

Manufacturing Test

Axtrinet™ APG Ethernet Packet Generators offer affordable 40Gbps & 10Gbps full wire-speed Ethernet load generation, capture and analysis capabilities for R&D, manufacturing, sales and support teams developing and selling products with high speed Ethernet interfaces.

An intuitive Graphical Control Interface or TCL-scripted interface can be used to configure and control the packet generation, capture and analysis capabilities of the unit via a Linux or Windows PC, managing it locally over USB or remotely over Ethernet LAN.



This application note describes how the Axtrinet™ APG Ethernet Packet Generators can be used as part of the Factory Test Solution to provide wire rate pass/fail traffic testing in the Manufacturing facility.

Benefits

Axtrinet™ APG Ethernet Packet Generators have been developed by a team with decades of experience in the networking industry to deliver the functions and capability required by Manufacturing Test engineers developing automated test solutions for products with 10Gbps or 40Gbps Ethernet interfaces:

- Create real life traffic patterns for traffic generation and capture to simulate actual use
- Wire rate testing at 40Gbps and 10Gbps
- Open TCL based API for scripting, test automation and integration into product test solution
- Packet and rate counters (packets, bytes, bits and errors)
- Management over Ethernet interface
- Compact size – 1U, 1/3 rack width for easy integration into production environments
- Lowest cost per gigabit pricing for multi-port 10Gbps manufacturing test solution



Manufacturing Functional Test

The traditionally high cost of 10Gbps and 40Gbps Ethernet test solutions meant that availability was restricted at manufacturing facilities.

Alternative solutions were often found for functional test, often running at lower speeds, requiring daisy-chained port configurations or multiple cable insertions and tests.

Axtrinet™ APG Ethernet Packet Generators are designed to solve these problems, offering the 'lowest cost per gigabit' wire rate 10Gbps and 40Gbps test solutions in a compact enclosure.

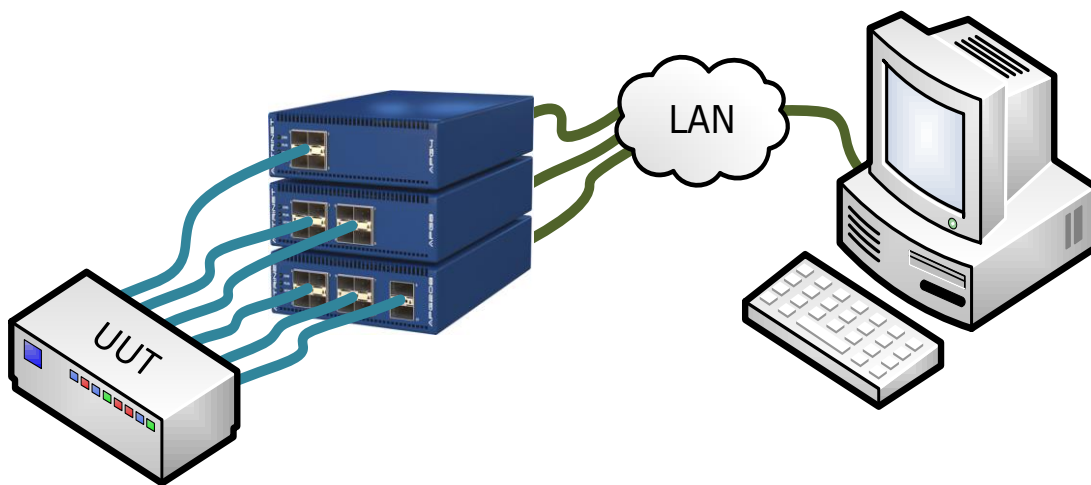
An APG unit can be mounted horizontally or vertically to minimise footprint in a busy environment.

Up to 16x 10Gbps ports are available from the APG208, with the each 40Gbps port operating in 4x10Gbps mode*.

The APG TCL API can connect to single or multiple units over the Ethernet management interface.

The unit retains its configuration over a power cycle for resilience and ease of use.

* Available Q1'17



TCL API Commands

The Axtrinet APG API provides a TCL scripting interface for automated test generation to provide access to:

- unit, port and stream configuration and status
- packet counters (packets, bytes, errors)
- receive filters and packet capture tools
- port control (start, step, stop)

The 'master' unit, port and stream configurations are stored on the Axtrinet™ APG unit.

The TCL API uses a 'local' database to store the current and modified configurations, before being applied into the unit.

The TCL API provides the tools to **apgLoad** the APG unit configuration and status into the local database, read (**apgGet**) and modify (**apgSet**) the local database, and write (**apgApply**) to the APG unit.

The traffic generator is controlled with the **apgControl** command.



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