



# Spirent TestCenter™

## ETHERNET LINK OAM (802.3AH) EMULATION BASE PACKAGE A

The Ethernet Link OAM Base Package allows one or more Spirent TestCenter test ports to exchange 802.3ah Link OAM protocol messages with an attached device under test (DUT) to perform functional and interoperability testing. When combined with Spirent TestCenter’s other Carrier Ethernet base packages and sophisticated data packet generation and analysis, the Spirent TestCenter system enables complete testing of Carrier Ethernet devices.

### APPLICATIONS

- Protocol compliance, functional and interoperability testing
- Software regression testing
- Technical marketing proof of concept testing/ demonstrations
- Combine with other Spirent TestCenter base packages for complete Carrier Ethernet system testing

The Ethernet Link OAM Base Package allows each Spirent TestCenter interface in an enabled chassis to operate as a Link OAM capable node, with user control over configured parameters, starting and stopping discovery and initiating faults. Counters and fault information received from the DUT are recorded in real time for immediate or post test examination.

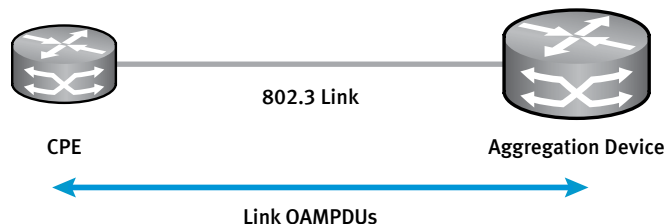
For NEMs, testing will typically be at the development, product verification or technical marketing phases.

For Service Providers, usage will be at the pre-deployment verification phase.

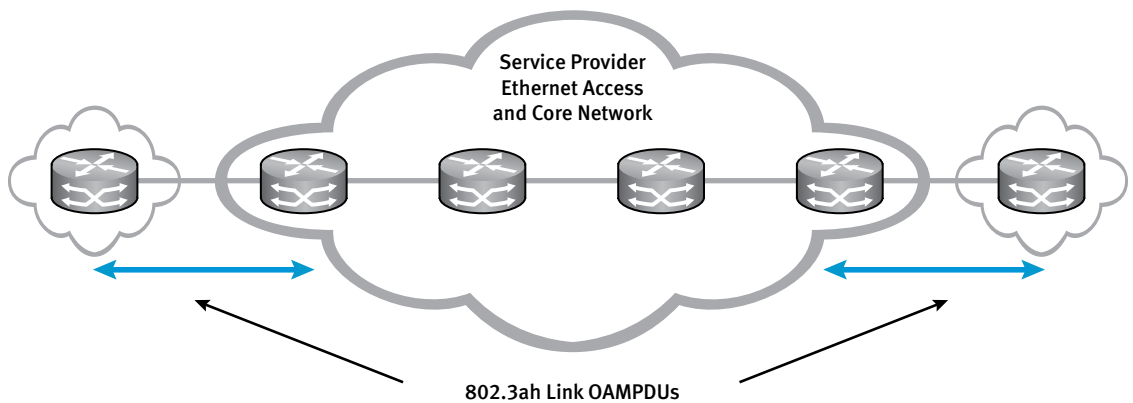
### FEATURES & BENEFITS

- Granular user control of Link OAM attributes, settings and messages quickly verify DUT capability and interoperability
- Grid editing of major parameters for all ports allows bulk set up and control of dozens of interfaces simultaneously for easily managing large test beds
- NoCode™ Automation capability in Command Sequencer allows non- and novice-scripters to build automated and repeatable Link OAM test cases

### Emulate Link OAM to test CPE or Access Aggregation Devices



### Link OAM in the Network



## TECHNICAL SPECIFICATIONS

### Key Features

- Stateful Discovery support with user configured Local Information TLV
- User configurable Organization Specific Information TLVs, Variable Response Containers and Link Event TLVs
- Send Critical Link Events and Link Events
- Send Remote Loopback Control messages
- State indicators, message counters, event counters and event notification log for each port
- Create abnormal conditions for negative testing, including pausing Link OAM discovery state machine at specific states

### Configuration Parameters

- Active or Passive mode
- Unidirectional support
- Loopback support
- Link Events support
- Variable Retrieval support
- Vendor Specific Information
- Max PDU size
- OUI
- OAM version
- Organization Specific Information TLVs content
- Variable Responses content
- Event Notification content

