



Programmable Interface Changes

Between Tektronix DSA8200 and DSA8300 Sampling Oscilloscopes

Summary of changes to the Programmable Interface (PI).Comments on GPIB and TekVisa Plug and Play (PnP)

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DSA8300 Programmable Interface Changes Introduction

Tektronix 8000 series programmable interface (PI, GPIB, TekVisa, Plug and Play PnP) is an extension of the PI developed for the original CSA8000/TDS8000 Sampling oscilloscopes in the end of 1990s. The latest step in this extension is the PI for the DSA8300.

There have been significant new developments in the high speed oscilloscope measurements and in the world of high speed serial data oscilloscope measurements in particular. To accommodate these changes the new DSA8300 Tektronix Equivalent Time Sampling Oscilloscope implements several significant changes to basic oscilloscope operation. Some of these changes modify the behavior of the programmable interface (PI).

This document summarizes the changes of the programmable interface so as to aid the users of older Tek 8000 sampling oscilloscopes, as well as users of other sampling oscilloscopes, to move their test code to DSA8300.

The oscilloscope Firmware version commented upon in this document is V 6.0.* ; it is expected that from the PI point of view the V 6.1 expected in 2012/Q1 will be the same or nearly the same.

- **Plug and Play (PnP) comments**
DSA8300 implements a new PnP driver. The name of the driver is "tkdsa83".
- **IVI driver**
IVI driver is not currently available for Tektronix Sampling oscilloscopes.

- **Factory Default changes** (sorted approximately in the order of impact)

Following factory defaults changed between the DSA8200 and DSA8300; see Section C of respective Programmers Manual for details.

1. Trigger Mode default is Clock (using the front panel SMA connector CLOCK INPUT), rather than the EXTERNAL DIRECT connector on the DSA8200. For typical serial data applications the CLOCK INPUT is the only trigger input needed.
2. Horizontal Record Length now defaults to 4000 points/screen, which yields appearing trace on the higher resolution screen of DSA8300. Note that a mask test with e.g. 1000 waveforms thus includes 8x more samples – and runs roughly 8x slower – than on DSA8200; please adjust your acquisition parameters accordingly – e.g. for eye mask test set the record length to 1000 points and adjust the number of waveforms for desired number of samples.
3. Default measurement type for measurements using WfmDB is now Eye
4. Autoset Type now defaults the Eye, rather than Period
5. Horizontal Display Scale adds a horizontal scale *per screen* model
6. FrameScan values and behavior are modified
7. Horizontal position of Main and Magnify windows and their Reference points are changed
8. Print InkSaver mode is On, rather than Off
9. Clock Recovery defaults to channel *none*, rather than Ch1
10. Measurement gating default position is changed
11. Export Waveform Data Stop is set to 1000, rather than 500, samples
12. Certain waveform, cursor etc. colors are changed together with the improved colors of the GUI, both enabled by the larger color palette of DSA8300
13. Exact Cursor position default is changed
14. Display persistence default is changed slightly
15. Import of waveform data into the oscilloscope: number of points and position are changed

- **Compensation Changes**

Tektronix recommends that to minimize changes in vertical offset between Compensation and normal Operation, the DSA8300 compensation of the mainframe should be done without trigger signal, while the compensation of the modules should be done with a trigger signal either the same or similar as the normal operation's trigger.

Consequently the compensation of ALL (both the oscilloscope and the modules) has been removed, and compensation of ALL_MODULES has been added.

Additional Resources

- DSA8300 User Manual: For details on general oscilloscope behavior.
- DSA8300 Programmer Manual: For details on programmable commands and the most up-to-date document.
- 80SJNB User Manual: For details on programmable commands of oscilloscope applications, such as 80SJNB Jitter, Noise and BER application.

Table 1. List of Changes to Plug and Play, with PI Commands

Action	Explanation	Information/From	To	PI command
Replace	Only one product is supported	#define tktds8k_PROD_ID1 "TEKTRONIX,TDS/CSA8000" #define tktds8k_PROD_ID2 "TEKTRONIX,TDS8000" #define tktds8k_PROD_ID3 "TEKTRONIX,CSA8000" #define tktds8k_PROD_ID4 "TEKTRONIX,TDS8200" #define tktds8k_PROD_ID5 "TEKTRONIX,CSA8200" #define tktds8k_PROD_ID6 "TEKTRONIX,DSA8200"	#define tkdsa83_PROD_ID1 "TEKTRONIX,DSA8300"	
Add	New, longer record lengths are supported		#define tkdsa83_HORZ_RECLEN_8000 (8000L) #define tkdsa83_HORZ_RECLEN_16000 (16000L)	
Delete	Trigger Mode obsolete, use Free Run in place of AUTO.	static ViStringTrigMode[2] = {"AUTO","NORMAL"};		
Add	New Acquisition mode. Use Eye or Pattern for serial data.		static ViStringScopeMode[3] = {"EYE","PATTERN","OTHER"};	
Add	New Display Scale commands.		static ViStringDisplayScale[2] = {"PERDIVISION", "PERSCREEN"};	
Change	Changes to the Trigger Source selections.	static ViStringTrigSource[4] = {"EXTDIRECT","EXTPRESCALER","INTCLK", "CLKRECOVERY"};	static ViStringTrigSource[6] = {"FREERUN","EXTDIRECT","EXTPRESCALER","TDR","C1CLKRECOVERY", "C3CLKRECOVERY"};	
Delete	Pattern Sync module (80A06) functionality has been absorbed into the mainframe and the Pattern mode.	static ViStringpSyncSource[9] = {"CH1","CH2","CH3","CH4","CH5","CH6", "CH7","CH8","TRIGPROBE"};		
Change	Timebase mode now to only work with TDR. Short term timebase mode obsolete and removed.	static ViStringVertTBMMode[3]={"SHORTTERM","LOCKEXT","LOCKINT"};	static ViString TDR10MHzMode[3]={ "LOCKEXT","LOCKINT"};	
Change	This function needs to use the *OPT? command and search the returned string for "Advanced Trigger". "Advanced Trigger" in the string indicates the pattern sync capability is enabled.	ViBoolean tktds8k_PSyncAvail(ViSessioninstrumentHandle)		
Delete	This function no longer needed, only one pattern sync capability in the mainframe.	ViBoolean tktds8k_PSyncSourceValid(ViSessioninstrumentHandle, ViInt32 chan)		

