

# **Reporting RPM\_form factor\_connector type**

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**Revision 0**

Proposal submitter:

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**Document Status**

Revision History (part of )		
Rev	Date	Description
0	February 3, 2007	1) Initial Revision

## 1 Introduction

Reason for change request: ATA devices can be remotely located in data centers and may be managed by storage management software that recommends appropriate device replacements. As such, the single most important necessity driving this change is to properly facilitate the replacement of a device into a RAID set. A 5400 rpm device should not be added into a 7200 rpm RAID set as it could degrade the RAID set performance. Additionally, device connector type value helps to expedite proper device replacement as does form factor (for obvious reasons).

## 2 Scope

This e06176r0 proposal requests simple, informational additions to the ATA8-ACS standard. The request is to provide IDENTIFY DEVICE data resource (word(s)) to support this information. The information requested to be supported by IDENTIFY DEVICE data is the ATA device revolutions per minute (RPM), form factor, and interface connector type.

## 3 Overview

This proposal does not request implementation of a feature set for this information. All this proposal requests is information to be provided about the ATA end device "geometry". As such, it is believed at this time that only the IDENTIFY DEVICE data need be affected.

## 4 Changes to ACS

### 4.1 Changes to clause 2

#### 4.1.1 Changes to Approved ANSI References

n/a

#### 4.1.2 Changes to ANSI References Under Development

n/a

#### 4.1.3 Changes to Other References

n/a

## **4.2 Changes to clause 3**

### **4.2.1 Changes to Definitions and abbreviations**

1        **Your Term:** Definition. ?

1        **Your Term:** Definition. ?

## **4.3 Changes to clause 4**

### **4.3.1 Overview - Changes to the Feature Set Summary Table**

n/a

### **4.3.2 New Feature Set**

n/a

## **4.4 Changes to clause 7**

### **4.4.1 Command Definition**

4.4.1.1 **Your Command Name – n/a,**

n/a

4.4.1.2 **Feature Set**

n/a

4.4.1.3 **Description**

n/a

4.4.1.4 **Inputs**

n/a

4.4.1.5 **Normal Outputs**

n/a

4.4.1.6 **Error Outputs**

n/a

4.4.1.7 **Input Data Structure**

n/a

4.4.1.8 **Output Data Structure**

n/a

4.4.2 **Changes to DCO Set**

n/a

**4.4.3 Changes to IDENTIFY DEVICE data**

This proposal does not add a feature set or command. (There should not be an addition to the IDENTIFY DEVICE data to indicate both supported and enabled descriptions.)

Word	O	S	F	Description
M	P	V		
TBD A	M	B	F	Medium rotation rate (rpm)
TBD B	M	B	F	Reporting SFF device form factor and connector type supported
			F	15: Shall be set to one
			F	15:0: SFF form factor and connector type
TBD C	M	B	F	
			F	
Key:				V The contents of the field is variable and may change depending on the state of the device or the commands executed by the device.
O/M Mandatory/optional requirement.				X The content of the field may be fixed or variable
M Support of the word is mandatory.				S/P Content applies to Serial or Parallel transport
O Support of the word is optional.				S Serial Transport
F/V Fixed/variable content				P Parallel Transport
F The content of the field is fixed and does not change. The DCO command may change the value of a fixed field. For removable media devices, these values may change when media is removed or changed.				B Both Serial and Parallel Transports
				N Belongs to a transport other than Serial or Parallel

**X.XX.X.X WORD (TBA): Medium rotation rate (rpm)**

Word (TBA) specifies the medium rotation rate (rpm) of the device. The value properly indicates the medium rotation rate in rotations per minute (ex: 7200rpm = 1C20h).

**EDITOR’S NOTE: (Mention of or reference to ATA byte swapping may be necessary here. This may be misinterpreted since it is planned that this value be translated by a SATL into the same reporting as the MEDIUM ROTATION RATE field of the SCSI (SAS) Geometry mode page).**

**X.XX.X.X WORD (TBA): Device form factor and device connector type**

Word (TBA) specifies the applicable SFF standard that applies to the device for form factor and connector type (ex: 8223h = SFF-8223 2.5” Drive w/Serial Attachment Connector). If bit 15 of this field is set to 0b reporting SFF form factor and connector type is not supported.

**4.5 Changes to Normal and Error Outputs**

**4.5.1 Changes to Normal Outputs**

n/a

**4.5.2 Changes to Error Outputs**

n/a

**4.6 Changes to Annex A - Command Set Summary**

**4.6.1 Changes to the Command Matrix Table**

n/a

**4.6.2 Changes to the Command Codes Table**

n/a

**4.6.3 Changes to the Historical Command Assignments Table**

n/a

**4.6.4 Changes to the Historical Set Feature Code Assignments Table**

n/a