### Configurable Timers

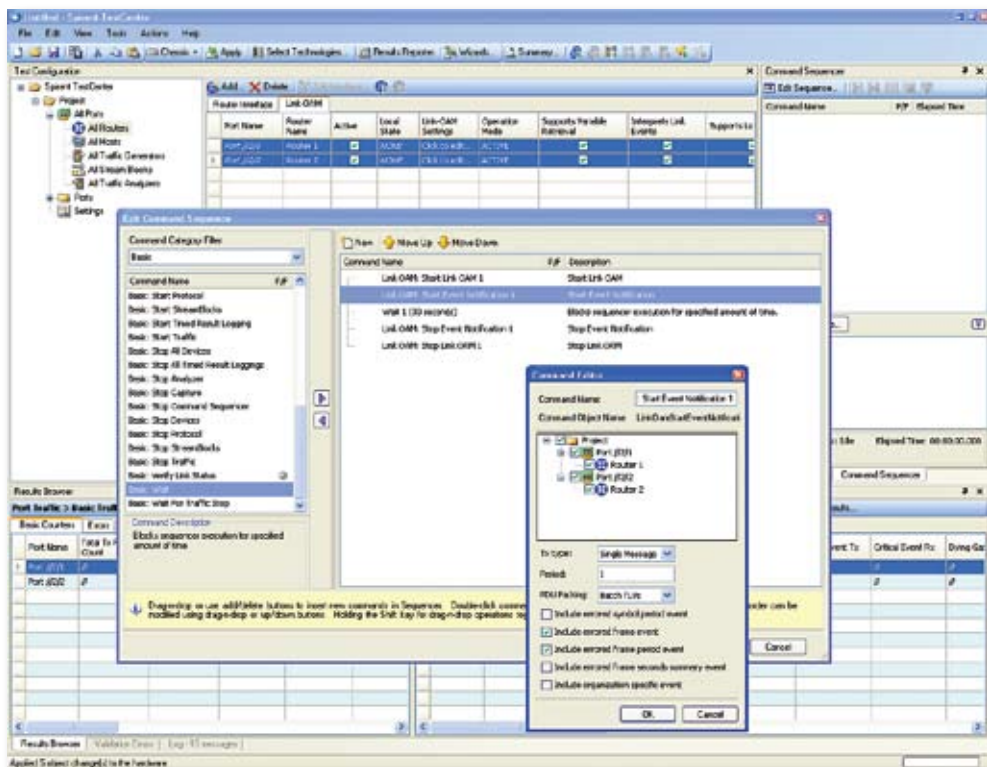
- OAMPDU
- Lost link
- Loopback response
- Variable response OAMPDU contents

### Transmit Controls

- Critical Event
- Dying Gasp
- Link Fault
- Organization Specific OAMPDU with user defined TLVs
- Loopback Control OAMPDU
- Variable Request OAMPDU
- Event Notification OAMPDU with user defined Link Event TLVs

### Negative Testing Controls

- User specified version number
- Override Local Satisfied and Remote Stable state indicators
- Disable OAMPDU transmission, Loopback response and Variable Response
- Pause Discovery state machine at user-specified state
- Applicable Standards – IEEE 802.3ah, Ethernet in the First Mile Section 57



**Link OAM Command Sequencer Configuration**

**SUPPORTED MODULES & PLATFORMS**

- Supported on Series 1000 and 2000 Ethernet test modules
- Supported on all Spirent TestCenter chassis

**SYSTEM REQUIREMENTS**

**Minimum PC, UNIX, or Linux Requirements by System Size**

- For Small Port System (2-25 ports)
  - Minimum Requirement – 2.4 GHz Intel Pentium 4 processor (or equivalent), 512 MB RAM and 10 GB of free disk space
  - Recommended System – Intel Core™ 2 Duo E6300 processor (or equivalent), 2 GB of free RAM, and 10 GB of free disk space
- For Medium Port System (26-75 ports)
  - Minimum Requirement – 3 GHz Intel Pentium 4 processor (or equivalent), 2 GB of free RAM, 15 GB of free disk space
  - Recommended System – Intel Core 2 Duo E6400 processor (or equivalent), 4 GB free RAM, 100 GB of free disk space

- For Large System (76 ports and above)
  - Minimum Requirement – Intel Core 2 Duo E6400 processor (or equivalent), 3 GB free RAM, 100 GB free space on hard drive
  - Recommended System – Intel Core 2 Duo E6600 processor (or equivalent), 4 GB of RAM, 100 GB of free disk space

**Spirent TestCenter Hardware 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 10/100/1000Mbps 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)
- Operating systems supported: Windows XP SP2, Windows 2003 Server (32 bit), RedHat EL3 and EL5, Solaris 8.0 and 10.0

## Spirent TestCenter

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- SPT-2000A Spirent 2U Chassis and Controller, SPT-5000A Spirent 5U Chassis and Controller or SPT-9000A Spirent 9U Chassis and Controller
- At least one installed Spirent TestCenter Ethernet module
- BPK-1001A, Packet Generator and Analyzer Base Package

#### ORDERING INFORMATION

Ethernet Link OAM (802.3AH) Emulation Base Package A: BPK-1067A

#### SPIRENT GLOBAL SERVICES

Spirent Global Services provides a variety of professional services, support services and education services – all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services website at [www.spirentcom.com/gs](http://www.spirentcom.com/gs) or contact your Spirent sales representative.



Spirent Communications  
1325 Borregas Avenue  
Sunnyvale, CA 94089 USA

**SALES AND INFORMATION**  
[sales@spirent.com](mailto:sales@spirent.com)  
[www.spirent.com](http://www.spirent.com)

**Americas**  
T: +1 800.SPIRENT  
+818 676.2683

**Europe, Middle East, Africa**  
T: +33 1 6137.2250

**Asia Pacific**  
T: +852 2511.3822