

ATTEST™

Conformance Test Suite

**Precision Time Protocol - High Accuracy
Version 1.1**

Test Cases - Overview

Introduction

The ATTEST™ Precision Time Protocol - High Accuracy Conformance test suite consists of following test groups:

S. No.	Group	Test cases
1	Inter Operation with Default Profiles (IDP)	4
2	Message Format Group (MFG)	4
3	Message Handling Group (MHG)	3
4	Optional Parameters Verification (OPV)	1
5	PTP Accuracy Group (PAG)	10
6	PTP-HA Configuration Group (PCG)	15
7	PTP External Configuration Group (PEG)	23
8	State Machine Group (SMG)	22
	Total	82

Following is the list of ATTEST-CTS PTP-HA test cases

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
1	Inter-operation with the Delay Request-Response Default PTP profile when DUT is master	To verify that a PTP enabled device using Delay Request-Response mechanism synchronizes its High Accuracy Delay Request-Response Default PTP profile to Delay Request-Response Default PTP Profile when it is master.	P1588/D1.3, February 2018 V3.01 Clause J.5.4 Page 414	IDP_001	SHALL
2	Inter-operation with the Peer-to-peer Default PTP profile when DUT is master	To verify that a PTP enabled device using Peer-to-Peer delay mechanism synchronizes its High Accuracy Peer-to-Peer Delay PTP profile to Peer-to-Peer Default PTP profile when it is master.	P1588/D1.3, February 2018 V3.01 Clause J.5.4 Page 414	IDP_002	SHALL
3	Inter-operation with the Delay Request-Response Default PTP profile when DUT is slave	To verify that a PTP enabled device using Delay Request-Response mechanism synchronizes its High Accuracy Delay Request-Response Default PTP profile to Delay Request-Response Default PTP Profile when it is slave.	P1588/D1.3, February 2018 V3.01 Clause J.5.4 Page 414	IDP_003	SHALL
4	Inter-operation with the Peer to Peer Default PTP profile when DUT is slave	To verify that a PTP enabled device using Peer to Peer Delay mechanism synchronizes its High Accuracy Peer to Peer Delay PTP profile to Peer to Peer Default PTP profile when it is slave.	P1588/D1.3, February 2018 V3.01 Clause J.5.4 Page 414	IDP_004	SHALL
5	L1SYNC Message with optParamsEnabled is set to FALSE - transport UDP over IP	To verify that a PTP enabled device sends L1Sync signaling message in correct format when optParamsEnabled is set to FALSE and transport over UDP over IP.	P1588/D1.3, February 2018 V3.01 Clause O.6.1 Page 447, Clause O.6.2 Page 447, Clause O.6.4 Pages 448 and 449, Clause 13.12.2 Page 225	MFG_001	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
6	L1Sync message with optParamsEnabled is set to TRUE - transport UDP over IP	To verify that a PTP enabled device sends L1Sync signaling message in correct format when optParamsEnabled is set to TRUE and transport over UDP over IP.	P1588/D1.3, February 2018 V3.01 Clause O.6.1 Page 447, Clause O.6.2 Page 447, Clause O.6.4 Pages 448 and 449, Clause O.8.5 Page 455 and 456, Clause 13.12.2 Page 225	MFG_002	SHALL
7	L1Sync message with optParamsEnabled is set to FALSE - transport over IEEE 802.3/Ethernet	To verify that a PTP enabled device sends L1Sync signaling message in correct format when optParamsEnabled is set to FALSE and transport over IEEE 802.3/Ethernet.	P1588/D1.3, February 2018 V3.01 Clause O.6.1 Page 447, Clause O.6.2 Page 447, Clause O.6.4 Pages 448 and 449, Clause 13.12.2 Page 225	MFG_003	SHALL
8	L1Sync message with optParamsEnabled is set to TRUE - transport over IEEE 802.3/Ethernet	To verify that a PTP enabled device sends L1Sync signaling message in correct format when optParamsEnabled is set to TRUE and transport over IEEE 802.3/Ethernet.	P1588/D1.3, February 2018 V3.01 Clause O.6.1 Page 447, Clause O.6.2 Page 447, Clause O.6.4 Pages 448 and 449, Clause O.8.5 Page 455 and 456, Clause 13.12.2 Page 225	MFG_004	SHALL
9	Non-forwarding of L1Sync messages with non-forwardable address on transport over UDP over IP	To verify that a PTP enabled device does not forward PTP signaling message with L1 Sync TLV destined with non-forwardable address (224.0.0.107) on transport over UDP over IP.	P1588/D1.3, February 2018 V3.01 Clause O.6.1 Page 447	MHG_001	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
10	Non-forwarding of L1Sync messages with non-forwardable address on transport over IEEE 802.3/Ethernet	To verify that a PTP enabled device does not forward PTP signaling message with L1 Sync TLV destined with non-forwardable address (01:80:C2:00:00:0E) on transport over IEEE 802.3/Ethernet.	P1588/D1.3, February 2018 V3.01 Clause O.6.1 Page 447	MHG_002	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
11	Discarding of PTP signaling message with L1 Sync TLV with invalid domain number.	To verify that a PTP enabled device does not accept PTP signaling message with L1 Sync TLV and invalid domain number.	P1588/D1.3, February 2018 V3.01 Clause O.7.2 Page 449 Clause J.5.2 Page 412.	MHG_003	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
12	L1SyncOptParamsPortDS.timestampsCorrectedTx	To verify that a PTP enabled device supports to enable L1SyncOptParamsPortDS.timestampsCorrectedTx only when L1SyncBasicPortDS.optParamsEnabled is enabled.	P1588/D1.3, February 2018, V3.01 Clause 0.8.4.2.1 Page 453	OPV_001	SHALL
13	Egress timestamp in Delay_Req message	To verify that a PTP enabled device generates Egress timestamp in Delay_Req (event) messages from timestampCorrectionPortDS.egressLatency when using Delay Request-Response mechanism.	IEEE 1588-2017 Clause 16.7.1 Page 301, Clause 7.3.4.2 Page 68, Clause 8.2.16.2 Page 128	PAG_002	SHALL
14	Egress timestamp in Pdelay_Req message	To verify that a PTP enabled device generates Egress timestamp in Pdelay_Req (event) messages from timestampCorrectionPortDS.egressLatency when using Peer to Peer Delay mechanism.	IEEE 1588-2017 Clause 16.7.1 Page 301, Clause 7.3.4.2 Page 68, Clause 8.2.16.2 Page 128	PAG_003	SHALL
15	Calculation of delayAsymmetry in Delay Request-Response mechanism	To verify that a PTP enabled device performs computation of delayAsymmetry each time the value of meanDelay is updated in Delay Request-Response mechanism	P1588/D1.3, February 2018 V3.01 clause 16.8.3 Page 302, Clause 7.4.2 Page 73	PAG_004	SHALL
16	Calculation of delayAsymmetry in Peer to Peer Delay mechanism when DUT is slave	To verify that a PTP enabled device performs computation of delayAsymmetry each time the value of meanDelay is updated in Peer to Peer Delay mechanism when DUT is slave.	P1588/D1.3, February 2018 V3.01 clause 16.8.3 page 302 Clause 7.4.2 Page 73	PAG_005	SHALL
17	Calculation of delayAsymmetry in Peer to Peer Delay mechanism when DUT is master	To verify that a PTP enabled device performs computation of delayAsymmetry each time the value of meanDelay is updated in Peer to Peer Delay mechanism when DUT is master.	P1588/D1.3, February 2018 V3.01 clause 16.8.3 page 302 Clause 7.4.2 Page 73	PAG_006	SHALL
18	Egress timestamp in Pdelay_Resp message	To verify that a PTP enabled device generates Egress timestamp in Pdelay_Resp (event) messages from	IEEE 1588-2017 Clause 16.7.1 Page 301, Clause 7.3.4.2 Page 68, Clause 8.2.16.2 Page 128	PAG_007	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
		timestampCorrectionPortDS.egressLatency when using Peer to Peer Delay mechanism.			
19	Ingress timestamp in Sync message	To verify that a PTP enabled device generates Ingress timestamp in Sync (event) messages from timestampCorrectionPortDS.ingressLatency when using Delay Request-Response mechanism.	IEEE 1588-2017 Clause 16.7.1 Page 301, Clause 7.3.4.2 Page 68, Clause 8.2.16.2 Page 128	PAG_008	SHALL
20	Ingress timestamp in Delay_Req message	To verify that a PTP enabled device generates Ingress timestamp in Delay_Req (event) messages from timestampCorrectionPortDS.ingressLatency when using Delay Request-Response mechanism.	IEEE 1588-2017 Clause 16.7.1 Page 301, Clause 7.3.4.2 Page 68, Clause 8.2.16.2 Page 128, Clause 11.3.2 Page 193	PAG_009	SHALL
21	Ingress timestamp in Pdelay_Req message	To verify that a PTP enabled device generates Ingress timestamp in Pdelay_Req (event) messages from timestampCorrectionPortDS.ingressLatency when using Peer to Peer Delay mechanism.	IEEE 1588-2017 Clause 16.7.1 Page 301, Clause 7.3.4.2 Page 68, Clause 8.2.16.2 Page 128, Clause 11.3.2 Page 192	PAG_010	SHALL
22	Ingress timestamp in Pdelay_Resp message	To verify that a PTP enabled device generates Ingress timestamp in Pdelay_Resp (event) messages from timestampCorrectionPortDS.ingressLatency when using Peer to Peer Delay mechanism.	IEEE 1588-2017 Clause 16.7.1 Page 301, Clause 7.3.4.2 Page 68, Clause 8.2.16.2 Page 128	PAG_011	SHALL
23	Default initialization values for attributes - High Accuracy Delay Request-Response mechanism	To verify that a PTP enabled device stores all attributes with default initialization values for High Accuracy Delay Request-Response mechanism. Checking that the following attributes have correct default values. 1) defaultDS.domainNumber = 0 2) portDS.logAnnounceInterval = 1 3) portDS.logSyncInterval = 0 4) portDS.logMinDelayReqInterval = 0 5) portDS.announceReceiptTimeout = 3 6) defaultDS.priority1 = 128 7) defaultDS.priority2	P1588/D1.3, February 2018 V3.01 Clause J.5.2 Page 412, Table 150 Page 413	PCG_001	MUST