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Action	Explanation	Information/From	To	PI command
Delete	Timebase mode is no longer available.	tktds8k_SetHorizontalTimebaseMode tktds8k_GetHorizontalTimebaseMode		HORizontal:TBMode
Add	These functions set horizontal parameters in bits instead of time. They use these new commands that only apply to the main timebase.		ViStatus_VI_FUNC tkdsa83_SetHorizontalMainBitsScale (ViSessioninstrumentHandle, ViReal64 horizontalBitsScale) ViStatus_VI_FUNC tkdsa83_SetHorizontalMainBitsPosition (ViSessioninstrumentHandle, ViReal64 horizontalBitsPosition) ViStatus_VI_FUNC tkdsa83_GetHorizontalMainBitsScale (ViSessioninstrumentHandle, ViReal64 *horizontalBitsScale) ViStatus_VI_FUNC tkdsa83_GetHorizontalMainBitsPosition (ViSessioninstrumentHandle, ViReal64 *horizontalBitsPosition)	HORizontal:MAIn:BITS:SCALE<nr3 > HORizontal:MAIn:BITS:POSition< nr3>
Add	Ssupport for longer record lengths added to these function. Length of 20 no longer supported.		ViStatus_VI_FUNC tkdsa83_SetHorizontalRecordLength (ViSessioninstrumentHandle, ViInt32 timebaseSelector, ViInt32 recordLength) ViStatus_VI_FUNC tkdsa83_GetHorizontalRecordLength (ViSessioninstrumentHandle, ViInt32 timebaseSelector, ViInt32 *recordLength)	HORizontal:MAIn:RECOrdlength {50 100 250 500 1000 2000 4000 8000 16000} HORizontal:MAG1:RECOrdlength {50 100 250 500 1000 2000 4000} HORizontal:MAG2:RECOrdlength {50 100 250 500 1000 2000 4000}
Delete	This capability is no longer supported.	ViStatus_VI_FUNC tktds8k_GetFrameScanStartBit (ViSessioninstrumentHandle, ViReal64 *startBit)		HORizontal:FRAMEScan:STARTBit <nr3>
Modify	Remove the startBit parameter (no longer supported).	ViStatus_VI_FUNC tktds8k_SetFrameScanAcquisition (ViSessioninstrumentHandle, ViInt32 autoPosition, ViInt32 mode, ViReal64 startBit, ViReal64 scanBits)	ViStatus_VI_FUNC tkdsa83_SetFrameScanAcquisition (ViSessioninstrumentHandle, ViInt32 mode, ViReal64 scanBits)	

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Action	Explanation	Information/From	To	PI command
Replace	External 10MHz reference now only used with TDR. The new functions will use the new command TDR:EXT10MHzref:FREQ.	ViStatus_VI_FUNC tktds8k_SetExt10MHzRefFrequency (ViSessioninstrumentHandle, ViReal64 frequency) ViStatus_VI_FUNC tktds8k_GetExt10MHzRefFrequency (ViSessioninstrumentHandle, ViReal64 *frequency)	ViStatus_VI_FUNC tkdsa83_SetTDRExt10MHzRefFrequency (ViSessioninstrumentHandle, ViReal64 frequency) ViStatus_VI_FUNC tkdsa83_GetTDRExt10MHzRefFrequency (ViSessioninstrumentHandle, ViReal64 *frequency)	Old: HOrizontal:EXT10MHzref:FREQ <n> New: TDR:EXT10MHzref:FREQ
Modify	Now to be only used with TDR. The new functions will use the new command TDR:REF10Mhz {LOCKInt LOCKExt}.		ViStatus_VI_FUNC tkdsa83_SetTDRRef10MHzMode (ViSessioninstrumentHandle, ViInt32 ref10MHzMode) ViStatus_VI_FUNC tkdsa83_GetTDRRef10MHzMode (ViSessioninstrumentHandle, ViInt32 *ref10MHzMode)	Old: HOrizontalTBMMode {SHORTTerm LOCKExt LOCKInt} New: TDR:CH<x>:REF10Mhz {LOCKExt LOCKInt}
Modify	Change this function to use the new Trigger Mode parameter (Eye, Pattern or Other).	ViStatus_VI_FUNC tktds8k_SetExtDirectTriggerParameters (ViSessioninstrumentHandle, ViInt32 mode, ViReal64 holdOff, ViInt32 slope, ViInt32 user50PcntlevelSelector, ViReal64 userDefinedLevel)	ViStatus_VI_FUNC tkdsa83_SetExtDirectTriggerParameters (ViSessioninstrumentHandle, ViReal64 holdOff, ViInt32 slope, ViInt32 user50PcntlevelSelector, ViReal64 userDefinedLevel)	
Modify	This function to use the new Trigger Source parameters and the mainframe pattern sync capability.	ViStatus_VI_FUNC tktds8k_SetTriggerSource (ViSessioninstrumentHandle, ViInt32 source)	ViStatus_VI_FUNC tkdsa83_SetTriggerMode (ViSessioninstrumentHandle, ViInt32 mode) ViStatus_VI_FUNC tkdsa83_GetTriggerSource (ViSessioninstrumentHandle, ViChartriggerSource[])	New: TRIGger:SOUrce {FREerun EXTDirect TDR EXTPrescaler C1CLKRec C3CLKRec}
Modify	Modification of this function to use the new Trigger Mode parameters.	ViStatus_VI_FUNC tktds8k_SetTriggerMode (ViSessioninstrumentHandle, ViInt32 mode)	ViStatus_VI_FUNC tkdsa83_SetTriggerMode (ViSessioninstrumentHandle, ViInt32 mode) ViStatus_VI_FUNC tkdsa83_GetTriggerMode (ViSessioninstrumentHandle, ViInt32 *mode)	
Modify	Removed the Mode parameter.	ViStatus_VI_FUNC tktds8k_SetExternalPrescalerParameters (ViSessioninstrumentHandle, ViInt32 mode, ViReal64 holdOff)	ViStatus_VI_FUNC tkdsa83_SetExternalPrescalerParameters (ViSessioninstrumentHandle, ViReal64 holdOff)	New: TRIGger:MODE {OTHer EYE PATtern}

