



ULINK TCG Test Suites

ULINK Technology, Inc.

DriveMaster 2010 TCG Features

TCG IF Commands

- ◆ **TCG ATA Commands**
 - ◇ Trusted Receive (DMA)
 - TCG_SEND
 - TCG_SEND_DMA
 - ◇ Trusted Send (DMA)
 - TCG_RECEIVE/TCG_RCV
 - TCG_RECEIVE_DMA/TCG_RCV_DMA
 - ◇ Trusted Non-Data
 - TCG_RCV_NDATA
 - TCG_RECEIVE_NDATA
 - TCG_SEND_NDATA
- ◆ **TCG SCSI Commands**
 - ◇ Security Protocol In
 - SECURITY_PTC_IN
 - ◇ Security Protocol Out
 - SECURITY_PCT_OUT

OPAL SSC and Enterprise SSC support

- ◆ **TCG Protocol 2**
 - ◇ GET_COMID
 - ◇ HANDLE_COMID_REQUEST
 - ◇ GET_COMID_RESPONSE
 - ◇ VERIFY_COMID_VALID
 - ◇ STACK_RESET
- ◆ **TCG Protocol 1 - Generic**
 - ◇ LEVEL 0 DISCOVERY
 - ◇ PROPERTIES
 - ◇ START SESSION/SYNC SESSION
 - ◇ START TRUSTED SESSION/SYNC TRUSTED SESSION
 - ◇ EDNSESSION/CLOSESESSION
 - ◇ AUTHENTICATE
 - ◇ GET ◇ GET ACL ◇ SET
 - ◇ GENKEY ◇ NEXT

OPAL SSC and Enterprise SSC support (continue)

- ◆ **TCG Protocol 1 – OPEL SSC Specific**
 - ◇ ACTIVATE
 - ◇ REVERT
 - ◇ REVERTSP
- ◆ **TCG Protocol 1 – Enterprise SSC Specific**
 - ◇ ERASE
 - ◇ RANDOM

Direct Payload Manipulation

- ◆ Pre-programmed token
- ◆ Easy data payload to the buffer
- ◆ Payload decode in readable format

Universal Interface Commands

- ◆ TCG Generic IF Commands
- ◆ TCG Protocol 1 Commands
- ◆ TCG Protocol 0 Commands

User friendly interpretation on the returned data

- ◆ Level 0 Discovery
- ◆ GET_COMID_RESPONSE

Flexible control of TCG implementation and testing

- ◆ Maximum utilize and customize pre-programmed SSC data payload before IF commands issued
 - ◇ TCG_AUTO_IFCMD
- ◆ Universal scripts over different SSCs
 - ◇ TCG_SSC_SPEC
- ◆ ATA PIO/DMA protocol control
 - ◇ TCG_DMA

Plenty of variables for ease of use

- ◆ Set the parameters set in the payload to be issued
- ◆ Retrieve the information from the payload returned

TCG Test Suites

◆ TCG Storage Workgroup Test Case Suites

- ◆ OPAL Test Case

◆ TCG Command and Protocol Test Suites

- ◆ OPAL Application Note Test
- ◆ ENTERPRISE Application Note Test
- ◆ MBR Test
- ◆ SIIF Test



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Capture of Level 0 Discovery

DriveMaster 2010 supports many user friendly interpretation on the returned data features. **Level 0 Discovery** is one of them. Below is its capture.

```

Level0DiscoveryOutput.txt - Notepad
File Edit Format View Help
: 15 | [ 00h 00h 00h 00h 00h 00h 00h 00h 00h 00h 00h ]
=====
Locking Feature Descriptor
-----
0-1 | (MSB) | Feature Code: [00 02h] | (LBS)
    |      | [10h]
    |-----|
    | 2 | [0001] (01h) | [0000] (00h)
    |   | Version      | Reserved
    |-----|
    | 3 | Length (n-3): [0Ch]
    |   | [1Bh]
    |-----|
    | 4 | [00] Reserved | [0] MBR Done | [1] MBR Enb | [1] Med Crypt | [0] Locked | [1] Lock Enb | [1] Lock Spt
    |-----|
    | 5 | Reserved
    | : | [ 00h 00h 00h 00h 00h 00h 00h 00h 00h 00h 00h ]
    | 15 |
=====
Opal/Enterprise SSC Feature Descriptor
-----
0-1 | (MSB) | Feature Code: [02 00h] | (LBS)
    |      | [10h]

```

DriveMaster 2010 Hardware Platform

DriveMaster 2010 Pro SATA

- ◆ **Generic AHCI Platform**
 - AMD • Intel • JMicron • NVIDIA • VIA
- ◆ **Generic IDE / PATA**
- ◆ **Intel**
 - ICHx (IDE, AHCI and RAID Mode)
- ◆ **Marvell**
 - 6081 PCI-X SATA II / 61xx PCI-E Series
- ◆ **Silicon Image**
 - SiI3124 PCI-X / SiI3132 / 3531PCI-E
- ◆ **VIA 5324**
- ◆ **All third party HBAs complied with the vendor specs of the above Marvell and Silicon Image chipsets**

DriveMaster 2010 Ent SAS/FC

- ◆ **Adaptec 3405 SAS**
- ◆ **ATTO SAS H680**
- ◆ **LSI SAS**
 - 1064 / 1064E • 1068 / 1068E
 - 1078
 - 2008 • 2108 • 9260
- ◆ **Marvell SAS**
 - 6320 / 6340 • 6440 / 6445
 - 6480 / 6485 • 9480 / 9485
- ◆ **LSI FC**
 - 919X • 929X • 939X • 949X
 - 949E
- ◆ **QLogic FC**
 - 2432



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