Nov 2021

Test System Validation Decision

Validation is the engineering process of demonstrating a test system achieves accurate, repeatable and traceable results for supported test cases and conforms to the Bluetooth Specification and Bluetooth Test Specification.

The Bluetooth Testing and Interoperability Committee (BTI) hereby acknowledges that the Teledyne LeCroy Harmony LE Tester is validated for the following Bluetooth Specifications (hereinafter "Validated Parts") on the basis of validation results in accordance with the Bluetooth Test System Validation Guideline on the *TeleDyne LeCroy Harmony LE Tester 21.10.27249.0*

- *Bluetooth Specification, Part: LL, version 5.3 and earlier, and*
- *Bluetooth Specification, Part: IAL, version 5.3 and earlier*
- *Bluetooth Specification, Part: HCI, version 5.3 and earlier*

The scope of the validation decision is Test Platform and Test Case implementation for Validated Parts.

After this decision, Teledyne LeCroy may declare additional test cases validated within Validated Parts after the concurrence of the BTI. Teledyne LeCroy shall maintain validation material and make it available to Bluetooth Special Interest Group.

The Bluetooth Special Interest Group reserves the right to review validation status annually and at any time test system status has changed pertaining to validation requirements. The Bluetooth Special Interest Group reserves the right to suspend validation at any time, without notice, for cause.

The above conclusion was reached by BTI vote as of the 15 November 2021

Validated Parts according to

- Teledyne LeCroy Harmony - Test System Validation Report TCRL 2021-1 r1.1
- Teledyne LeCroy Harmony - Test System Validation Evidence TCRL 2021-1 r1.1

HCI tests per TCRL2021-1

Test Case Identifier	Description
HCI/DDI/BI-14-C	Reject LE Set Periodic Advertising Data setting the fragment when periodic advertising is enabled
HCI/DDI/BV-09-C	LE Periodic Advertising Enable Command, Disable Periodic Advertising, Periodic Advertising ADI Supported

Missing Test cases

Test cases defined in the test specification but not listed among the Validated Parts may be absent for the following reasons:
1. the test case was validated previously in the tester and that validation is still applicable, or
2. the test case is supported by the tester but not yet validated since sufficient evidence has not been presented to justify the validation status, or
3. the test case is not yet supported by the tester.

