

Date – 11/18/2013

Attendees: CJ Clark, Adam Ley, Bill Tuthill, Brian Turmelle, Bob Gottlieb, Craig Stephan, Dharma Konda, Dwayne Burek, Gobinathan Athimolom, Ismed Hartanto, John Colburn, Josh Ferry, Kevin Gorman, Marc Hutner, Mike Ricchetti, , Philippe Lebourg, Steve Sunter, Teresa McLaurin, Tapan J Chakraborty, Zahi Abuhanmdeh,

Absent with Excuse: Gurgen Harutyunyan, Frans de Jong,

No Present for ¾ of meeting:

Missing: Kent Ng, Tom Waayers, Bill Huott, Saman AdhamJim Wilson, Dave_Armstrong,

Agenda:

- 1) Patent Slides
- 2) New slides – Trying to capture with more detail at least one approach for consideration in a single slide set. Added disclaimer.
- 3) New Business

Meeting Called to order at 11:05 am EST

Minutes:

Review Patent Slide – Slide Presented to the Group.

Solicited input from anybody who is aware of patents that might read on our standard.

No Response

New Slides

CJ is trying to put together a comprehensive set of slides to describe all the current ideas and slides we have discussed already. Can be used for new people who come to the group.

Slides were sent out in email on reflector

CJ connected with Mark from Form Factor (probe vendor) and reviewing the opportunity to come in and talk to us.

Review of slides

Added slide on Embedded Clock Block diagram.

Slide on BSDL attributes and PDL

Need to communicate – Frequency of Clock, Diff Swing, and encoding

How to get into p1149.10 mode

Example – Attribute SYSCLOCK_REQUIREMENTS of MyChip:entity

“(SysClk,198.5e6,201.5e6,1149_10_Enable)”;

Possible additions

Enumerate encodings understood by tester

Power descriptions

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PDL – would be a standardized routine. IC vendor would specify how to get the SERDES into the 1149.10 mode.

Should be written by IC Vendor.

Not going to describe how to test SERDES before being put into 1149.10 mode but will not require it.

Flow – Slide not completed.

Alternative approach with IR accessible.

Having the IR as one of the scan chains that you can scan to.

Would allow you to use Clamp hold. Allow IC Rest (1149.1-2013 instruction)

InBound Packets

Config – Enable uninitiated p1149.10 interface to be enumerated

Target – specify where packets go

Reset – Assert Reset*

Scan – interleaved IR or DR scan Packet

Raw – (maybe optional) data is not processed by packet processor. All RX data can be sent to TX

XOFFA – XOFF Acknowledge (tells chip that tester was told to hold off)

All response packets are ignored and forwarded to TX

Bob – is expectation that all the scan chains from different cores come back to this main p1149.10 interface?

CJ – remains to be determined. Would prefer to have them all coming back to the SERDES.

Bob – could have intermediate bandwidth?

CJ – don't see how you can require it.

Bob – not sure it makes sense to have all the scan chains from different cores coming to a single interface.

OutBound packets

ScanR – interleaved scan packet response

TargetR – Target Packet Response

ConfigR – Config Packet Response

RawR – Raw Packet Response

ResetR – Reset Packet Response

XOFF – Tell ATE to hold off sending more packets

XON – Tell ATE to resume

IDLE<n> – Tell ATE to insert n IDLE packets

All inbound packets following a TARGET for an alternative device

Philippe – What is the TX port in context to?

CJ – TX is in context of the Circuit and not the tester. Data being sent out on PISO

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Philippe – you have a daisy chain of rx to tx, if you want to pass this over to the next target device?

CJ – yes.

CJ –targeting allows you to talk to multiple chips in the chain.

Philippe – would multiple chips in a 3D stack need a different method to talk to each of them?

CJ – yes p1838 is looking at that.

Ismed – what is meant by “p1149.10 does not mandate it used during wafer test”?

CJ – we do not want to mandate use during wafer test, it is outside the scope of our standard

CJ – the standard is defining an architecture. Not required to put it in the device.

Like IEEE1149.1. You are not required to use it during chip test. It is just an architecture you choose to use

Ismed- main scope of standard is a TAP for delivering test data. You are expanding possible usage to other things

CJ - Test is really a differentiator between test and mission mode.

Ismed – Expanded definition of Test needs to be explained then.

Bob – We should think about sharing bandwidth between cores needing same data going forward.

Bob will try and put together slides to describe the problem.

Bob – on your target packet you would have a broadcast id?

CJ – target ID is not for chip as opposed to per scan chain.

No new business.

Bob motion to adjourn

Ismed seconds

Meeting adjourned: 12:03 EST

Next Meeting:

November 25th, 2013 11:00am

Motion Summary

0 motions

Action Items

~~*Bill Tuthill – 10-21-2013 – Add minutes and Attendance spreadsheet to the website.*~~

~~*CJ – 11-11-2013 – Reach out to ATE industry and Probe Industry to get update on future of ATE equipment to see which data speeds and protocols they are heading towards.*~~

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NOTES:

1149.10 working group website - <http://grouper.ieee.org/groups/1149/10/>

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