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Action	Explanation	Information/From	To	PI command
Delete	Internal clock is being replace with TDR as a Trigger Source.	ViStatus_VI_FUNC tktds8k_SetIntClockTriggerParameters (ViSessioninstrumentHandle, ViInt32 internalClockRate)		
Change	Changed this function to use the new Trigger Source parameters.	ViStatus_VI_FUNC tktds8k_SetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 clockRecoverySource, ViInt32 clockRecoveryValue)	ViStatus_VI_FUNC tkdsa83_SetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 clockRecoverySource, ViInt32, scopeMode, ViInt32 clockRecoveryValue)	New: New: TRIGger:SOUrce {FREerun EXTDirect TDR EXTPrescaler C1CLKRec C3CLKRec} New TRIGger:MODe {EYE PATtern OTHER}
Change	Changed this function to use the new Trigger Source parameters.	ViStatus_VI_FUNC tktds8k_SetClockRecoveryUserValue (ViSessioninstrumentHandle, ViInt32 clockRecoverySource, ViReal64 userValue)	ViStatus_VI_FUNC tkdsa83_SetClockRecoveryUserValue (ViSessioninstrumentHandle, ViInt32 clockRecoverySource, ViReal64 userValue)	New: TRIGger:SOUrce {FREerun EXTDirect TDR EXTPrescaler C1CLKRec C3CLKRec}
Delete	This function is no longer needed, thus not supported.	ViStatus_VI_FUNC tktds8k_SetMetastabilityReject (ViSessioninstrumentHandle, ViInt32 metaReject)		Deleted: TRIGger:METAReject {ON OFF}
Delete	This function is no longer supported.	ViStatus_VI_FUNC tktds8k_SetGatedTriggerState (ViSessioninstrumentHandle, ViInt32 state)		Deleted: TRIGger:GATEd {ON OFF}
Modify	Removed the PSyncSource parameter - functionality absorbed into the mainframe.	ViStatus_VI_FUNC tktds8k_SetPSyncTriggerParameters (ViSessioninstrumentHandle, ViInt32 PSyncSource, ViReal64 dataRate, ViInt32 patternLength, ViInt32 data, ViInt32 clock)	ViStatus_VI_FUNC tkdsa83_SetPSyncTriggerParameters (ViSessioninstrumentHandle, ViReal64 dataRate, ViInt32 patternLength, ViInt32 data, ViInt32 clock)	Deleted: TRIGger:PSYNc:SOUrce
Delete	This function is no longer supported.	ViStatus_VI_FUNC tktds8k_SetPSyncSource (ViSessioninstrumentHandle, ViInt32 PSyncSource)		Deleted: TRIGger:PSYNc:SOUrce
Modify	Removed the PSyncSource parameter - functionality absorbed into the mainframe.	ViStatus_VI_FUNC tktds8k_SetPSyncDataRate (ViSessioninstrumentHandle, ViInt32 PSyncSource, ViReal64 dataRate)	ViStatus_VI_FUNC tkdsa83_SetPSyncDataRate (ViSessioninstrumentHandle, ViReal64 dataRate) ViStatus_VI_FUNC tkdsa83_GetPSyncDataRate (ViSessioninstrumentHandle, ViReal64 *dataRate)	Deleted: TRIGger:PSYNc:SOUrce

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Action	Explanation	Information/From	To	PI command
Modify	Removed the PSyncSource parameter - functionality absorbed into the mainframe.	ViStatus_VI_FUNC tktds8k_SetPSyncPatternLength (ViSessioninstrumentHandle, ViInt32 PSyncSource, ViInt32 patternLength)	ViStatus_VI_FUNC tkdsa83_SetPSyncPatternLength(ViSessioninstrumentHandle, ViReal64 dataRate) ViStatus_VI_FUNC tkdsa83_GetPSyncPatternLength (ViSessioninstrumentHandle, ViReal64 *dataRate)	Deleted: TRIGger:PSYNc:SOURce
Modify	Remove the PSyncSource parameter - functionality absorbed into the mainframe.	ViStatus_VI_FUNC tktds8k_SetPSyncDataClockRatio (ViSessioninstrumentHandle, ViInt32 PSyncSource, ViInt32 data, ViInt32 clock)	ViStatus_VI_FUNC tkdsa83_SetPSyncDataClockRatio (ViSessioninstrumentHandle, ViInt32 data, ViInt32 clock) ViStatus_VI_FUNC tkdsa83_GetPSyncDataClockRatio (ViSessioninstrumentHandle, ViInt32 *data, ViInt32 *clock)	Deleted: TRIGger:PSYNc:SOURce
Delete	This function is no longer supported.	ViStatus_VI_FUNC tktds8k_SetPSyncRelativeTrigger (ViSessioninstrumentHandle, ViInt32 relativeBit)		Deleted: TRIGger:PSYNc:RBIT
Delete	This function is replaced with the GetTDRIntRate.	ViStatus_VI_FUNC tktds8k_GetTriggerInternalClockRate (ViSessioninstrumentHandle, ViReal64 *internalClockRate)		Deleted: TRIGger:INTRate
Modify	Modify this function to use the new Trigger Source parameters for clock recovery.	ViStatus_VI_FUNC tktds8k_GetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 *clockRecoveryValue, ViCharclockRecoveryList[], ViInt32 *clockRecoverySource)	ViStatus_VI_FUNC tkdsa83_GetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 *clockRecoverySource, ViInt32 *scopeMode, ViInt32 *clockRecoveryValue)	ViStatus_VI_FUNC tkdsa83_GetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 *clockRecoverySource, ViInt32 *scopeMode, ViInt32 *clockRecoveryValue)
Delete	This function is no longer supported.	ViStatus_VI_FUNC tktds8k_GetMetastabilityReject (ViSessioninstrumentHandle, ViInt32 *metaReject)		Deleted: TRIGger:METAReject {ON OFF}
Delete	This function is no longer supported.	ViStatus_VI_FUNC tktds8k_GetGatedTriggerState (ViSessioninstrumentHandle, ViInt32 *state)		Deleted: TRIGger:GATED