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
		<p>=128 8) defaultDS.slaveOnly = FALSE 9) defaultDS.SdoId = 0x000 10) L1SyncBasicPortDS.L1SyncEnabled = TRUE 11) L1SyncBasicPortDS.txCoherencyIsRequired = TRUE 12) L1SyncBasicPortDS.rxCoherencyIsRequired = TRUE 13) L1SyncBasicPortDS.congruencyIsRequired = TRUE 14) L1SyncBasicPortDS.optParametersConfigured = FALSE 15) L1SyncBasicPortDS.logL1SyncInterval = 0 16) L1SyncBasicPortDS.L1SyncReceiptTimeout = 3 17) defaultDS.externalPortConfigurationEnabled = FALSE 18) timestampCorrectionPortDS.egressLatency = Default is zero unless specified otherwise by implementation. 19) timestampCorrectionPortDS.ingressLatency = Default is zero unless specified otherwise by implementation. 20) asymmetryCorrectionPortDS.constantAsymmetry = Default is zero unless specified otherwise by implementation. 21) asymmetryCorrectionPortDS.scaledDelayCoefficient = Default is zero unless specified otherwise by implementation. 22) asymmetryCorrectionPortDS.enable = TRUE 23) portDS.masterOnly = FALSE Note: The default values of these attributes can be changed through ATTEST GUI (Go to Configuration Manager and select desired configuration, go to Protocol Options > PTP-HA > PTP-HA Attributes).</p>			