IAL tests per TCRL2021-1

Test Case Identifier	Description
IAL/BIS/FRA/BRD/BV-06-C	Broadcast Single SDU, BIS, Framed – NSE 4, BN 2
IAL/BIS/FRA/BRD/BV-08-C	Broadcast Single SDU, BIS, Framed – NSE 2, BN 1
IAL/BIS/FRA/BRD/BV-13-C	Broadcast Large SDU, BIS, Framed – NSE 10, BN 5
IAL/BIS/FRA/BRD/BV-15-C	Broadcast Large SDU, BIS, Framed – NSE 6, BN 3
IAL/BIS/FRA/BRD/BV-17-C	Broadcast Multiple, Small SDUs, BIS, Framed – NSE 2, BN 1
IAL/BIS/FRA/BRD/BV-18-C	Broadcast Multiple, Small SDUs, BIS, Framed – NSE 2, BN 2
IAL/BIS/FRA/BRD/BV-20-C	Broadcast Multiple, Small SDUs, BIS, Framed – NSE 4, BN 2
IAL/BIS/FRA/BRD/BV-25-C	Broadcast Zero-Length SDU, BIS, Framed – NSE 6, BN 2
IAL/BIS/FRA/BRD/BV-26-C	Broadcast Zero-Length SDU, BIS, Framed – NSE 2, BN 1
IAL/BIS/FRA/BRD/BV-27-C	Broadcast Zero-Length SDU, BIS, Framed – NSE 4, BN 1
IAL/BIS/FRA/BRD/BV-28-C	Broadcast Zero-Length SDU, BIS, Framed – NSE 6, BN 3
IAL/BIS/FRA/SNC/BV-06-C	Receive Single SDU, BIS, Framed – NSE 4, BN 2
IAL/BIS/FRA/SNC/BV-08-C	Receive Single SDU, BIS, Framed – NSE 2, BN 1
IAL/BIS/FRA/SNC/BV-11-C	Receive Large SDU, BIS, Framed – NSE 8, BN 4
IAL/BIS/FRA/SNC/BV-13-C	Receive Large SDU, BIS, Framed – NSE 8, BN 4
IAL/BIS/FRA/SNC/BV-15-C	Receive Large SDU, BIS, Framed – NSE 8, BN 4
IAL/BIS/FRA/SNC/BV-17-C	Receive Multiple, Small SDUs, BIS, Framed – NSE 2, BN 1
IAL/BIS/FRA/SNC/BV-18-C	Receive Multiple, Small SDUs, BIS, Framed – NSE 2, BN 2
IAL/BIS/FRA/SNC/BV-20-C	Receive Multiple, Small SDUs, BIS, Framed – NSE 4, BN 2
IAL/BIS/FRA/SNC/BV-25-C	Receive Zero-Length SDU, BIS, Framed – NSE 6, BN 2
IAL/BIS/FRA/SNC/BV-26-C	Receive Zero-Length SDU, BIS, Framed – NSE 2, BN 1
IAL/BIS/FRA/SNC/BV-27-C	Receive Zero-Length SDU, BIS, Framed – NSE 4, BN 1
IAL/BIS/FRA/SNC/BV-28-C	Receive Zero-Length SDU, BIS, Framed – NSE 6, BN 3
IAL/BIS/UNF/BRD/BV-01-C	Broadcast Single SDU, BIS, Unframed – NSE 2, BN 1
IAL/BIS/UNF/BRD/BV-02-C	Broadcast Single SDU, BIS, Unframed – NSE 1, BN 2
IAL/BIS/UNF/BRD/BV-03-C	Broadcast Single SDU, BIS, Unframed – NSE 2, BN 2
IAL/BIS/UNF/BRD/BV-09-C	Broadcast Large SDU, BIS, Unframed – NSE 12, BN 6
IAL/BIS/UNF/BRD/BV-10-C	Broadcast Large SDU, BIS, Unframed – NSE 6, BN 3
IAL/BIS/UNF/BRD/BV-11-C	Broadcast Large SDU, BIS, Unframed – NSE 6, BN 3
IAL/BIS/UNF/BRD/BV-21-C	Broadcast Zero-Length SDU, BIS, Unframed – NSE 4, BN 2
IAL/BIS/UNF/BRD/BV-22-C	Broadcast Zero-Length SDU, BIS, Unframed – NSE 6, BN 3
IAL/BIS/UNF/BRD/BV-23-C	Broadcast Zero-Length SDU, BIS, Unframed – NSE 1, BN 1
IAL/BIS/UNF/BRD/BV-24-C	Broadcast Zero-Length SDU, BIS, Unframed – NSE 2, BN 1
IAL/BIS/UNF/BRD/BV-29-C	Broadcasting Unframed Empty PDUs with LLID=0b01, BIS, Encryption Enabled
IAL/BIS/UNF/SNC/BI-02-C	Receive an unsuccessful Large SDU, BIS, Unframed – BN 4
IAL/BIS/UNF/SNC/BV-01-C	Receive Single SDU, BIS, Unframed – NSE 2, BN 1
IAL/BIS/UNF/SNC/BV-02-C	Receive Single SDU, BIS, Unframed – NSE 1, BN 1
IAL/BIS/UNF/SNC/BV-03-C	Receive Single SDU, BIS, Unframed – NSE 2, BN 2
IAL/BIS/UNF/SNC/BV-09-C	Receive Large SDU, BIS, Unframed – NSE 8, BN 4
IAL/BIS/UNF/SNC/BV-21-C	Receive Zero-Length SDU, BIS, Unframed – NSE 4, BN 2
IAL/BIS/UNF/SNC/BV-22-C	Receive Zero-Length SDU, BIS, Unframed – NSE 6, BN 3
IAL/BIS/UNF/SNC/BV-23-C	Receive Zero-Length SDU, BIS, Unframed – NSE 1, BN 1
IAL/BIS/UNF/SNC/BV-24-C	Receive Zero-Length SDU, BIS, Unframed – NSE 2, BN 1
IAL/BIS/UNF/SNC/BV-29-C	Receiving Unframed Empty PDUs with LLID=0b01, BIS, Encryption Disabled
IAL/CIS/FRA/CEN/BV-03-C	Send Single SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-05-C	Send Large SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-07-C	Send Multiple, Small SDUs, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-10-C	Receive Single SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-15-C	Receive Multiple, Small SDUs, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-18-C	Send Zero-Length SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-20-C	Receive Zero-Length SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-22-C	Simultaneous Sending and Receiving SDUs, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-26-C	Send Single SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-29-C	Send Large SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-31-C	Send Multiple, Small SDUs, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-35-C	Receive Single SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-39-C	Receive Multiple, Small SDUs, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-42-C	Send Zero-Length SDU, CIS, Framed, Central
IAL/CIS/FRA/CEN/BV-44-C	Receive Zero-Length SDU, CIS, Framed, Central