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Action	Explanation	Information/From	To	PI command
Modify	Remove the PSyncSource parameter - functionality absorbed into the mainframe.	ViStatus_VI_FUNC tkds8k_GetPSyncTriggerParameters (ViSessioninstrumentHandle, ViInt32 *PSyncSource, ViReal64 *dataRate, ViInt32 *patternLength, ViInt32 *data, ViInt32 *clock, ViInt32 *relativeBit)	ViStatus_VI_FUNC tkdsa83_GetPSyncTriggerParameters (ViSessioninstrumentHandle, ViReal64 *dataRate, ViInt32 *patternLength, ViInt32 *data, ViInt32 *clock, ViInt32 *relativeBit)	Deleted: TRIGger:PSYNc:SOURce
Delete	This function is no longer supported.	ViStatus_VI_FUNC tkdsa83_GetPSyncSource (ViSessioninstrumentHandle, ViInt32 *PSyncSource)		Deleted: TRIGger:PSYNc:SOURce
Modify	Remove the PSyncSource parameter - functionality absorbed into the mainframe.	ViStatus_VI_FUNC tkds8k_GetPSyncDataRate (ViSessioninstrumentHandle, ViInt32 PSyncSource, ViReal64 *dataRate)	ViStatus_VI_FUNC tkdsa83_GetPSyncDataRate (ViSessioninstrumentHandle, ViReal64 *dataRate)	Deleted: TRIGger:PSYNc:SOURce
Delete	This function is no longer supported.	ViStatus_VI_FUNC tkdsa83_GetPSyncRelativeTrigger (ViSessioninstrumentHandle, ViInt32 *relativeBit)		Deleted: TRIGger:PSYNc:RBIT
Add	New functions for a new command.		ViStatus_VI_FUNC tkdsa83_GetHorizontalDisplayScaleSeconds (ViSessioninstrumentHandle, ViInt32 *displayScale) ViStatus_VI_FUNC tkdsa83_SetHorizontalDisplayScaleSeconds (ViSessioninstrumentHandle, ViInt32 displayScale)	HORizontal:DISPlayscale:SECond s {PERDivision PERScreen}
Add	New functions for a new command.		ViStatus_VI_FUNC tkdsa83_GetHorizontalDisplayScaleBits (ViSessioninstrumentHandle, ViInt32 *displayScale) ViStatus_VI_FUNC tkdsa83_SetHorizontalDisplayScaleBits (ViSessioninstrumentHandle, ViInt32 displayScale)	HORizontal:DISPlayscale:BITS {PERDivision PERScreen}

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Action	Explanation	Information/From	To	PI command
Add	New functions for a new command.		ViStatus_VI_FUNC tkdsa83_GetHorizontalDisplayScaleDistance (ViSessioninstrumentHandle, ViInt32 *displayScale) ViStatus_VI_FUNC tkdsa83_SetHorizontalDisplayScaleDistance(ViSessioninstrumentHandle, ViInt32 displayScale)	HORizontal:DISPlayscale:DISTance {PERDivision PERScreen}
Add	New functions for a new command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryEqualizer(ViSessioninstrumentHandle, ViInt32 *Equalizer) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryEqualizer(ViSessioninstrumentHandle, ViInt32 *Equalizer)	TRIGger:CLKRec:CRc:EQualizer [0-10]
Add	New functions for a new command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryModelNumber(ViSessioninstrumentHandle, ViChar *ModelNumber)	TRIGger:CLKRec:CRc:MODEInum ?
Add	New functions for a new command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryCapabilities(ViSessioninstrumentHandle, ViInt *Capabilities)	TRIGger:CLKRec:CRc:CAPabilities ?
Add	New functions for a new command.		ViStatus_VI_FUNC tkdsa83_SetClockRecoveryLockFrontPanel(ViSessioninstrumentHandle) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryUnLockFrontPanel(ViSessioninstrumentHandle)	TRIGger:CLKRec:CRc:LOCKFp [ON OFF]
Add	New functions for a new command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryHalfrate(ViSessioninstrumentHandle, ViInt *Halfrate)	TRIGger:CLKRec:CRc:HALFRate?

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Action	Explanation	Information/From	To	PI command
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryAutosetConfig(ViSessioninstrumentHandle, ViInt * configDev) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryAutosetConfig (ViSessioninstrumentHandle, ViIntconfigDev)	TRIGger:CLKRec:CRC:AUTOSConf igdv [ON OFF]
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryClockAmplitude (ViSessioninstrumentHandle, ViReal64 *amplitude) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryClockAmplitude (ViSessioninstrumentHandle, ViReal64 amplitude)	TRIGger:CLKRec:CRC:CLOCKAmpl itude<NR3>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryClockOutput(ViSessioninstr umentHandle, ViInt *output) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryClockOutput (ViSessioninstrumentHandle, ViInt output)	TRIGger:CLKRec:CRC:CLOCKOutp ut [ON OFF]
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_SetClockRecoveryCreateTestStandard (ViSessioninstrumentHandle, ViChar *standardName)	TRIGger:CLKRec:CRC:CREATESTa ndard<Qstring>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryDataRate (ViSessioninstrumentHandle, ViReal64 *dataRate)	TRIGger:CLKRec:CRC:DATARate?
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_SetClockRecoveryDeleteStandard (ViSessioninstrumentHandle, ViChar *standardName)	TRIGger:CLKRec:CRC:DELETESTa ndard<Qstring>

