

# Proposal to Align DCO with ATA/ATAPI-7

**To:** T13 Technical committee  
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## **Change History:**

R0: Initial proposal

## **1 Introduction**

In the course of the development of ATA/ATAPI-7, several new features were approved. It is desirable that some of these features be controllable by the Device Configuration Overlay (DCO).

- Streaming feature set
- Time-limited Read/Write Mode feature set
- SMART Selective self test
- SMART Conveyance self test
- Forced Unit Access (FUA )
- SATA-2 features

## **2 Proposed Changes**

### **6.9.3 DEVICE CONFIGURATION SET command**

**Table 14 – Device Configuration Overlay data structure**

Word	Content
7	Command set/feature set supported <b>15-14 Reserved</b> <b>13 1 = SMART Conveyance self-test is allowed</b> <b>12 1 = SMART Selective self-test is allowed</b> <b>11 1 = Forced Unit Access is allowed</b> <b>10 1 = Time-limited Read/Write feature set allowed</b> <b>9 1 = Streaming feature set allowed</b> 8 1 = 48-bit Addressing feature set supported 7 1 = Host Protected Area feature set supported 6 1 = Automatic acoustic management supported 5 1 = READ/WRITE DMA QUEUED commands supported 4 1 = Power-up in Standby feature set supported 3 1 = Security feature set supported 2 1 = SMART error log supported 1 1 = SMART self-test supported 0 1 = SMART feature set supported
<b>8</b>	<b>Reserved for serial ATA</b>
<b>9-254</b>	<b>Reserved</b>
255	Integrity word 15-8 Checksum 7-0 Signature

**6.9.4.8.5 Word 7: Command/features set supported**

Proposed changes:

*Word 7 bit 13 is cleared to zero to disable support for the SMART Conveyance self-test. Subsequent attempts to start this test via the SMART EXECUTE OFF-LINE IMMEDIATE command shall cause that command to abort. In addition, the SMART READ DATA command shall clear bit 5 to zero in the “Off-line data collection capabilities “ field.*

*Word 7 bit 12 is cleared to zero to disable support for the SMART Selective self-test. Subsequent attempts to start this test test via the SMART EXECUTE OFF-LINE IMMEDIATE command shall cause that command to abort. In addition, the SMART READ DATA command shall clear bit 6 to zero in the “Off-line data collection capabilities “ field.*

*Word 7 bit 11 is cleared to zero to disable support for the Force Unit Access commands and has the effect of clearing bits 6 and 7 to zero in word 84 and word 87 of the IDENTIFY DEVICE or IDENTIFY PACKET DEVICE response.*

*Word 7 bit 10 is cleared to zero to disable support for the Time-limited Read/Write mode feature set and has the effect of clearing bits 11 and 12 to zero in word 84 and word 87 and clearing the value in word 116 of the IDENTIFY DEVICE or IDENTIFY PACKET DEVICE response.*

*Word 7 bit 9 is cleared to zero to disable support for the Streaming feature set and has the effect of clearing bits 4, 9 and 10 to zero in word 84 and word 87 and clearing the value in words (99:95) and word 104 of the IDENTIFY DEVICE or IDENTIFY PACKET DEVICE response.*

**6.9.4.8.xxx Word 8: Reserved for serial ATA**

*This word is reserved for future serial ATA use.*