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Category	■ FAQ □ SOP	Related OS	
Abstract	Why does some hard drives not work with UNO-2184G?		
Keyword	UNO-2184G, Hard Drive, SATA power, Seagate		
Related Product	UNO-2184G / ST91000640NS / ST9500620NS / ST9250G10NS		

■ **Problem Description:**

   When user connects the Seagate Constellation.2 2.5" SATA HD(please refer to Figure 1) to UNO-2184G, the hard drive can't be detected by BIOS and OS.

■ **Problem Analysis:**

   Seagate Constellation.2 2.5" SATA HD is designed for Storage-hungry business applications such as Storage area networks (SAN) and network attached storage (NAS). For server application, Constellation.2 requires +12V & +5V power, Please refer to Figure 2. However, UNO-2184G only provides +5V and +3.3V on the SATA power supply. If there is no +12V, the HD will not work.

■ **Brief Solution:**

   Hard drive vendor has server product lines for different application. Constellation.2 is designed for Storage-hungry business applications, not for embedded computing. Please select the corresponding product according to the usage.

<Figure 1>

<Figure 2>

Specifications	6Gb/s SAS		SATA 6Gb/s		
	1TB[1]	500GB[1]	1TB[1]	500GB[1]	250GB[1]
Model Number	ST91000640SS	ST9500620SS	ST91000640NS	ST9500620NS	ST9250610NS
	ST91000641SS[2]	ST9500621SS[2]	ST91000641NS[2]	ST9500621NS[2]	ST9250611NS[2]
Features					
Protection Information	Yes	Yes	—	—	—
Low Halogen	Yes	Yes	Yes	Yes	Yes
Reliability/Data Integrity					
Mean Time Between Failures (MTBF, hours)	1.4 million	1.4 million	1.4 million	1.4 million	1.4 million
Reliability Rating @ Full 24x7 Operation (AFR)	0.62%	0.62%	0.62%	0.62%	0.62%
Nonrecoverable Read Errors per Bits Read	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-On Hours per Year	8760	8760	8760	8760	8760
Bytes per Sector	512, 520, 528	512, 520, 528	512	512	512
Limited Warranty (years)	5	5	5	5	5
Performance					
Spindle Speed (RPM)	7200	7200	7200	7200	7200
Cache, Multisegmented (MB)	64	64	64	64	64
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate (MB/s)	115	115	115	115	115
Seek Time, Average Read/Write (ms)	8.5/9.5	8.5/9.5	8.5/9.5	8.5/9.5	8.5/9.5
Average Latency (ms)	4.16	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Single	Single	Single
RV Tolerance (rad/s^2 to 1800Hz)	16	16	16	16	16
Power Management					
Idle Power (W)	3.85	3.27	3.31	2.67	2.52
Typical Operating, Random Read (W)	6.4	5.6	5.21	4.51	4.35
Power Supply Requirements	+12V and +5V	+12V and +5V	+12V and +5V	+12V and +5V	+12V and +5V
PowerChoice™ Technology (W)[3]	As low as 1.87	As low as 1.87	As low as 1.19	As low as 1.19	As low as 1.19

- **Reference:**
  https://www.seagate.com/www-content/product-content/constellation-fam/constellation/constellation-2/en-us/docs/constellation2-fips-ds1719-4-1207us.pdf