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
24	Domain Number	To verify that a PTP enabled device supports to configure domain number in range 0 to 127.	P1588/D1.3, February 2018 V3.01 Clause J.5.2 Page 412	PCG_002	SHALL
25	logAnnounceInterval	To verify that a PTP enabled device transmits Announce messages at configured logAnnounceInterval (allowable range: 0 to 4).	P1588/D1.3, February 2018 V3.01 Clause J.5.2 Page 412 Clause 7.7.2.2 Page 96	PCG_003	SHALL
26	logSyncInterval	To verify that a PTP enabled device transmits Sync messages at configured logSyncInterval (allowable range: -1 to +1).	P1588/D1.3, February 2018 V3.01 Clause J.5.2 Page 412 Clause 7.7.2.3 Page 96	PCG_004	SHALL
27	logMinDelayRequestInterval	To Verify that a PTP enabled device transmits Delay_Req messages at configured logMinDelayRequestInterval (allowable range: 0 to 5).	P1588/D1.3, February 2018 V3.01 Clause J.5.2 Page 412 Clause 7.7.2.4 Page 96 Clause 9.5.11 Page 174	PCG_005	SHALL
28	announceReceiptTimeout	To verify that a PTP enabled device supports to configure announceReceiptTimeout interval to range of value 2 to 10.	P1588/D1.3, February 2018 V3.01 Clause J.5.2 Page 412	PCG_006	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
29	logMinPdelayReque stInterval	To Verify that the PTP enabled device transmits Pdelay_Req messages at configured logMinPdelayReqInterval (allowable range: 0 to 5)	P1588/D1.3, February 2018 V3.01 Clause J.5.2 Page 412 Clause 7.7.2.5 Page 97	PCG_007	SHALL
30	logL1SyncInterval	To verify that a PTP enabled device transmits L1Sync messages at configured logL1SyncInterval (allowable range: -4 to 4)	IEEE 1588-2017 Clause J.5.3 Table 150 Page 413 Clause O.4.6 Page 443	PCG_008	SHALL
31	L1SyncReceiptTimeo ut	To verify that a PTP enabled device supports to configure L1SyncReceiptTimeout in range of value 2 to 10	P1588/D1.3, February 2018 V3.01 Clause J.5.3 Table 150, Page 413 Clause O.4.7 Page 443	PCG_009	SHALL
32	Port State: masterOnly - remains in master state	To verify that a PTP enabled device does not allow PTP port state to enter into SLAVE state when the PTP port state is configured as masterOnly.	P1588/D1.3, February 2018 V3.01 Section 9.2.2.2 Page 139	PCG_012	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
33	No-updation of data set based on Announce message when portstate is masterOnly	To verify that a PTP enabled device does not update data set from received Announce message when port state is configured as masterOnly.	P1588/D1.3, February 2018 V3.01 Section 9.2.2.2 Page 139	PCG_013	SHALL
34	timestampCorrectionPortDS.egressLatency	To verify that a PTP enabled device supports to configure timestampCorrectionPortDS.egressLatency (allowable range: -2^{63} to $2^{63}-1$).	P1588/D1.3, February 2018 V3.01 Clause 7.3.4.2 Page 68, Clause 8.2.16.3 Page 129, Clause 16.7 Page 301, Clause J.5.3 Table 150 Page 413	PCG_014	SHALL
35	timestampCorrectionPortDS.ingressLatency	To verify that a PTP enabled device supports to configure timestampCorrectionPortDS.ingressLatency (allowable range: -2^{63} to $2^{63}-1$).	P1588/D1.3, February 2018 V3.01 Clause 7.3.4.2 Page 68, Clause 16.7 Page 301, Clause J.5.3 Table 150 Page 413	PCG_015	SHALL
36	asymmetryCorrectionPortDS.constantAsymmetry	To verify that a PTP enabled device supports to configure asymmetryCorrectionPortDS.constantAsymmetry (allowable range: -2^{63} to $2^{63}-1$).	P1588/D1.3, February 2018 V3.01 Clause 7.4.2 Page 75, Clause 8.2.15.4.8 Page 127, Clause J.5.3 Table 150 Page 413	PCG_016	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
37	asymmetryCorrectionPortDS.scaledDelayCoefficient	To verify that a PTP enabled device supports to configure asymmetryCorrectionPortDS.scaledDelayCoefficient (allowable range: -2^{63} to $2^{63}-1$).	P1588/D1.3, February 2018 V3.01 Clause 7.4.2 Page 75, Clause 8.2.17.3 Page 130, Clause J.5.3 Table 150 Page 413	PCG_017	SHALL
38	externalPortConfigurationPortDS.desiredState - Port state remains in MASTER state	To verify that a PTP enabled device remains in MASTER state if externalPortConfigurationPortDS.desiredState is set to MASTER.	P1588/D1.3, February 2018 V3.01 Clause 17.6.5.4 Page 356	PEG_001	SHALL
39	Default value of portDS.portState is PASSIVE	To verify that a PTP enabled device sets portDS.portState to PASSIVE state when defaultDS.externalPortConfigurationEnabled is set to TRUE unless otherwise specified.	P1588/D1.3, February 2018 V3.01 Clause 17.6.3.2 Page 354	PEG_002	SHALL
40	External Configuration: portDS.portState is SLAVE	To verify that a PTP enabled device sets portDS.portState to SLAVE state when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to SLAVE.	P1588/D1.3, February 2018 V3.01 Clause 17.6.3.2 Page 354	PEG_003	SHALL
41	External Configuration: portDS.portState is LISTENING	To verify that a PTP enabled device sets portDS.portState to LISTENING state when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to LISTENING.	P1588/D1.3, February 2018 V3.01 Clause 17.6.3.2 Page 354	PEG_004	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
