



# Veryx ATTEST™ PRP

## Comprehensive Automated Test Solution - For Industrial Ethernet

### DATASHEET

**Veryx ATTEST™ Comprehensive Automated Test Solution (CATS) Parallel Redundancy Protocol (PRP)** is ideal for industrial Ethernet network equipment manufacturers who desire an easy and efficient solution for verification of **PRP (IEC 62439-3)** implementation in their industrial Ethernet equipment. The Parallel Redundancy Protocol (PRP) IEC62439-3 Clause 4, relies on the parallel operation of two local area networks and provides completely seamless switchover in case of failure of links or switches, thus fulfilling all the hard real-time requirements of substation automation. PRP offers vendor-interoperable communications that takes zero time to recover from a failure.

Veryx has defined test cases that comprehensively test for PRP conformance, functionality, multiprotocol co-existence, performance and robustness. These test cases are grouped into convenient test groups for each category of functions.

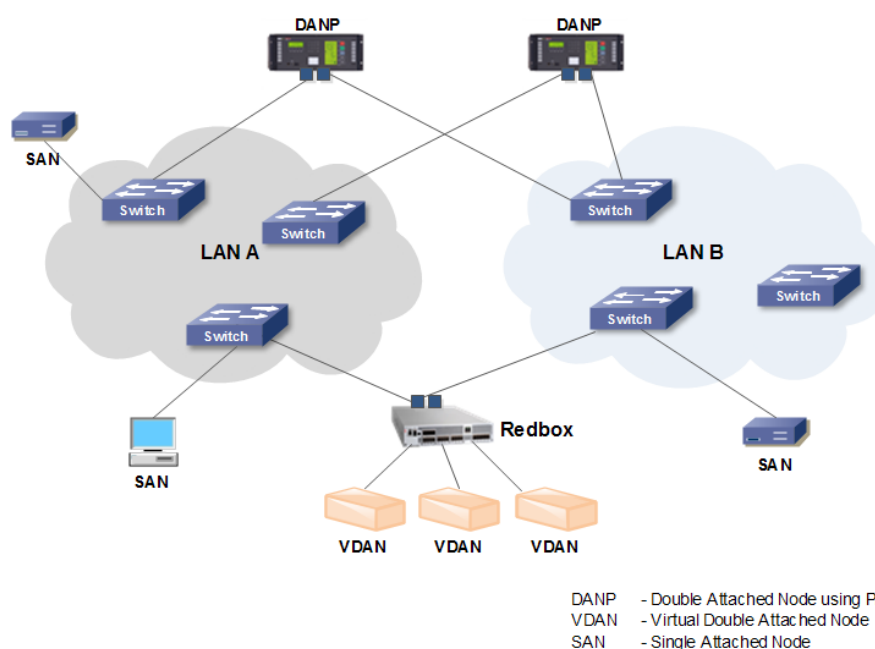


Figure 1: Redundant Network across two LANs

### HIGHLIGHTS

- Verifies PRP implementations – Redbox and DANC
- Validates control and invalid frames
- Verifies multi-protocol co-existence (VLAN, PTP, PNAC, LLDP, etc.)
- Performance measurement for different frame sizes

### BENEFITS

- Enables significant speeding up of testing cycles and reduces the “time-to-market
- Test suites written in industry standard TCL scripts. Well defined APIs provide the flexibility to customize the test cases for specific requirements
- Built in Automation and Reporting Capabilities

### SPECIFICATIONS

- ★ IEC 62439-3:2011/FDIS
- ★ IEEE 802.1AB-2005
- ★ IEEE 802.1D 2004
- ★ IEEE 802.1X 2004
- ★ IEEE 1588v2

### KEY TESTS

- ★ Redundancy
- ★ VDAN
- ★ Node Table
- ★ Sequence Numbers
- ★ Duplicate Discard
- ★ Duplicate Accept
- ★ Frame format
- ★ Multiprotocol



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PRP Test Cases	
<ul style="list-style-type: none"> <li>❖ Frame Format verification</li> <li>❖ Constants and counters verification</li> <li>❖ Timer verification for duplicate discard</li> <li>❖ Nodes Supported – Redbox and DANP</li> <li>❖ Duplicate accept and Duplicate discard method verification</li> <li>❖ PRP implementations with Multiprotocol deployment scenarios verification                             <ul style="list-style-type: none"> <li>• VLAN on Logical PRP port</li> <li>• PRP and 802.1X co-existence on Redbox</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>❖ Test is performed for various rates ranging 10Mbps to 100Mbps and performance is measured</li> <li>❖ Invalid PDU verification and robustness                             <ul style="list-style-type: none"> <li>• Reception of supervision frames with invalid entries</li> <li>• Reception of supervision frames for non existent VLAN</li> </ul> </li> <li>❖ Scalability                             <ul style="list-style-type: none"> <li>• Support for maximum number of Node table entries</li> </ul> </li> </ul>

Veryx ATTEST PRP is designed for conformance and functional testing of PRP functions in Industrial Ethernet network.

ATTEST Test Suites are written in industry standard Tcl scripts. Well defined APIs and source files provide the flexibility to add, customize, or modify the test cases for specific requirements.

Veryx ATTEST PRP test solution relies on ATTEST – a powerful test framework that requires minimal time for set-up and enables efficient use of time and resources

Veryx ATTEST Framework helps customers to easily integrate device under test for automation – using CLI / SNMP (v1 / v2 / v3). It also provides a standard interface to integrate with home-grown automation systems.

For more information, kindly visit our website or contact us.

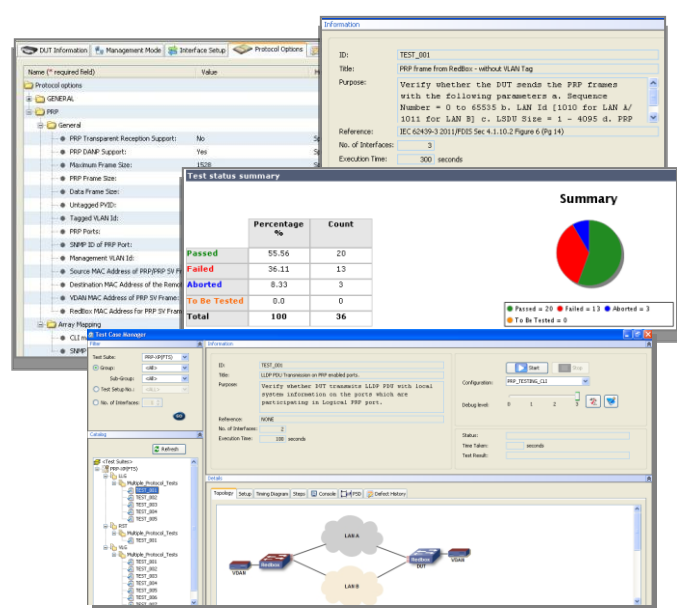


Figure 2: ATTEST PRP – Screen shots

<b>ORDERING INFORMATION</b>	
PRODUCT	PART NUMBER
ATTEST PRP Comprehensive suite	CATS-PRP-B
ATTEST PRP Conformance suite	CTS-PRP-B
ATTEST PRP Functional suite	XP-PRP-B

**About Veryx Technologies**

Veryx Technologies (formerly Net-O2 Technologies) provides innovative Verification and Measurement Solutions for the global communications industry. ATTEST solutions verify networking equipment being used for Access, Carrier Ethernet, Data Center, Edge, Enterprise, Industrial and Security. The unique offerings from Veryx enable customers to reduce the “time-required-to-test” and enhance their “time-to-market”.

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