Tektronix®

Thunderbolt™ Compliance, Verification and Characterization
Keep up with the latest standards.

Comprehensive and Adaptable Solutions

Tektronix's Thunderbolt testing solution is designed to be both comprehensive and adaptable to your unique projects. Our hardware enables accurate, repeatable measurements you can rely on, and our automated software reduces test time and complexity by handling setup and calibration.

Thunderbolt is a trademark of Intel Corporation or its subsidiaries. USB4™ is a trademark of Universal Serial Bus Implementers Forum.

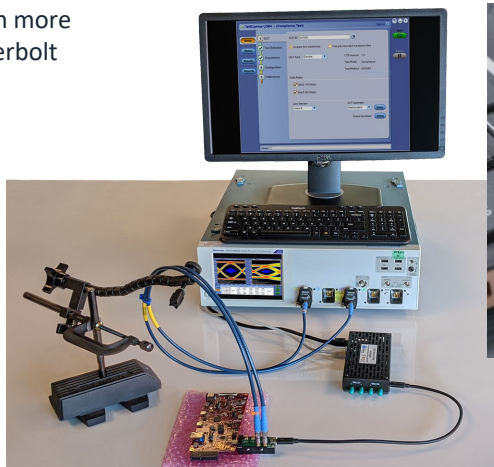## Thunderbolt 3/4 Generation 2/3 Transmitter Compliance Testing

Item	Description	Vendor	Type	R/O	Qty	Notes
DPO72304SX or DPO72304DX	≥21GHz, 2-channel oscilloscope	Tektronix	Equipment	Req.	1	21GHz minimum BW
TBT3	TekExpress Thunderbolt 3 & Thunderbolt 4 Tx Compliance/Debug Automation Solution (Requires Opt. CIO, DJA, SDLA)	Tektronix	Software	Req.	1	
CIO	Pre-req option for USB4	Tektronix	Software	Req.	1	
DJA	Pre-req option for USB4	Tektronix	Software	Req.	1	
SDLA64	Pre-req option for USB4	Tektronix	Software	Req.	1	
PMCABLE1M	Phase Mated Cable pair, 2.92mm (M-M)	Tektronix	Cable	Req.	2	
10XL	Extended record length 125M/channel, useful for debug.	Tektronix	Software	Opt.	1	
DPO7AFP (SX scopes only)	Aux front panel	Tektronix	Equipment	Opt.	1	
640-0535-000 and 640-0847-000	Thunderbolt Micro-Controller (TBT-TPA-UHG2) and fixtures (TBT-TPA-PR)	Wilder	Equipment	Req.	1	Ordered if device is Titan Ridge or Alpine Ridge
640-0961-000	USB4 controller and fixture (USB4-TPA-UC-K)	Wilder	Equipment	Req.	1	Ordered if device is Ice Lake, Goshen Ridge, Maple Ridge, or Tiger Lake
SM8852	2.92mm (female) to SMP (female) Cable or Adapter	Fairview Microwave	Accessory	Req.	4	
ST2643	SMP terminators	Fairview Microwave	Accessory	Req.	4	

Comprehensive and Adaptable Thunderbolt Solutions

Thunderbolt 3/4 Generation 2/3 Receiver Compliance Solution

Item	Description	Vendor	Type	R/O	Qty	Notes
MP1900A	20Gb/s, BERT configuration available upon request	Anritsu	Equipment	Req.	1	20Gb/s minimum, refer to Anritsu rep for specific options needed…i.e. Error Detector, Equalization, and Link Training
DPO72304SX or DPO72304DX	≥21GHz, 2-channel oscilloscope	Tektronix	Equipment	Req.	1	21GHz Minimum BW
USB4	TekExpress Thunderbolt 3 & Thunderbolt 4 Tx Compliance/Debug Automation Solution (Requires Opt. CIO, DJA, SDLA)	Tektronix	Software	Req.	1	GRL SW uses our measurement engine for stressed eye calibration
CIO	Pre-req option for USB4	Tektronix	Software	Req.	1	
DJA	Pre-req option for USB4	Tektronix	Software	Req.	1	
SDLA64	Pre-req option for USB4	Tektronix	Software	Req.	1	
PMCABLE1M	Precision Phase Matched Cable Pair, 1m	Tektronix	Equipment	Req.	3	
640-0535-000 and 640-0847-000	Thunderbolt Micro-Controller (TBT-TPA-UHG2) and fixtures (TBT-TPA-PR)	Wilder	Equipment	Req.	1	Ordered if device is Titan Ridge or Alpine Ridge
640-0961-000	USB4 controller and fixture (USB4-TPA-UC-K)	Wilder	Equipment	Req.	1	Ordered if device is Ice Lake, Goshen Ridge, Maple Ridge, or Tiger Lake
ST2643	SMP terminators	Fairview Microwave	Accessory	Req.	4	
SM8852	2.92mm (female) to SMP (female) Cable or Adapter	Fairview Microwave	Accessory	Req.	6	
PCIe Gen4 ISI Fixture	ISI fixture	PCI-SIG	Equipment	Req.	1	Recommended for use until official fixture available from USBIF

Click here to learn more about our Thunderbolt solutions.