IAL/CIS/FRA/PER/BV-03-C	Send Single SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-05-C	Send Large SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-07-C	Send Multiple, Small SDUs, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-10-C	Receive Single SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-15-C	Receive Multiple, Small SDUs, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-18-C	Send Zero-Length SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-20-C	Receive Zero-Length SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-22-C	Simultaneous Sending and Receiving SDUs, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-26-C	Send Single SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-29-C	Send Large SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-31-C	Send Multiple, Small SDUs, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-35-C	Receive Single SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-39-C	Receive Multiple, Small SDUs, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-42-C	Send Zero-Length SDU, CIS, Framed, Peripheral
IAL/CIS/FRA/PER/BV-44-C	Receive Zero-Length SDU, CIS, Framed, Peripheral
IAL/CIS/UNF/CEN/BV-01-C	Send Single SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-04-C	Send Large SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-09-C	Receive Single SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-12-C	Receive Large SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-17-C	Send Zero-Length SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-19-C	Receive Zero-Length SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-21-C	Simultaneous Sending and Receiving SDUs, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-24-C	Simultaneous Sending and Receiving SDUs, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-25-C	Send Single SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-28-C	Send Large SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-33-C	Receive Single SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-41-C	Send Zero-Length SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-43-C	Receive Zero-Length SDU, CIS, Unframed, Central
IAL/CIS/UNF/CEN/BV-45-C	Sending and Receiving Unframed Empty PDUs with LLID=0b01, CIS, Unframed, Central
IAL/CIS/UNF/PER/BI-02-C	Receive an Unsuccessful Large SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BI-03-C	Receive an Unsuccessful Large SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-01-C	Send Single SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-04-C	Send Large SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-09-C	Receive Single SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-17-C	Send Zero-Length SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-19-C	Receive Zero-Length SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-21-C	Simultaneous Sending and Receiving SDUs, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-24-C	Simultaneous Sending and Receiving SDUs, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-25-C	Send Single SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-28-C	Send Large SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-33-C	Receive Single SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-36-C	Receive Large SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-41-C	Send Zero-Length SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-43-C	Receive Zero-Length SDU, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-45-C	Sending and Receiving Unframed Empty PDUs with LLID=0b01, CIS, Unframed, Peripheral
IAL/CIS/UNF/PER/BV-46-C	Sending and Receiving Unframed Empty PDUs with LLID=0b01, CIS, Unframed, Peripheral

Missing Test cases

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1. the test case was validated previously in the tester and that validation is still applicable, or
2. the test case is supported by the tester but not yet validated since sufficient evidence has not been presented to justify the validation status, or
3. the test case is not yet supported by the tester.

