



# 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
: 15 | [ 00h 00h 00h 00h 00h 00h 00h 00h 00h 00h 00h ]
=====
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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