42	External Configuration: portDS.portState is UNCALIBRATED	To verify that a PTP enabled device sets portDS.portState to UNCALIBRATED state when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to UNCALIBRATED.	P1588/D1.3, February 2018 V3.01 Clause 17.6.3.2 Page 354	PEG_005	SHALL
43	External Configuration: portDS.portState is PRE-MASTER	To verify that a PTP enabled device sets portDS.portState to PRE-MASTER state when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to PRE-MASTER.	P1588/D1.3, February 2018 V3.01 Clause 17.6.3.2 Page 354	PEG_006	SHALL
44	External Configuration: portDS.portState is FAULTY	To verify that a PTP enabled device sets portDS.portState to FAULTY state when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to FAULTY.	P1588/D1.3, February 2018 V3.01 Clause 17.6.3.2 Page 354	PEG_007	SHALL
45	portDS.portState remains in passive state - expiry of Announcereceipttimeout	To verify that a PTP enabled device remains in PASSIVE state even after the expiry of Announcereceipttimeout when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to PASSIVE.	P1588/D1.3, February 2018 V3.01 Clause 17.6.5.3 Page 355	PEG_008	SHALL
46	portDS.portState remains in slave state - expiry of Announcereceipttimeout	To verify that a PTP enabled device remains in SLAVE state even after the expiry of Announcereceipttimeout when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to SLAVE.	P1588/D1.3, February 2018 V3.01 Clause 17.6.5.3 Page 355	PEG_009	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
47	portDS.portState remains in uncalibrated - expiry of Announcereceipttimeout	To verify that a PTP enabled device remains in UNCALIBRATED state even after the expiry of Announcereceipttimeout when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to UNCALIBRATED.	P1588/D1.3, February 2018 V3.01 Clause 17.6.5.3 Page 355	PEG_010	SHALL
48	portDS.portState remains in listening - expiry of Announcereceipttimeout	To verify that a PTP enabled device remains in LISTENING state even after the expiry of Announcereceipttimeout when defaultDS.externalPortConfigurationEnabled is set to TRUE and externalPortConfigurationPortDS.desiredState is set to LISTENING.	P1588/D1.3, February 2018 V3.01 Clause 17.6.5.3 Page 355	PEG_011	SHALL
49	Data set updation based on Announce message portDS.portState is in UNCALIBRATED	To verify that a PTP enabled device updates data set from most recently received Announce message when port state is in UNCALIBRATED state and defaultDS.externalPortConfigurationEnabled is set to TRUE.	P1588/D1.3, February 2018 V3.01 Clause 17.6.5.4 Page 356	PEG_012	SHALL
50	Data set updation based on Announce message portDS.portState is in SLAVE	To verify that a PTP enabled device updates data set from most recently received Announce message when port state is in SLAVE state and defaultDS.externalPortConfigurationEnabled is set to TRUE.	P1588/D1.3, February 2018 V3.01 Clause 17.6.5.4 Page 356	PEG_013	SHALL
51	slaveOnly is FALSE when defaultDS.externalPortConfigurationEnabled is TRUE.	To verify that an Ordinary Clock does not allow to set slaveOnly to TRUE when defaultDS.externalPortConfigurationEnabled is set to TRUE.	P1588/D1.4, July 2018 Clause 17.6.5.3 Page 361	PEG_014	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
52	masterOnly is FALSE when defaultDS. externalPortConfigurationEnabled is TRUE.	To verify that an Ordinary Clock does not allow to set masterOnly to TRUE when defaultDS. externalPortConfigurationEnabled is set to TRUE.	P1588/D1.4, July 2018 Clause 17.6.5.3 Page 361	PEG_015	SHALL
53	portDS.portState remains in SLAVE state	To verify that a PTP enabled device remains in SLAVE state by setting externalPortConfigurationPortDS. desiredState to SLAVE, even if fault condition occur. (This test is applicable only if Peer to Peer Delay mechanism is supported.)	P1588/D1.3, February 2018 V3.01 Clause 17.6.1 Page 353, Clause 17.6.3.2 Page 354.	PEG_016	SHALL
54	portDS.portState remains in PASSIVE state	To verify that a PTP enabled device remains in PASSIVE state by setting externalPortConfigurationPortDS. desiredState to PASSIVE, even if fault condition occur. (This test is applicable only if Peer to Peer Delay mechanism is supported.)	P1588/D1.3, February 2018 V3.01 Clause 17.6.1 Page 353, Clause 17.6.3.2 Page 354.	PEG_017	SHALL
55	portDS.portState remains in LISTENING state	To verify that a PTP enabled device remains in LISTENING state by setting externalPortConfigurationPortDS.desiredState to LISTENING, even if fault condition occur. (This test is applicable only if Peer to Peer Delay mechanism is supported.)	P1588/D1.3, February 2018 V3.01 Clause 17.6.1 Page 353 Clause 17.6.3.2 Page 354.	PEG_018	SHALL
56	portDS.portState remains in UNCALIBRATED	To verify that a PTP enabled device remains in UNCALIBRATED state by setting externalPortConfigurationPortDS.desiredState to UNCALIBRATED, even if fault condition occur. (This test is applicable only if Peer to Peer Delay mechanism is supported.)	P1588/D1.3, February 2018 V3.01 Clause 17.6.1 Page 353 Clause 17.6.3.2 Page 354.	PEG_019	SHALL

