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1. Introduction

Presented in this document are several typical examples of VSI-S ‘conversations’ for a typical hypothetical VSI-S compatible system. DTS responses are indented for clarity.

2. Usage Examples

2.1 Setup and Record

Setup a DIM to record 8 bit streams at an effective sample rate of 16 Msamples/sec/bit-stream; set the DOT clock; start recording.

```
reset = system;
!reset = 0;
status?
!status? 0 : 0x0;
!status? 0 : 0x0;
1PPS_source = alt1pps;
!1PPS_source = 0;
CLOCK_frq = 32 : 16;
!CLOCK_frq = 0;
DOT_set = 2002y182d16h32m30s;
!DOT_set = 0;

(about a second later.....)

DOT?;
!DOT? 0 : 2002y182d16h32m31.175s;
BS_mask = 0xff;
!BS_mask = 0;
BS_mask?;
!BS_mask? 0 : 0xff;
receive = on;
!receive = 0;
status?;
!status? 0 : 0x80;
(receive?;
!receive? 0 : off;
status?;
!status? 0 : 0xa0;
receive?;
!receive? 0 : off;
```

reset system
reset successful
query system status
OK
specify 1-pps tick from alternate input
OK
Specify clock freq as 32 MHz; sample rate 16 MHz
OK
Enable DOT clock set on next ALT1PPS tick
OK
DOT running; current DOT clock reading
OK
specify bit streams 0-7 as active
OK
query bit-stream mask
OK
start recording
OK
get status
recording
get status
recording stopped (due to hitting end of media)
automatically set to ‘off’ at end-of-media
2.2 Setup and playback

Setup DOM to playback the data recorded in Example 2.1. Reproduce the 8 recorded bit streams to DOM output bit-streams 8-15, respectively, at 8 Msamples/sec/bit-stream with 32 MHz DPS CLOCK; set the ROT clock, start playback.

status?
!status? 0 : 0x0;

DPSCLOCK_source = dpsclock : 32;
!DPSCLOCK = 0;

RCLOCK_frq = 8;
!RCLOCK_frq = 0;

DPS1PPS_source = dps1pps;
!DPS1PPS_source = 0;

ROT_set = 2002y182d16h32m35s;
!ROT_set = 0;

(about a second later.....)

ROT?;

!ROT_set? 0 : 1 : 2002y182d16h32m36.875s; ROT running; current ROT clock reading

!crossbar = 0;

transmit = on;
!transmit = 0;

status?;
!status? 0 : 0x100;

(a few seconds later......)

status?;
!status? 0 : 0x200;

RCLOCK_frq?;
!RCLOCK_frq? 0 : 8 : 8 : 16 : 0xff;

(sometime later...end of media)

status?;
!status? 0 : 0x300;

transmit?;
!transmit? 0 : off;

status?;
!status? 0 : 0x300;

transmit = off;
!transmit = 0;

status?;
!status? 0 : 0x0;

idle
2.3 Media copy

Copy from a DOM to a DIM using PDATA/QDATA to automatically set the DOT clock in the DIM. Assume various DOM/DIM clocks and clock ratios are already properly set. DOM and DIM commands are shown separately since they may be separate units.

DOM:

QDATA_cntl = 0x2;  
Causes QDATA to issue a ‘DOT_set’ command at every ROT1PPS tick, with the time adjusted forward by one second for proper setting of the DOT clock in the DIM.

!QDATA_cntl = 0;  
OK

transmit = on;  
Start DOM playback

!transmit = 0;  
OK

DIM:

PDATA_cntl = 0x10;  
Enable DIM to execute DOT_set commands arriving via PDATA

!PDATA_cntl = 0;  
OK

receive = on;  
Start DIM record

!receive = 0;  
OK