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Action	Explanation	Information/From	To	PI command
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryDeviceName (ViSessioninstrumentHandle, ViChar *deviceName) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryDeviceName (ViSessioninstrumentHandle, ViChar *deviceName)	TRIGger:CLKRec:CR:DEVICENam e<Qstring>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryEdgeDensity(ViSessioninstr umentHandle, ViReal64 *edgeDensity)	TRIGger:CLKRec:CR:EDGEDEnsity?
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryEdgeDensityMode(ViSessio ninstrumentHandle, ViInt32 *edgeDensityMode) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryEdgeDensityMode(ViSession instrumentHandle, ViInt32 edgeDensityMode)	TRIGger:CLKRec:CR:EDGEDENSI TYMode [NOMinal ON_Lock]
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryExpansioniBoardRev(ViSessi oninstrumentHandle, ViChar *revision)	TRIGger:CLKRec:CR:EXPrev?
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryFPGARev(ViSessioninstrum entHandle, ViChar *revision)	TRIGger:CLKRec:CR:FPGarev?
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryHardwareRev(ViSessioninst rumentHandle, ViChar *revision)	TRIGger:CLKRec:CR:HWRev?
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryLockMode(ViSessioninstru mentHandle, ViInt32 *lockMode) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryLockMode(ViSessioninstrum entHandle, ViInt32 llockMode)	TRIGger:CLKRec:CR:LOCKMode [MANual AUTOMATIC]

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Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryLockRange(ViSessioninstrumentHandle, ViReal64 *lockRange) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryLockRange(ViSessioninstrumentHandle, ViReal64 lockRange)	TRIGger:CLKRec:CR:LOCKRange <NR3>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryLockState(ViSessioninstrumentHandle, ViInt32 *lockState)	TRIGger:CLKRec:CR:LOCKState [UNLocked ACQuireinglock LOCKed HIGHJitter]
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryLoopBandwidth(ViSessioninstrumentHandle, ViReal64 *loopBandwidth) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryLoopBandwidth(ViSessioninstrumentHandle, ViReal64 loopBandwidth)	TRIGger:CLKRec:CR:LOOPBand width<NR3>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryNominalEdgeDensity(ViSessioninstrumentHandle, ViReal64 *nominalEdgeDensity) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryNominalEdgeDensity(ViSessioninstrumentHandle, ViReal64 nominalEdgeDensity)	TRIGger:CLKRec:CR:NOMEdged ensity<NR3>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryNominalFrequency(ViSessioninstrumentHandle, ViReal64 *nominalFrequency) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryNominalFrequency(ViSessioninstrumentHandle, ViReal64 nominalFrequency)	TRIGger:CLKRec:CR:NOMFreque ncy<NR3>

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Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryPeakRange(ViSessioninstrumentHandle, ViReal64 *peakRange) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryPeakRange(ViSessioninstrumentHandle, ViReal64 peakRange)	TRIGger:CLKRec:CR:PEAKing<NR3>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryPhaseErrorLimit(ViSessioninstrumentHandle, ViReal64 *phaseErrorLimit) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryPhaseErrorLimit(ViSessioninstrumentHandle, ViReal64 phaseErrorLimit)	TRIGger:CLKRec:CR:PHASEERRLimit<NR3>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryPhaseErrorPeakToPeak(ViSessioninstrumentHandle, ViReal64 *phaseErrorPeakToPeak)	TRIGger:CLKRec:CR:PHASEERRMS?
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_SetClockRecoveryRestoreConfiguration(ViSessioninstrumentHandle, ViInt32 *configuration)	TRIGger:CLKRec:CR:RCONfigdevice [POWER_ON SETUP_1 SETUP_2 SETUP_3 SETUP_4 FACTORY]
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_SetClockRecoveryRelock(ViSessioninstrumentHandle)	TRIGger:CLKRec:CR:RELock
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_SetClockRecoveryResetLockCount(ViSessioninstrumentHandle)	TRIGger:CLKRec:CR:RESETLockcount
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_SetClockRecoverySaveConfiguration(ViSessioninstrumentHandle, ViInt32 *configuration)	TRIGger:CLKRec:CR:SCONfigdevice [POWER_ON SETUP_1 SETUP_2 SETUP_3 SETUP_4]
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoverySerialNumber(ViSessioninstrumentHandle, ViChar *serialNumber)	TRIGger:CLKRec:CR:SERialnum?

Table 1. List of Changes to Plug and Play, with PI Commands

Action	Explanation	Information/From	To	PI command
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryStandard(ViSessioninstrumentHandle, ViChar *standard) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryStandard(ViSessioninstrumentHandle, ViChar *standard)	TRIGger:CLKRec:CR:STANdard<Qstring>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoveryStandardList(ViSessioninstrumentHandle, ViCharstandardList[])	TRIGger:CLKRec:STANDARDList?
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoverySubclockAmplitude(ViSessioninstrumentHandle, ViReal64 *subclockAmplitude) ViStatus_VI_FUNC tkdsa83_SetClockRecoverySubclockAmplitude(ViSessioninstrumentHandle, ViReal64 subclockAmplitude)	TRIGger:CLKRec:CR:SUBCLOCKAmpl<NR3>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoverySubclockDivisionRatio(ViSessioninstrumentHandle, ViInt32 *subclockDivisionRatio) ViStatus_VI_FUNC tkdsa83_SetClockRecoverySubclockDivisionRatio(ViSessioninstrumentHandle, ViInt32 subclockDivisionRatio)	TRIGger:CLKRec:CR:SUBCLOCKDiv<NR1>
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoverySubclockDivisionList(ViSessioninstrumentHandle, ViInt32 subclockDivisionList[])	TRIGger:CLKRec:CR:SUBCLOCKDIVList?
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoverySubclockOutput(ViSessioninstrumentHandle, ViInt *output) ViStatus_VI_FUNC tkdsa83_SetClockRecoverySubclockOutput(ViSessioninstrumentHandle, ViInt output)	TRIGger:CLKRec:CR:SUBCLOCKOutput [ON OFF]

