

N5102A SCPI Commands



Manufacturing Part Number: N5102-90001A

Printed in USA

September 2003

© Copyright 2003 Agilent Technologies, Inc.

SCPI Commands

:CLOCK:CPS

```
DIGital:CLOCK:CPS 1|2|4
DIGital:CLOCK:CPS?
*RST           +1
```

:CLOCK:PHASe

```
:DIGital:CLOCK:PHASe 0|90|180|270
:DIGital:CLOCK:PHASe?
*RST           +0.00000000E+000
```

:CLOCK:POLarity

```
:DIGital:CLOCK:POLarity POSitive|NEGative
:DIGital:CLOCK:POLarity?
*RST           POS
```

:CLOCK:RATE

:DIGital:CLOCK:RATE <val><unit>

:DIGital:CLOCK:RATE?

Range

Parallel & Parallel Interleaved Port Configuration

Clocks Per Sample	Signal Type	LVTTL and CMOS Logic Type	LVDS Logic Type
1	IQ	1 kHz–100 MHz	1 kHz–100 MHz
2		2 kHz–150 MHz	2 kHz–200 MHz
4		4 kHz–150 MHz	4 kHz–300 MHz
1	IF	4 kHz–150 MHz	4 kHz–400 MHz

Serial Port Configuration

Word Size	LVTTL and CMOS Logic Type	LVDS Logic Type
4	4 kHz–150 MHz	4 kHz–300 MHz
5	5 kHz–150 MHz	5 kHz–300 MHz
6	6kHz–150 MHz	6 kHz–300 MHz
7	7 kHz–150 MHz	7 kHz–300 MHz
8	8 kHz–150 MHz	8 kHz–300 MHz
9	9 kHz–150 MHz	9 kHz–300 MHz
10	10 kHz–150 MHz	10 kHz–300 MHz
11	11 kHz–150 MHz	11 kHz–300 MHz
12	12 kHz–150 MHz	12 kHz–300 MHz
13	13 kHz–150 MHz	13 kHz–300 MHz
14	14 kHz–150 MHz	14 kHz–300 MHz
15	15 kHz–150 MHz	15 kHz–300 MHz
16	16 kHz–150 MHz	16 kHz–300 MHz

*RST: +1.00000000E+008

Resolution: millihertz

:CLOCK:REFERENCE:FREQUENCY

:DIGital:CLOCK:REFerence:FREQuency <val><unit>
:DIGital:CLOCK:REFerence:FREQuency?

*RST +1.00000000E+007 Range 1–100 MHz

:CLOCK:SKEW

:DIGital:CLOCK:SKEW <val><unit>
:DIGital:CLOCK:SKEW?

*RST +0.00000000E+000
Range up to ±127 discrete steps, with a boundary of ±5 ns

$$\text{Discrete Step Resolution: } \frac{1}{256 \times \text{Clock Rate}}$$

:CLOCK:SOURCE

:DIGital:CLOCK:SOURce EXTernal|DEVice|INTernal
:DIGital:CLOCK:SOURce?

*RST INT

:DATA:BORDER

:DIGital:DATA:BORDER MSB|LSB
:DIGital:DATA:BORDER?

*RST LSB

:DATA:POLARITY:FRAME

:DIGital:DATA:POLarity:FRAMe NEGative|POSitive
:DIGital:DATA:POLarity:FRAMe?

*RST POS

:DATA:IGAIN

:DIGital:DATA:IGain <val>
:DIGital:DATA:IGain?

*RST +1.00000000.E+002 Range 87.50–112.5%

:DATA:INEGate

```
:DIGital:DATA:INEGate OFF|ON|{0}|1
:DIGital:DATA:INEGate?
*RST          0
```

:DATA:IOFFset

```
:DIGital:DATA:IOFFset <val>
:DIGital:DATA:IOFFset?
*RST          0+0.00000000E+000    Range    -100 to 100%
```

:DATA:NFORmat

```
:DIGital:DATA:NFORmat TCOMplement|OBINary
:DIGital:DATA:NFORmat?
*RST          TCOM
```

:DATA:QOFFset

```
:DIGital:DATA:QOFFset <val>
:DIGital:DATA:QOFFset?
*RST          +0.00000000E+000    Range    -100 to 100%
```

:DATA:POLarity:IQ

```
:DIGital:DATA:POLarity:IQ POSitive|NEGative
:DIGital:DATA:POLarity:IQ?
*RST          POS
```

:DATA:QGain

```
:DIGital:DATA:QGain <val>
:DIGital:DATA:QGain?
*RST          +1.00000000E+002    Range    87.50-112.5%
```

:DATA:QNEGate

```
:DIGital:DATA:QNEGate OFF|ON|{0}|1  
:DIGital:DATA:QNEGate?  
*RST          0
```

:DATA:ROTation

```
:DIGital:DATA:ROTation <val>  
:DIGital:DATA:ROTation?  
*RST          +0.00000000E+000    Range    0–360 degrees
```

:DATA:SCALing

```
:DIGital:DATA:SCALing <val>  
:DIGital:DATA:SCALing?  
*RST          +7.00000000.E+001    Range    –100 to 100%
```

:DATA:SIZE

```
:DIGital:DATA:SIZE <val>  
:DIGital:DATA:SIZE?  
*RST          +16                    Range    4–16
```

:DATA:STYPe

```
:DIGital:DATA:STYPe IQ|IF  
:DIGital:DATA:STYPe?  
*RST          IQ
```

:DATA:TYPE

```
:DIGital:DATA:TYPE SAMPles|PFSamples  
:DIGital:DATA:TYPE?  
*RST          SAMP
```

:DIAGnostic:LOOPback

```
:DIGital:DIAGnostic:LOOPback? DIGBus|CABLE|N5102A|DEVice
```

:LOGic[:TYPE]

:DIGital:LOGic[:TYPE] LVDS|LVTT1|CMOS33|CMOS25|CMOS18|CMOS15

:DIGital:LOGic[:TYPE]?

*RST CMOS33

:PCONFig

:DIGital:PCONFig PARallel|SERial|PINTIQ|PINTQI

:DIGital:PCONFig?

*RST PAR

[:STATe]

:DIGital[:STATe] 0|1|OFF|ON

:DIGital[:STATe]?

*RST 0