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
57	portDS.portState remains in PRE-MASTER	To verify that a PTP enabled device remains in PRE-MASTER state by setting externalPortConfigurationPortDS.desiredState to PRE-MASTER, even if fault condition occur. (This test is applicable only if Peer to Peer Delay mechanism is supported.)	P1588/D1.3,February 2018 V3.01 Clause 17.6.1 Page 353 Clause 17.6.3.2 Page 354.	PEG_020	SHALL
58	portDS.portState remains in MASTER state	To verify that a PTP enabled device remains in MASTER state by setting externalPortConfigurationPortDS desiredState to MASTER, even if fault condition occur. (This test is applicable only if Peer to Peer Delay mechanism is supported.)	P1588/D1.3,February 2018 V3.01 Clause 17.6.1 Page 353 Clause 17.6.3.2 Page 354.	PEG_021	SHALL
59	Transition of slaveOnly from TRUE to FALSE when defaultDS.externalPortConfigurationEnabled is set to TRUE	To verify that an Ordinary Clock transits slaveOnly from TRUE to FALSE when defaultDS.externalPortConfigurationEnabled is set to TRUE.	P1588/D1.4, July 2018 Clause 17.6.5.3 Page 361	PEG_022	SHALL
60	Transition of masterOnly from TRUE to FALSE when defaultDS.externalPortConfigurationEnabled is set to TRUE	To verify that an Ordinary Clock transits masterOnly from TRUE to FALSE when defaultDS.externalPortConfigurationEnabled is set to TRUE.	P1588/D1.4, July 2018 Clause 17.6.5.3 Page 361	PEG_023	SHALL
61	L1SYNC port in DISABLED state	To verify that the PTP enabled port does not transmit PTP signaling message with L1 Sync TLV when L1Sync port is disabled by setting the data set L1SyncBasicPortDS.L1SyncEnabled to FALSE via configuration.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_001	MUST