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Action	Explanation	Information/From	To	PI command
Add	New functions for an existing command.		ViStatus_VI_FUNC tkdsa83_GetClockRecoverySoftwareRevision(ViSessionInstrumentHandle, ViChar *softwareRevision)	TRIGger:CLKRec::CRC:SWRev?
Add	Clock recovery configuration list.		static ViStringClockRecoveryConfigList[6] = {"POWER_up", "SETUP_1", "SETUP_2", "SETUP_3", "SETUP_4", "FACTORY"};	
Add	Clock recovery lock state list.		static ViStringClockRecoveryLockState[4] = {"UNLOCKED", "ACQUIRINGLOCK", "LOCKED", "HIGHJITTER"};	
Delete	Functionality no longer supported.	ViStatus_VI_FUNC tktds8k_SetPSyncRelativeTrigger (ViSessionInstrumentHandle, ViInt32 relativeBit)		
Delete	Functionality no longer supported.	ViStatus_VI_FUNC tktds8k_GetPSyncRelativeTrigger (ViSessionInstrumentHandle, ViInt32 *relativeBit)		
Modify	Record Length of 20 removed, 8000 and 16000 added.	ViStatus_VI_FUNC tktds8k_SetHorizontalParameters (ViSessionInstrumentHandle, ViInt32 timebaseSelector, ViReal64 horizontalScale, ViReal64 horizontalPosition, ViInt32 recordLength, ViReal64 horizontalReferencePoint)	ViStatus_VI_FUNC tkdsa83_SetHorizontalParameters (ViSessionInstrumentHandle, ViInt32 timebaseSelector, ViReal64 horizontalScale, ViReal64 horizontalPosition, ViInt32 recordLength, ViReal64 horizontalReferencePoint)	
Modify	Record Length of 20 removed, 8000 and 16000 added.	ViStatus_VI_FUNC tktds8k_GetHorizontalParameters (ViSessionInstrumentHandle, ViInt32 timebaseSelector, ViReal64 *horizontalScale, ViReal64 *horizontalPosition, ViInt32 *recordLength, ViReal64 *horizontalReferencePoint, ViReal64 *horizontalResolution, ViReal64 *firstPointTime, ViReal64 *lastPointTime)	ViStatus_VI_FUNC tkdsa83_GetHorizontalParameters (ViSessionInstrumentHandle, ViInt32 timebaseSelector, ViReal64 *horizontalScale, ViReal64 *horizontalPosition, ViInt32 *recordLength, ViReal64 *horizontalReferencePoint, ViReal64 *horizontalResolution, ViReal64 *firstPointTime, ViReal64 *lastPointTime)	
Delete	Functionality no longer supported.	ViStatus_VI_FUNC tktds8k_SetFrameScanStartBit (ViSessionInstrumentHandle, ViReal64 startBit)		

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Action	Explanation	Information/From	To	PI command
Delete	Functionality no longer supported.	ViStatus_VI_FUNC tktds8k_GetFrameScanStartBit (ViSessioninstrumentHandle, ViReal64 *startBit)		
Modify	Record Length of 20 removed, 8000 and 16000 added.	ViStatus_VI_FUNC tktds8k_SetWaveform (ViSessioninstrumentHandle, ViInt32 destination, ViReal64 waveformArray[], ViInt32 numPoints, ViReal64 XOffset, ViReal64 XIncrement, ViReal64 YScale, ViReal64 YZero, ViReal64 YMult)	ViStatus_VI_FUNC tkdsa83_SetWaveform (ViSessioninstrumentHandle, ViInt32 destination, ViReal64 waveformArray[], ViInt32 numPoints, ViReal64 XOffset, ViReal64 XIncrement, ViReal64 YScale, ViReal64 YZero, ViReal64 YMult)	
Modify	New color parameter is a COLORREF number. This change applies to all functions that accept a color parameter.	# define tktds8k_COL_MAX 15L	# define tkdsa83_COL_MAX 16777216L	
Modify	Add new color parameter.	ViStatus_VI_FUNC tktds8k_SetMaskSourceParameters (ViSessioninstrumentHandle, ViInt32 maskSource, ViInt32 sourceTimebase, ViInt32 maskStandard, ViInt32 waveformDBState, ViInt32 maskCountState) ViStatus_VI_FUNC tktds8k_GetMaskSourceParameters (ViSessioninstrumentHandle, ViInt32 *maskSource, ViInt32 *maskStandard, ViInt32 *waveformDatabaseState, ViInt32 *countState)	ViStatus_VI_FUNC tkdsa83_SetMaskSourceParameters (ViSessioninstrumentHandle, ViInt32 maskSource, ViInt32 sourceTimebase, ViInt32 maskStandard, ViInt32 waveformDBState, ViInt32 maskCountState ViInt32 maskColor) ViStatus_VI_FUNC tkdsa83_GetMaskSourceParameters (ViSessioninstrumentHandle, ViInt32 *maskSource, ViInt32 *maskStandard, ViInt32 *waveformDatabaseState, ViInt32 *countState ViInt32 *maskColor)	MASK:COLOR<NR1>

