to be reproduced and eliminated.

Emulate complex use case and events

ATAM Connect uses Nextgen patented technologies to control product user interfaces. It accurately emulates the everyday user interactions with the product and profiles the product performance. ATAM Connect automation uses the product's normal controls and interfaces, so all functionality of the product can be accessed and tested. Simulated user interactions over a time are mapped to show how user interactions with the product affect performance over time and give best user experience.

Instant 'action replay' of bugs and failures

The ability to reproduce bugs quickly is key to fixing any issues. ATAM Connect generates detailed log files, capturing and compiling all events seen during testing, including debug logs, air traces, audio and video records and more. Continuous smart video recording generates a record of failure events and is captured and stored alongside other data providing valuable visual cues for further investigation. The data captured creates an 'action replay' of the test cases and any failures, allowing developers to easily locate bugs and fix them quickly.

Fast test creation, with no programming required

ATAM Connect features FlexFlow, Nextgen's intuitive graphical interface for automated testing. FlexFlow is designed to make test creation with ATAM fast and easy to learn. FlexFlow makes automated test creation simple and doesn't require scripting or programming knowledge.

The logical ATAM FlexFlow visual interface is ideal for fast and intuitive test setup. And because ATAM Connect doesn't require the development team to create test cases, resources can be focussed on development work.



ATAM Connect Overview



Portable and easy to setup in lab or in field



Wide variety of interfaces provide many control and monitoring options



Robotic arm option extends ability to easily add support for additional devices



Vision system with text and object recognition

Recommended PC Specifications for ATAM Connect

Processor	Intel Core i7-8700 CPU or better
Random Access Memory	8Gb RAM (16Gb recommended)
Hard Drive Space	500Gb SSD (1Tb SSD recommended)
Access Ports	4 x USB Ports (USB 2.0 or better)
Network	Ethernet (Gigabit recommended)
Screen	HD Display (1080 x1920 or better)
Operating System	Windows 10 Pro 64bit OS.

ATAM Connect Features

Audio	Audio Interfaces	Up to 12 Analog Audio channels / 6 Stereo (Audio hardware dependant) Bluetooth Audio, Bluetooth LE Audio
	Signal measurement and analysis:	Audio Gap Analysis <10ms, Spectrum Analysis 20Hz-20KHz, Stereo Phase, SNR, THDN, THDF, RMS Noise, Peak Power, Peak Hold
Connectivity	Bluetooth:	Bluetooth BR / EDR / LE API Support for Frontline and Ellisys Protocol Analysers
	Wi-Fi:	Wi-Fi 2.4GHz and 5GHz, Support 3rd party Wi-Fi Analysers with API Support
Mobile Support	Apple iPhone / iPad:	iOS / iPadOS with full external control of phone menus and app features using ATAM iOS Client
	Android phone / tablet	Android 6+ with full control of phone menus and app features using ATAM Android Client
Desktop Support	Microsoft Windows	Windows 7/8/10/11 with full remote control
	Apple Mac	MacOS 10+ full remote control
	ChromeOS	ChromeOS full remote control
Hardware Interfaces	Acoustic Head Simulator	Anthropometric ear simulator with dual high sensitivity low noise microphones. Mouth simulator vocal transducer.
	Earbuds control	Activate earbuds and headphone controls and on-board sensors
	External RF	Support control over External RF Interferers, Bluetooth, Wi-Fi
	Turntable	Supports turntable control for acoustic head motion simulation
External integrations	API Support for DevOps CI / CD	Jenkins, Atlassian, Azure, Jira, TestRail, ATAM Cloud, ATAM Remote access



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