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
62	L1SYNC port state changes from DISABLED to IDLE	To verify that L1 SYNC port changes its state from DISABLED to IDLE when L1_SYNC is enabled by setting dataset L1SyncBasicPortDS.L1SyncEnabled to TRUE via configuration.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_002	MUST
63	L1SYNC port state continues to be in IDLE State	To verify that L1 SYNC port continues to be in IDLE state if no L1 Sync TLV is received.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_003	MUST
64	L1 SYNC port changes from IDLE To LINK_ALIVE	To verify that L1 SYNC port changes its state from IDLE to LINK_ALIVE when L1 Sync TLV is received.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_004	MUST
65	L1 SYNC port changes from LINK_ALIVE to CONFIG_MATCH	To verify that L1 SYNC port changes its state from LINK_ALIVE to CONFIG_MATCH when configuration of the communicating L1Sync ports is compatible.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_005	MUST
66	L1 SYNC port state changes from CONFIG_MATCH to LINK_ALIVE	To verify that L1_SYNC port moves back to LINK_ALIVE from CONFIG_MATCH when configuration of the communicating L1Sync ports is incompatible.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_006	MUST
67	L1 SYNC port changes from CONFIG_MATCH to L1_SYNC_UP [DUT port state - Master]	To verify that L1 SYNC port changes its state from CONFIG_MATCH to L1_SYNC_UP when communicating L1 sync ports has the relationship required by configuration in place [DUT port state - Master].	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_007	MUST
68	L1_SYNC port state changes from L1_SYNC_UP to CONFIG_MATCH [DUT port state - Master]	To verify that L1Sync port moves back to CONFIG_MATCH from L1_SYNC_UP state, if communicating L1 sync ports do not have relationship required by configuration in place [DUT port state - Master].	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_008	MUST

