

UniPro Test Executive v1.2.3835 release supports the following 57 full CTS tests, 51 Stimulus debug tests, and 15 Trace Validation debug tests. The additional 9 On Hold tests in orange may be implemented in a future release if they are determined to be implementable.

		Stim mode	TV mode	CTS mode	Demo license
CTS PHY Adapter Layer Related Tests					
Group 1 Basic PHY Adapter Layer					
1.1.1	M-PHY Control Symbols and Primitives	2.2.2	√	√	
1.1.2	Direct Access to M-PHY Module Attributes	√	√	√	
1.1.3	Setting Out of Range Attributes	√	√	√	
1.1.4	Invalid Configuration Request	√	√	√	√
1.1.5	Lane Discovery and Renumbering (Single Data Lane)			On hold	
1.1.6	Lane Discovery and Renumbering (Multiple Data Lanes)			On hold	
1.1.10	Expiry of LinkStartUp Timer	< √ >	< √ >	< √ >	
1.1.11	Terminating a Link Startup	√	√	√	
1.1.14	Capability Exchange and Downgrading w/o OMC	√	√	√	
Group 2 Power Mode Change					
1.2.1	Power Mode	√	√	√	
1.2.2	Power Mode Change (Tester as Initiator)	√	√	√	
1.2.5	M-PHY Lane Merging			On hold	
1.2.6	LINK Re-Initialization	√	√	√	
1.2.9	Invalid Peer Configuration Request	√	√	√	
1.2.10	PACP Error Detection	√	√	√	
Group 3 Hibernate					
1.3.1	Hibernate	√	√	√	
Group 4 M-PHY Test Mode					
Group 5 UniPro 1.6 Extended					
1.5.1	Skip Pattern				
1.5.2	Data Scrambling			On hold	
1.5.3	Compatibility with Earlier UniPro Versions (Skip Pattern Insertion, Scrambling)	√	√	√	
Data Link Layer Related Tests					
Group 1 Data Link Layer Frame Structure					
2.1.2	Control Symbol Analysis	√	√	√	
2.1.3	Data Frame Analysis	√	√	√	
2.1.4	Control Frame Analysis	√	√	√	

		Stim mode	TV mode	CTS mode	Demo license
Group 2 Data Link Layer Initialization Related Tests					
2.2.2	DL Initialization (one Traffic Class)	√	√	√	
Group 3 Control Frames Triggering Tests					
2.3.1	AFC Frame transmission, NAC Reception	√	√	√	√
2.3.2	AFC Frame transmission, TC_replay timer expiry	√	√	√	
2.3.3	AFC Frame transmission, AFC request timer expiry	√	√	√	
2.3.4	AFC Frame transmission, OutAckthreshold check	√	√	√	
2.3.5	AFC Frame transmission, Creditthreshold check	√	√	√	
2.3.6	AFC Frame transmission, Creq=1	√	√	√	
2.3.7	AFC Frame transmission, FC protection timer exp.	√	√	√	
2.3.8	NAC Frame transmission, Wrong CRC	√	√	√	
2.3.11	NAC Frame transmission, wrong sequence number	√	√	√	√
2.3.13	NAC Frame transmission, data w/o CRC	√	√	√	
2.3.14	NAC Frame transmission, bad first frame symbol	√	√	√	
Group 4 Data Link Layer Priority Scheme Tests					
2.4.1	DL priority, NAC vs Data	√	√	√	
2.4.2	DL priority, promoted AFC vs Data (1)	√	√	√	
2.4.3	DL priority, promoted AFC vs Data (2)	√	√	√	
2.4.7	DL priority, AFC0 vs TC0	√	√	√	
Group 5 Data Link Layer Retransmission and Buffering Tests					
2.5.1	Retransmission buffering mechanism	< √ >	< √ >	< √ >	
2.5.2	Data Frame Credit Limit Test	< √ >	< √ >	< √ >	
2.5.3	Unacknowledged Data Frame Number Limit Test			On hold	
2.5.4	Flow Control Mechanism (partial credits)	< √ >	< √ >	< √ >	
2.5.5	Retransmitted scheme (credit system)			On hold	
Group 6 Data Link Layer Timers Tests					
2.6.1	AFC request timer	√	√	√	√
2.6.2	TC relay timer	√	√	√	
Group 7 L2 Freezing Test					
2.7.1	Link Property change			On hold	
Group 8 Hibernate Test					
2.8.1	Hibernate attribute retaining	√	√	√	√

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Network Layer Related Tests					
Group 1 Network Layer Packet Structure					
3.1.1	data packet analysis	√	√	√	√
Group 2 Network Layer Related Tests					
3.2.2	Payload Length tolerance (TX)	√	√	√	
3.2.3	Payload Length tolerance (RX)	√	√	√	
3.2.4	DestDeviceID range tolerance (TX)	√	√	√	
3.2.5	DestDeviceID_Enc range tolerance (RX)	√	√	√	
3.2.6	DestDeviceID_Enc range tolerance (RX)	√	√	√	
3.2.7	L3 Discard Feature	√	√	√	
Transport Layer Related Tests					
Group 1 Transport Layer Segment Structure					
4.1.1	Data Segments analysis	√	√	√	√
Group 2 Transport Layer Related Tests					
4.2.1	DestCportID_Enc tolerance (Tx)	√	√	√	
4.2.2	DestCportID_Enc tolerance (Rx)	√	√	√	
4.2.3	Segmentation function	√	√	√	√
4.2.4	Reassembly Function Test	√	√	√	
4.2.5	E2EFC, T_Credits to send	√	√	√	
4.2.7	FCT triggering	√	√	√	
4.2.8	Data Transmission without E2EFC (Tx)	√	√	√	
4.2.9	Controller Segment Dropping Test (Rx)			On hold	
4.2.11	Discard Feature Test (CPort Out of Range)			On hold	
DME Related Tests					
Group 1 DME Related Tests					
5.1.2	Peer attribute access	√	√	√	√
5.1.3	Powermode change and timer update	√	√	√	√
5.1.6	Error condition in MIB attribute access	√	√	√	√