Table 1. List of Changes to Plug and Play, with PI Commands

Action	Explanation	Information/From	To	PI command
Modify	Trigger Mode parameter added to functions.	ViStatus_VI_FUNC tktds8k_SetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 clockRecoverySource, ViInt32 clockRecoveryValue) ViStatus_VI_FUNC tktds8k_GetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 *clockRecoveryValue, ViCharclockRecoveryList[], ViInt32 *clockRecoverySource)	ViStatus_VI_FUNC tkdsa83_GetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 *clockRecoveryValue, ViCharclockRecoveryList[], ViInt32 *clockRecoverySource, ViInt32 *triggerMode) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 clockRecoverySource, ViInt32 clockRecoveryValue, ViInt32 triggerMode)	TRIGger:MODe [EYE PATtern OTHER]
Modify	Trigger Mode parameter added to functions.	ViStatus_VI_FUNC tktds8k_GetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 *clockRecoveryValue, ViCharclockRecoveryList[], ViInt32 *clockRecoverySource) ViStatus_VI_FUNC tktds8k_SetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 clockRecoverySource, ViInt32 clockRecoveryValue)	ViStatus_VI_FUNC tkdsa83_GetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 *clockRecoveryValue, ViCharclockRecoveryList[], ViInt32 *clockRecoverySource, ViInt32 *triggerMode) ViStatus_VI_FUNC tkdsa83_SetClockRecoveryParameters (ViSessioninstrumentHandle, ViInt32 clockRecoverySource, ViInt32 clockRecoveryValue, ViInt32 triggerMode)	TRIGger:MODe [EYE PATtern OTHER]
Add	New function for new commands. The tcrClockRate parameter can be any value between 25kHz and 300KHz.	ViStatus_VI_FUNC tktds8k_GetTdrClockTriggerParameters (ViSessioninstrumentHandle, ViReal64 tdrClockRate) ViStatus_VI_FUNC tktds8k_SetTdrClockTriggerParameters (ViSessioninstrumentHandle, ViReal64 tdrClockRate)	ViStatus_VI_FUNC tkdsa83_GetTdrClockTriggerParameters (ViSessioninstrumentHandle, ViReal64 tdrClockRate) ViStatus_VI_FUNC tkdsa83_SetTdrClockTriggerParameters (ViSessioninstrumentHandle, ViReal64 tdrClockRate)	TDR:INTRate<NR3>
Delete	Remove unused error messages.	#define tktds8k_ERROR_PATSYNC_NO_MODULE (160+tktds8k_GENERIC_ERROR) #define tktds8k_ERROR_PATSYNC_INVALID_SOURCE (161+tktds8k_GENERIC_ERROR)		

Action	Explanation	Information/From	To	PI command
Add	New communication standard tokens to the BitsStandard[] array.		ENET41250 ENET40GB_LR4 ENET40GB_SR4 ENET100GB_ER4 ENET100GB_LR4 ENET100GB_SR10 FC8500FINAL FC14025_MMR6_1 FC14025_SMR6_1	
Add	New filters to the FilterType[] array.		INF2500 INF5000 OBSAI6144 CPRI7373 FC8500FINAL FEC12500 ENET103R4 ENET257R4 ENET103R10 INF25781 OTU27952 ENET41250 FPELECOUT	

Table 1. List of Changes to Plug and Play, with PI Commands

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Action	Explanation	Information/From	To	PI command
Add	Add/change these predefined colors for convenience.		<pre>#define tkdsa83_COLOR_BLACK 0 #define tkdsa83_COLOR_BLUE 16711680 #define tkdsa83_COLOR_AQUA 16776960 #define tkdsa83_COLOR_LIME 65280 #define tkdsa83_COLOR_FUSCHIA 16711935 #define tkdsa83_COLOR_RED 255 #define tkdsa83_COLOR_YELLOW 65535 #define tkdsa83_COLOR_WHITE 16777215 #define tkdsa83_COLOR_NAVY 8388608 #define tkdsa83_COLOR_TEAL 8421376 #define tkdsa83_COLOR_GREEN 32768 #define tkdsa83_COLOR_PURPLE 8388736 #define tkdsa83_COLOR_MAROON 128 #define tkdsa83_COLOR_OLIVE 32896 #define tkdsa83_COLOR_GRAY 8421504 #define tkdsa83_COLOR_SILVER 12632193 #define tkdsa83_COLOR_CH1 65278 #define tkdsa83_COLOR_CH2 16776960 #define tkdsa83_COLOR_CH3 16711935 #define tkdsa83_COLOR_CH4 65280 #define tkdsa83_COLOR_CH5 42495 #define tkdsa83_COLOR_CH6 16724675 #define tkdsa83_COLOR_CH7 3289855 #define tkdsa83_COLOR_CH8 65475</pre>	
Add	New function for an existing command.		<pre>ViStatus _VI_FUNC tkdsa83_GetTriggerClockStatus (ViSessioninstrumentHandle, ViCharclockStatus[])</pre>	TRIGger:ClOck:StAtus?
Add	New function for an existing command.		<pre>ViStatus _VI_FUNC tkdsa83_GetPhaseReferenceStatus (ViSessioninstrumentHandle, ViInt32 chan, ViCharphaseRefStatus[])</pre>	PHAseref:CH<x>:StAtus?