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
69	L1 SYNC port changes from CONFIG_MATCH to L1_SYNC_UP [DUT port state - Slave]	To verify that L1 SYNC port changes its state from CONFIG_MATCH to L1_SYNC_UP when communicating L1 sync ports has the relationship required by configuration in place. [DUT port state - Slave].	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_009	MUST
70	L1_SYNC port state changes from L1_SYNC_UP to CONFIG_MATCH [DUT port state - Slave]	To verify that L1Sync port moves back to CONFIG_MATCH from L1_SYNC_UP state if communicating L1 sync ports do not have relationship required by configuration in place. [DUT port state - Slave]	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_010	MUST
71	L1 Sync Port state changes from L1_SYNC_UP to LINK_ALIVE when configuration of the L1Sync ports is not compatible	To verify that L1Sync port changes its state from L1_SYNC_UP to LINK_ALIVE when configuration of the communicating L1Sync ports is not compatible.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_011	MUST
72	L1 Sync Port state changes from LINK_ALIVE to IDLE when L1SyncLinkAlive is FALSE	To verify that L1 SYNC port changes its state to IDLE from LINK_ALIVE when L1SyncLinkAlive is FALSE.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_012	MUST
73	L1 Sync Port state changes from CONFIG_MATCH to IDLE when when L1SyncLinkAlive is FALSE	To verify that L1Sync port changes its state from CONFIG_MATCH to IDLE when no L1_SYNC TLV has been received for L1_SYNC TLV reception timeout.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_013	MUST