Non-CTS debug tests that have been implemented include:

	Stim mode	TV mode	CTS mode	Demo license
NAC Conditions Tests (11)				

		Stim mode	TV mode	CTS mode	Demo license
	DeviceIDErr	√			
	DisparityErr	√			
	EOFEvenErr	√			
	EOFOddErr	√			
	LengthIncr	√			
	RsvdBitsErr	√			
	SeqNumDecr	√			
	SeqNumIncr	√			
	SOFError	√			
	SymbolErr	√			
	TRafficClassErr	√			
Power Mode Change Tests (40)					
	PWM and HS speeds by x1-x4	√			√ (2)
Traffic Overview (1)					
	Traffic Overview		√		√
UniPro (14)					
	Link Startup Sequence This test verifies proper progression through the seven phases of link startup.		√		√
	PACP Get Req This test verifies that all get requests are acknowledged with a PACP_GET_cnf.		√		
	PACP Set Req This test verifies that all set requests with the cnf bit set are acknowledged with a PACP_SET_cnf.		√		
	PowerModeChange This test verifies that a PACP_PWR_req power mode change request is properly handled.		√		
	AFC Sequence Number Order This test case verifies that AFC sequence numbers are in order. It accounts for Hibernate and AFC frames with errors.		√		
	AFC with CReq Set		√		

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	This test verifies that an AFC with CReq set to 0 is sent in response to an AFC with the CReq bit set.				
	Check for Packet Errors Checks entire trace for any UJniPro packet errors.		√		
	CheckCredits This test tracks the number of credits sent between the tester and DUT and reports errors if there are too many credits available or too many bad data frames		√		
	Data Frame TCO Sequence Numbers This test tracks the sequence numbers of the data frames and checks for proper replay of NAC'd data frames.		√		
	NAC Transmission Disabled This test verifies that NAC transmission is disabled until the DL Layer receives one Data or Control frame without any error.		√		
	Verify Control Frames This test verifies all of the fields in a control frame and checks for any error.		√		
	Verify Data Frames This test verifies all of the fields in a data frame and checks for any error.		√		
	Verify NAC Transmission This test looks for bad packets and checks for a corresponding NAC. It also looks for unexpected NACs.		√		
	Verify Outstanding Frames This test verifies that there is no more than 16 outstanding data frames that are unacknowledged.		√		

RED = expected for next

On hold = planned pending Keysight feature enhancement or feasibility determination

< √ > indicates test case may have some restrictions or limitations due to pattern generator functionality. See <http://www.protocolinsight.com/third-party-known-issues/> for more information.

Note: Demo licenses only enable the listed subset of all test cases. They can be run at PWM-G1 and HS-G1 speeds, x1 link width, Auto and NonAuto mode, and Scrambling Enabled and Disabled. Custom test cases can be created and saved but not run.

UniPro CTS test cases that are not supported:

- 1.1.5 Keysight HW limitation
- 1.1.6 Keysight HW limitation
- 1.1.7 Keysight HW limitation
- 1.1.8 Keysight HW limitation
- 1.1.9 Keysight HW limitation
- 1.1.12 Keysight HW limitation
- 1.1.13 Keysight HW limitation
- 1.1.15 Keysight HW limitation
- 1.1.16 Keysight HW limitation
- 1.2.3 Keysight HW limitation
- 1.2.4 Keysight HW limitation
- 1.2.7 Keysight HW limitation
- 1.2.8 Not Observable on the link
- 1.2.11 Keysight HW limitation
- 1.2.12 Keysight HW limitation
- 1.3.2 Keysight HW limitation
- 1.4.1 Keysight HW limitation
- 1.4.2 Keysight HW limitation
- 1.5.1 Keysight HW limitation
- 1.5.3 Keysight HW limitation
- 2.1.1 Not Observable on the link
- 2.2.3 Keysight HW limitation
- 2.3.9 Keysight HW limitation
- 2.3.10 Keysight HW limitation
- 2.3.12 Keysight HW limitation
- 2.3.15 Keysight HW limitation
- 2.3.16 Keysight HW limitation
- 2.3.17 Keysight HW limitation
- 2.3.18 Keysight HW limitation
- 2.3.19 Keysight HW limitation
- 2.3.20 Keysight HW limitation
- 2.3.21 Keysight HW limitation
- 2.4.4 Keysight HW limitation
- 2.4.5 Keysight HW limitation
- 2.4.6 Keysight HW limitation
- 2.5.5 Keysight HW limitation
- 2.5.6 Keysight HW limitation
- 3.2.1 Keysight HW limitation
- 4.2.6 Keysight HW limitation
- 4.2.10 Keysight HW limitation
- 4.2.11 Not Observable on the link
- 4.2.12 Not Observable on the link
- 4.2.13 Keysight HW limitation
- 5.1.1 Not Observable on the link
- 5.1.4 Not Observable on the link
- 5.1.5 Keysight HW limitation
- 5.1.7 Not Observable on the link

- 5.1.8 Not Observable on the link
- 5.1.9 Not Observable on the link
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- 5.1.11 Not Observable on the link
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- 5.1.13 Not Observable on the link