# Getting Started with TDSDVI

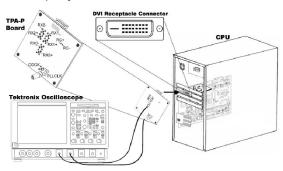
Side one of this Quick Reference Guide is designed to get you started making measurements with the DVI Compliance Test Solution (TDSDVI). Side two contains a complete menu tree for the TDSDVI software.

**NOTE.** For complete operating instructions and General Safety information, refer to the Online Help for the application.

The TDSDVI software application tests for compliance with DVI specifications. TDSDVI software is designed to meet the compliance test requirements of the DVI industry for physical layer measurements. Supported tests include Eye Diagram Test, Peak-to-Peak Jitter, Inter-Pair Skew, Intra-Pair Skew, and Rise and Fall Time testing.

## Performing Transmitter Eye-diagram Test

- 1. From the TDS Windows menu, select File > Run Application > DVI Compliance Test Solution.
- **2.** Attach the TPA-P test fixture to the device under test. To calculate Tbit, connect the differential probe to Rxc+ and Rxc- (transmitter clock). For Eye measurement, connect another differential probe to Rx0+ and Rx0-(data pair).
- 3. Connect an SMA cable to the recovered clock (PLL Clock) output on the fixture.



Connect the differential probes and the SMA cable from 4. the test fixture to your TDS oscilloscope.

- To calculate Tbit, select the Tbit button on the Define 5. Tbit pane of the application.
- **6.** Select the appropriate channel.
- 7. Press the "Running Man" icon to run the application. The Tbit value displays in the Value field.

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Select Measurement > Select >Transmitter> Eye Diagram. (Or, in the Transmitter tab, select the Eye 8. Diagram measurement.)

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Define Tbit To Clock Colouise Chil W Value Colouise Chil W Value	Select Measurement Tanemitter Cable Readiver Eye Alige and Par Pk Diagram Fail Time Jiter InterPair Skew Skew	Configure	Define Tbit value before taking any measurements Run/Stop			
Menu: Measurements > Select Hint: Define Tbit.then select a measurement to configure Status : Ready						

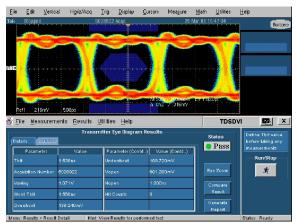
#### 9. Press the configure button to configure the application.



10. Press the "Running Man" icon to run the application.



### The detailed results and the eye diagram display as shown below.



11. Select Utilities > Report Generator from the TDSDVI menu to generate a compliance test report.

### For up to date information on Tektronix oscilloscope solutions for DVI testing, go to www.tektronix.com/dvi.

#### **TDSDVI Ordering Information**

This application supports TDS7704B, CSA7404B, TDS7404B, TDS7254B, CSA7404, TDS7404, TDS7254, TDS6604, and TDS6404 series oscilloscopes.

Order Option DVI (along with an oscilloscope).

Order TDS6/7 UP, TDS7B UP, CSA7B UP, or CSA7 UP, Option DVI (if ordered as an upgrade to an existing oscilloscope).

#### **Recommended Accessories**

P7350, P7330, P6330 - Differential Probes

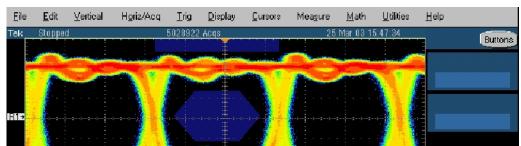
P7240 - Single ended probes

AWG510, AWG520, AWG610, AWG710 - Arbitrary Waveform Generator

DG2020A - Data Generator

TDS8000/ 80E04 - Time Domain Reflectometer

TDSJIT3 - Jitter analysis package



TDSDVI **Compliance Test Solution** Reference

Ref1 216mY	500ps		W SOLDS LODGESS E A Ch2 7 S16mY	TT Ups/ki	
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Details Statistics	Trai	Status	Define Tbit value before taking any		
Parameter	Value	Parameter (Contd)	Value (Contd)	Pass	measurements
Tbit	1.538ns	Undershoot	198.720m∨		Run/Stop
Acquistion Number	5028922	Vopen	691.200mV	Eye Zoom	×
Vawing	1.071V	Hopen	1.300ns	Compare	
Worst Tbit	1.560ns	Hit Counts	0	Result	
Overshoot	138.240mV			Generate Report	
vlenu: Results > Result Detail Hint: View Results for performed test Status : Re					

www.tektronix.com



## **TDSDVI** Menu Tree

	Recall Default —	Yes   No					
		File browser					
	Save	Save   Cancel					
		File browser					
	Recall ———	Open   Cancel					
	Recently Saved —	List of Files					
	Recently Recalled —						
File ———	Trecentry Trecalled -			•	ing   Prompt for signal connection		
		General —	Ref Wfm deletion prompt for Eye   Show report after generation   Use zoomed eye mask in report				
	Preferences —		Number of acquisitions				
			Prompt for resu				
		Advanced —	Prompt for Tbit	validity ram Test Point —	Test at TP2 Test at TP3		
	Minimize		Number of acqu		Test at TP2 & TP3		
		Yes		Restore Scope Settings			
	Exit	- No		Gennys			
		Cancel	Calculated —	Tx Clock	- Ch1, Ch2, Ch3, Ch4		
		Define Tbit	-				
	_		User —	- Value	_		
	Select	_	Transmitter —		Eye Diagram   Rise and Fall Time   Pk-Pk Jitter   Intra-Pair Skew   Inter-Pair Skew		
		Select Measurement	Cable		High-Amp Eye Diagram   Low-Amp Eye Diagram		
					Pk-Pk Jitter   Intra-Pair Skew   Inter-Pair Skew		
			Receiver —		High-Amp Eye Diagram   Low-Amp Eye Diagram		
Measurements —	-	Transmitter Eye Diagram	I <del></del>		Data   Trigger   Pair   Number of Eyes   Calculate Vswing		
		Transmitter Rise & Fall Ti	ime ————		– Data   Trigger   Pair   Hysteresis   Calculate Vswing		
		Transmitter Pk - Pk Jitter			Tx Clock   Trigger		
		Transmitter Intra-Pair Ske	(ew		- Source1   Source2   Pair   Hysteresis		
		Transmitter Inter-Pair Ski			Source1   Source2   Differential Probe		
			W		Pair1   Pair2   Hysteresis   Polarity		
	Configure —	Cable High-Amplitude Ey	e Diagram		- Data   Trigger   Pair   Number of Eyes		
		Cable Low-Amplitude Eye Diagram			Data   Trigger   Pair   Number of Eyes		
		Cable Pk-Pk Jitter			Tx Clock   Trigger		
		Cable Intra-Pair Skew			   Source1   Source2   Pair   Hysteresis		
					Source1   Source2   Differential Probe		
		Cable Inter-Pair Skew			Pair1   Pair2   Hysteresis   Polarity		
		Receiver High-Amp Eye Diagram			Select Source   Select Pair   Number of Eyes		
		Receiver Low-Amp Eye Diagram			Select Source   Select Pair   Number of Eyes		
Results							
			Device Detail -		_ ID   Description   Prefix		
		Report Setup	Mode		Manual   Automatic		
	Report Generator —		Clock Frequenc	y	Defined   Resolution   Refresh Rate		
		Report Name ———	Directory   File	Name			
Utilities ———	]		_				
	Compare Desults	Select Type					
	Compare Results —	Select File(s) to Compare					
	Topics	Select Destination File					
Help	About TDSDVI						
-	Contact Tektronix						

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