T Table 1. List of Changes to Plug and Play, with PI Commands

Action	Explanation	Information/From	To	PI command
Modify	Commands for compensating both the mainframe <i>and</i> all modules simultaneously are removed. Commands for compensating all modules simultaneously are added.	Tektronix recommends that the DSA8300 compensation of the mainframe is done without trigger signal, while the compensation of the modules is done with trigger as similar to the operational trigger as possible. Consequently the compensation of ALL (both the oscilloscope and the modules) has been removed, and compensation of ALL_MODULES has been added.	tkdsa83_CompensateScope(), tkdsa83_SaveUserCompensation(), tkdsa83_RecallUserCompensation(), tkdsa83_RecallFactoryCompensation() accept a new selector tkdsa83_COMP_SELECTOR_ALL_MODULES ; selector tkdsa83_COMP_SELECTOR_ALL is obsolete.	New: COMPensate:ALLModules , COMPensate:RECALL:FACTory:ALL Modules , COMPensate:RECALL:USER:ALLMo dules , COMPensate:SAVE:USER:ALLMod ules , Removed: COMPensate:ALL , COMPensate:RECALL:FACTory:ALL , COMPensate:RECALL:USER:ALL , COMPensate:SAVE:USER:ALL ,
Add	TDR sample rate is now settable via Trigger structure.	Same as previously existing commands TDR:INTRate <NR3>, TDR:INTRate?	ViStatus tkdsa83_SetTDRIntRate (ViSession instrumentHandle, ViReal64 TDRClockRate);	TRIGger:INTRate <NR3>, TRIGger:INTRate?
Add	Setups->Mode/Trigger->Direct now supports noise rejection.		ViStatus tkdsa83_SetTriggerNoiseReject (ViSession instrumentHandle, ViInt32 noiseReject); ViStatus tkdsa83_GetTriggerNoiseReject (ViSession instrumentHandle, ViPInt32 noiseReject);	TRIGger:NOIserej , TRIGger:NOIserej?

Table 2. List of PI Commands added to the DSA8300

1	COMPensate:ALLModules	30	TRIGger:CRc:JITter:MINAmplitude
2	COMPensate:RECAll:FACTory:ALLModules	31	TRIGger:CRc:JITter:MAXAmplitude
3	COMPensate:RECAll:USER:ALLModules	32	TRIGger:CRc:JITter:BINs
4	COMPensate:SAVE:USER:ALLModules	33	TRIGger:CRc:JITter:LOGX
5	HORizontal:DISPlayscale:SEConds	34	TRIGger:CRc:JITter:LOGY
6	HORizontal:DISPlayscale:BITS	35	TRIGger:CRc:JITter:UNIts
7	HORizontal:DISPlayscale:DISTance	36	TRIGger:CRc:JITter:RISingslope
8	HORizontal:MAIn:BITS:POsition	37	TRIGger:CRc:JITter:FALLingslope
9	HORizontal:MAIn:BITS:SCALE	38	TRIGger:CRc:JITter:MEAStyle
10	TDR:REF10Mhz	39	TRIGger:CRc:JITter:RESULts:SCANs
11	TDR:EXT10MHZref:FREQ	40	TRIGger:CRc:JITter:RESULts:HZPerbin
12	TRIGger:CRc:EQUalizer	41	TRIGger:CRc:JITter:RESULts:CURVE:MIN
13	TRIGger:CRc:MODEInum	42	TRIGger:CRc:JITter:RESULts:CURVE:MAX
14	TRIGger:CRc:CAPabilities	43	TRIGger:CRc:JITter:RESULts:CURVE:AVG
15	TRIGger:CRc:LOCKFp	44	TRIGger:CRc:JITter:RESULts:CURVE:VALue
16	TRIGger:CRc:HALFRate	45	TRIGger:CRc:JITter:RESULts:CURVE:PEAk
17	TRIGger:CRc:JITter:SCANs	46	TRIGger:CRc:JITter:RESULts:CURVE:FREquency
18	TRIGger:CRc:JITter:RESOLution	47	TRIGger:CRc:JITter:RESULts:CURVE:AMPLitude
19	TRIGger:CRc:JITter:SSC	48	TRIGger:CRc:SSC:STARt
20	TRIGger:CRc:JITter:FILTER<x>:MIN	49	TRIGger:CRc:SSC:STATus
21	TRIGger:CRc:JITter:FILTER<x>:MAX	50	TRIGger:CRc:SSC:PAUSE
22	TRIGger:CRc:JITter:STARt	51	TRIGger:CRc:SSC:RESUMe
23	TRIGger:CRc:JITter:PROgress	52	TRIGger:CRc:SSC:STOP
24	TRIGger:CRc:JITter:PAUse	53	TRIGger:CRc:SSC:RESULts
25	TRIGger:CRc:JITter:RESUMe	54	TRIGger:CRc:SSC:MEASUrement
26	TRIGger:CRc:JITter:STOP	55	TRIGger:CRc:SSC:CLEAR
27	TRIGger:CRc:JITter:CLEAR	56	TRIGger:INTRate
28	TRIGger:CRc:JITter:MINFrequency	57	TRIGger:NOIserej
29	TRIGger:CRc:JITter:MAXFrequency		

Table 3. List of PI Commands Removed with DSA8300

1	COMPensate:ALL	10	SYSTem:CH<x>:PSYNc:CLKRAnge
2	COMPensate:RECALL:FACTory:ALL	11	SYSTem:CH<x>:PSYNc:PLENRAnge
3	COMPensate:RECALL:USER:ALL	12	TRIGger:PSYNc:SOURce
4	COMPensate:SAVe:USER:ALL	13	TRIGger:PSYNc:CH<x>:DATARate
5	HORizontal:TBMode	14	TRIGger:PSYNc:CH<x>:PLENgtH
6	HORizontal:FRAMescan:AUTOPosition	15	TRIGger:PSYNc:CH<x>:DCRAtio
7	HORizontal:FRAMescan:STARTBit	16	TRIGger:PSYNc:TRIGProbe:DATARate
8	SYSTem:TRIGProbe:PSYNc:CLKRAnge	17	TRIGger:PSYNc:TRIGProbe::PLENgtH
9	SYSTem:TRIGProbe:PSYNc:PLENRAnge	18	TRIGger:PSYNc:TRIGProbe:DCRAtio

Table 4. List of PI Commands Modified in DSA8300

1	TDR:INTRate	The command now accepts any value from 25 to 300KHz.
2	TRIGger:MODe	The commands AUTO, NORMAl had beed removed; new commands are EYE, PATtern and OTHER.
3	TRIGger:SOURce	The commands CLKRECovery and PSYNc had been removed; new commands added are C1CLKRec, C3CLKRec, EXTPrescaler, FREerun; also available is TDR.