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
74	L1 Sync Port state changes from L1_SYNC_UP to IDLE when L1SyncLinkAlive is FALSE	To verify that L1Sync port changes its state from L1_SYNC_UP to IDLE when no L1_SYNC TLV has been received for L1_SYNC TLV reception timeout	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_014	MUST
75	L1 Sync Port state changes from IDLE to DISABLED when L1Sync is disabled	To verify that L1Sync port changes its state from IDLE to DISABLED when L1Sync is disabled by setting the data set L1SyncBasicPortDS.L1SyncEnabled to FALSE via configuration.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_015	MUST
76	L1Sync Port state changes from LINK_ALIVE to DISABLED when L1Sync is disabled	To verify that L1Sync port changes its state from LINK_ALIVE to DISABLED when L1Sync is disabled by setting the data set L1SyncBasicPortDS.L1SyncEnabled to FALSE via configuration.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_016	MUST
77	L1SYNC port state changes from CONFIG_MATCH to DISABLED when L1Sync is disabled	To verify that L1Sync port changes its state from CONFIG_MATCH to DISABLED when L1SYNC is disabled by setting the data set L1SyncBasicPortDS.L1SyncEnabled to FALSE via configuration.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_017	MUST
78	L1Sync Port state changes from L1_SYNC_UP to DISABLED when L1Sync is disabled	To verify that L1Sync port changes its state from L1_SYNC_UP to DISABLED when L1Sync is disabled by setting the data set L1SyncBasicPortDS.L1SyncEnabled to FALSE via configuration.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_018	MUST
79	L1 Sync Port state changes from IDLE to DISABLED when L1SYNC_RESET occurs.	To verify that L1Sync port changes its state from IDLE to DISABLED when L1SYNC_RESET event occurs.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_019	MUST

ATTEST-CTS PTP-HA Version 1.1
Test Case List

Sl. No	Title	Purpose	Reference	Test Case ID	Conformance Type
80	L1Sync Port state changes from LINK_ALIVE to DISABLED when L1SYNC_RESET is occurred.	To verify that L1Sync port changes its state from LINK_ALIVE to DISABLED when L1SYNC_RESET event occurs.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_020	MUST
81	L1SYNC port state changes from CONFIG_MATCH to DISABLED when L1SYNC_RESET is occurred.	To verify that L1Sync port changes its state from CONFIG_MATCH to DISABLED when L1SYNC_RESET event occurs.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_021	MUST
82	L1Sync Port state changes from L1_SYNC_UP to DISABLED when L1SYNC_RESET is occurred.	To verify that L1Sync port changes its state from L1_SYNC_UP to DISABLED when L1SYNC_RESET event occurs.	IEEE 1588-2017 Clause O.7.2 Table 157 Page 449, Clause O.7.3 Figure 70 Page 450	SMG_022	MUST