LL tests per TCRL2021-1

Test Case Identifier	Description
LL/BIS/BRD/BV-01-C	Broadcast Isochronous Stream Setup – Encryption Disabled
LL/BIS/BRD/BV-10-C	Isochronous Broadcaster Terminates BIS Stream, Not Encrypted
LL/BIS/BRD/BV-16-C	Maximum Supported Broadcast Isochronous Groups, Encryption Disabled
LL/BIS/SNC/BV-08-C	Pre-transmissions in Broadcast Isochronous Stream
LL/BIS/SNC/BV-10-C	Broadcast Isochronous Stream Termination, Not Encrypted
LL/BIS/SNC/BV-12-C	Broadcast Isochronous Stream Synchronization, Number of BISes Not Supported
LL/CIS/CEN/BV-06-C	Receiving data in Unidirectional CIS
LL/CIS/CEN/BV-07-C	Sending and Receiving Data in Bidirectional CIS - Encryption Disabled
LL/CIS/CEN/BV-08-C	Sending and Receiving Data in Multiple CISes, Single CIG, Single Connection, Interleaved CIG, Central
LL/CIS/CEN/BV-09-C	Sending and Receiving Data in Multiple CISes, Single CIG, Single Connection, Sequential, Central
LL/CIS/CEN/BV-10-C	Sending and Receiving Data in Multiple CISes, Single CIG, Multiple Connections, Interleaved CIG
LL/CIS/CEN/BV-11-C	Sending Data in Multiple CISes, Single CIG, Multiple Connections, Sequential
LL/CIS/CEN/BV-14-C	Retransmissions
LL/CIS/CEN/BV-15-C	CIS Terminate Procedure, Initiated
LL/CIS/CEN/BV-16-C	CIS Terminate Procedure, Accepting
LL/CIS/CEN/BV-17-C	Flushing of Packets in CIS, Central
LL/CIS/CEN/BV-18-C	Bursting of Payloads in CIS, Central
LL/CIS/CEN/BV-26-C	Connected Isochronous Stream Using Non-Test Command, Central Initiated – LE 1M PHY
LL/CIS/CEN/BV-27-C	Connected Isochronous Stream Using Non-Test Command, Central Initiated – LE 2M PHY
LL/CIS/CEN/BV-32-C	CIS Setup Procedure, Central Initiated – LE 1M PHY
LL/CIS/PER/BV-05-C	Receiving data in Unidirectional CIS
LL/CIS/PER/BV-06-C	Sending and Receiving Data in Bidirectional CIS - Encryption Disabled
LL/CIS/PER/BV-07-C	Sending and Receiving Data in Multiple CISes, Single CIG, Single Connection, Interleaved CIG, Peripheral
LL/CIS/PER/BV-08-C	Sending and Receiving Data in Multiple CISes, Single CIG, Single Connection, Sequential, Peripheral
LL/CIS/PER/BV-11-C	Retransmissions
LL/CIS/PER/BV-12-C	CIS Terminate Procedure, Initiated
LL/CIS/PER/BV-13-C	CIS Terminate Procedure, Accepting
LL/CIS/PER/BV-14-C	Flushing of Packets in CIS, Peripheral
LL/CIS/PER/BV-15-C	Bursting of Payloads in CIS, Peripheral
LL/CIS/PER/BV-16-C	Deterministic Packet Transmission in CIS, Peripheral
LL/CIS/PER/BV-21-C	Acknowledgement Scheme, Peripheral – Encryption Enabled
LL/CON/CEN/BV-132-C	Periodic Advertising Sync Transfer Procedure, Accepting, Enabling Duplicate Filter when already synchronized
LL/CON/CEN/BV-133-C	Periodic Advertising Sync Transfer Procedure, Accepting, Enabling Default Duplicate Filter
LL/CON/PER/BV-135-C	Periodic Advertising Sync Transfer Procedure, Accepting, Enabling Duplicate Filter when already synchronized
LL/CON/PER/BV-136-C	Periodic Advertising Sync Transfer Procedure, Accepting, Enabling Default Duplicate Filter
LL/DDI/SCN/BV-68-C	Scanner not supporting Periodic Advertising ADI accepts AUX_SYNC_IND with ADI Set
LL/FRH/CEN/BI-01-C	Channel Classification Disabled, Ignore Channel Classification PDU
LL/FRH/PER/BI-01-C	Properly Handle Invalid Enable Channel Classification Parameters
LL/IST/BRD/BV-01-C	ISO Transmit Test Mode, BIS
LL/IST/CEN/BV-03-C	ISO Receive Test Mode, CIS – Central
LL/IST/PER/BV-03-C	ISO Receive Test Mode, CIS – Peripheral
LL/IST/PER/BV-05-C	ISO Receive Test Mode missing PDU – Peripheral
LL/PCL/CEN/BV-20-C	Power Control Request – LE 1M PHY – CIS, Initiate, Central
LL/PCL/PER/BV-20-C	Power Control Request – LE 1M PHY – CIS, Initiate, Peripheral

Missing Test cases

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