POLARIS I
SP0914D

FEATURES

- Formatted Capacity 9.1 Gbytes
- 7,200 RPM Spindle Speed
- EPR4ML Read Channel with 16/17 Rate Code
- 272 Mbits/sec Maximum Data Rate
- PIO Mode 4 / Multi Word DMA Mode 2 / Ultra DMA
- Fast ATA-4/E-IDE Interface
- 1024KB Segmented Read/Write Cache Buffer
- Write Auto Reassignment
- Error Correction on the Fly (Multi-Burst)
- S.M.A.R.T. Compliant

DRIVE ARCHITECTURE

Formatted Capacities	
Gigabytes per Drive	9.1
Physical Organization	
Disks	2
Data Surfaces	4
Read/Write Heads	4
Cylinders	12354
Sector per Track	240-408

FUNCTIONAL SPECIFICATIONS

Actuator Type	Rotary Voice Coil
Interface	Fast ATA-4/E-IDE
Servo	Embedded Sector Servo
Recording Method	16/17 EPR4
Recording Density (bpi,max.)	250K
Flux Density (fcpi,max.)	266K
Track Density (tpi,@skew 0.)	13,100
Sector Size (Bytes)	512

PERFORMANCE SPECIFICATIONS

Read Seek Time (typical, ms)	
Track to Track	<1.0
Average	<9.0
Full Stroke	< 18
Average Latency	4.20
Spindle Speed	7,200 ± 0.3% rpm
Data Transfer Rate	
To/From Media (max.)	272 Mbits/s
To/From Buffer (max.)	66.6 Mbytes/s
Buffer Size	1024KB
Start Time	
Typical	15 sec
Stop Time	
Typical	10 sec

RELIABILITY SPECIFICATIONS

Seek Error	1 in 10^6 seeks
Recoverable Read Error	1 in 10^{10} bits
Non-recoverable Read Error	1 in 10^{14} bits
MTBF (POH)	500,000 hours
MTTR (typical)	5 minutes
Start/Stop Cycles	50,000
Component Design Life	5 years

ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating	0 ~ 60 °C
Non-operating	-40 ~ 70 °C
Thermal Gradient (max.)	20 °C/15%/hr
Humidity (non-condensing)	
Operating	8 ~ 80 %
Non-operating	5 ~ 90%
Maximum Wet Bulb (operating)	29 °C
(non-operating)	40 °C
Altitude (relative to sea level)	
Operating	-650 to 10,000 feet
Non-operating	-1000 to 40,000 feet

SHOCK AND VIBRATION

Linear Shock (1/2 sine pulse)			
Operating	2 ms		63 G
Non-operating	2 ms		200 G
Non-operating Rotational		1 ms	20,000 RAD/SEC^2
		2 ms	15,000 RAD/SEC^2
Vibration (swept sine)			
Operating (1/2 octave per minute)			
5 ~ 21 Hz			0.034" (double amplitude)
22 ~ 300 Hz			1.5 Gp-p
300 ~ 500 Hz			.5 Gp-p
Non-operating (1 octave per minute)			
5 ~ 21 Hz			0.195" (double amplitude)
22 ~ 500 Hz			8 Gp-p

POWER CHARACTERISTICS

Voltage	5V±5%	12V±10%
Current (Peak)	0.7A Amps	1.80A Amps
Typical Power Consumption (Watts)		
Spin Up		
Current Peak		2.4 A
Duration		4 sec
Read/Write (typical)		7.0 watts
Random Seek (typical)		8.5 watts
Idle (typical)		6.0 watts
Standby (typical)		1.5 watts
Sleep (typical)		1.5 watts

ACOUSTIC NOISE

Sound Power (A-weighted)	
Idle	3.8 BEL avg
	4.3 BEL max
Random Read/Write	4.1 BEL avg
	4.4 BEL max

RANDOM READ/WRITE

Height	1 inch
Width	4 inches
Depth	5.75 inches
Weight	1.4 pounds

Specifications are subject to change without notice