



# Spirent TestCenter™ LINK AGGREGATION CONTROL PROTOCOL (IEEE 802.3AD) BASE PACKAGE

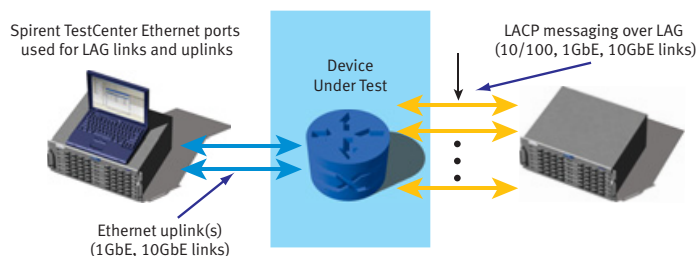
Convergence is creating a new generation of integrated network devices and services that are much more complex than ever before. The resulting increased complexity, scarcity of testing skills and architectural shortcomings in current test systems are hurting the ability of manufacturers to ship products on time at escalating quality levels and slowing service providers' ability to deploy networks that get Quality of Experience (QoE) right the first time.

## INCREASE PRODUCTIVITY: GET THERE FASTER WITH SPIRENT TESTCENTER

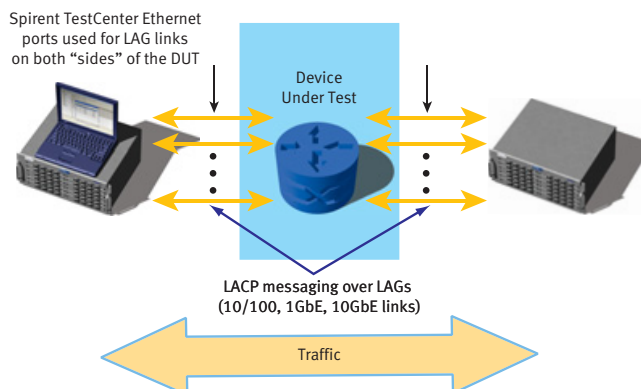
- **Quickly assess performance:** Measure in real-time the packet rate, loss, re-sequence, delay, delay variation and packet errors for thousands of flows simultaneously
- **Easy test setup:** Parameter tables allow quick definition of multiple Link Aggregation Groups (LAGs), port assignments to LAGs and manipulation of LACP parameters for LAGs. Traffic wizard enables quick variation of flow parameters like MAC addresses, VLAN tags, IP addresses and assignment of flows to ports and LAGs.
- **Build real world test scenarios:** To simulate failures, use Spirent TestCenter's sequencer to stop and start link traffic and LACP messages

Spirent can help you address this challenge with Spirent TestCenter 2.0 with its innovative Inspire Architecture™. Now you can create and execute more complex test cases in less time with the same resources – and scale tests higher while debugging problems faster. The results: lower CAPEX and OPEX, faster time to market, greater market share and higher profitability.

The Spirent TestCenter Link Aggregation Control Protocol (LACP) Base Package provides LACP protocol emulation for functional and interoperability testing of router and switch implementations. When combined with Spirent TestCenter's sophisticated data packet generation and analysis, this base package allows complete testing of Ethernet link aggregation capable devices.



**Non-LAG to LAG Test**



**LAG to LAG Test**

## APPLICATIONS

- Verify functional capability of LACP implementations using 10/100 Mbps, 1GbE or 10GbE links
- Supported test scenarios include LAG to LAG and non-LAG to LAG configurations
- Validate LAG performance characteristics such as reliability, packet forwarding capability and load balancing efficiency under various test conditions

## KEY FEATURES

- Real time LACP state information and protocol counters for interactive testing and troubleshooting
- Leverage the Inspire Architecture's Packet Generator/Analyzer Base Package to measure, in real time, parameters such as packet rate, loss, re-sequencing, delay, delay variation, FCS errors and PRBS errors
- Generate and analyze thousands of streams with variations in MAC addresses, VLAN IDs (including stacked VLANs), IP addresses, TCP or UDP port values, and MPLS labels
- Bi-directional real time protocol decoding for instant viewing of LACP messages and message contents
- Use the Inspire Architecture Command Sequencer to build complex and repeatable test steps within the GUI

## TECHNICAL SPECIFICATIONS

### Supported Ports

- Supported on 10/100/1000 Mbps copper, 10/100/1000 Mbps fiber, and 10GbE

### LACP Configurable Parameters

- LAG parameters
  - System priority
  - System ID
  - Group name

- Actor port parameters
  - Port number
  - Port MAC address
  - Port priority
  - Key
  - Timeout mode – short or long
  - Active mode – active or passive
  - LAG association

### LACP State Information

- Actor state and Partner state
- Actor and Partner Key
- Actor and Partner System ID
- Actor and Partner Port ID
- Partner System Priority
- Partner Port Priority
- Partner Collector Max Delay
- LACP state

### LACP Counters

- LACPDU's sent and received
- Marker PDU's sent and received
- Marker response PDU's sent and received

## REQUIREMENTS

- Pentium® or greater PC running Windows® XP Professional SP2 with mouse/color monitor required for GUI operation. See Minimum PC Requirements section.
- One Ethernet cable and one 10/100/1000 Mbps Ethernet card installed in the PC
- A SPT-2000A Spirent 2U Chassis and Controller, SPT-5000A Spirent 5U Chassis and Controller or SPT-9000A Spirent 9U Chassis and Controller
- Operating system languages supported: English, French, German, Italian, Japanese, Korean, and Chinese (traditional and simplified)

## MINIMUM PC REQUIREMENTS

- Small Port System: 1-25 ports
  - 2.4GHz Pentium 4 or equivalent with 512MB of free RAM and 10GB of free disk
- Medium Port System: 26-75 ports
  - 3GHz Pentium 4 or equivalent with 2GB of RAM and 15GB of free disk space
- Large Port (75+ ports)
  - E6400 Intel® Core™ 2 Duo or equivalent with 3GB of RAM and 100GB of free disk space

## SUPPORTED MODULES

Series 2000 modules provide higher performance than Series 1000 modules; contact your Spirent representative for details.

BPK-1015A supports all Spirent TestCenter test modules and personality cards.

## ORDERING INFORMATION

PRODUCT	PART NUMBER
IEEE 802.3ad Link Aggregation Base Package A	BPK-1015A
Packet Generator and Analyzer Base Package A	BPK-1001A
Enhanced Capture/Decode Base Package A	BPK-1029A

## SPIRENT GLOBAL SERVICES

Spirent Global Services optimizes your productivity with Spirent TestCenter over a broad range of technologies:

### Professional Services

- Test lab optimization: Test automation engineering services
- Service deployment and service-level optimization: Vendor acceptance testing, SLA benchmarking, infrastructure and security validation
- Device scalability optimization: POC high-scalability validation testing

### Education Services

- Web-based training: 24 x 7 hardware and software training
- Instructor-led training: Hands-on methodology and product training
- Certifications: SCPA and SCPE certifications

### Implementation Services

- Optimized new customer productivity with up to three days of on-site assistance

Visit [www.spirent.com/gs](http://www.spirent.com/gs) or contact your Spirent sales representative.

Spirent TestCenter

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