## Pioneer™ SG

### Specifications

<table>
<thead>
<tr>
<th>Pioneer SG</th>
<th>1.0</th>
<th>2.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>3.5 inch (low profile)</td>
<td></td>
</tr>
<tr>
<td>Interface</td>
<td>Fast ATA-2</td>
<td></td>
</tr>
<tr>
<td>Formatted Capacity (MB(^1))</td>
<td>1,082</td>
<td>2,111</td>
</tr>
</tbody>
</table>

### Disk Drive Configuration

- **Recording Surfaces**: 2, 4
- **AT Logical Cylinders**: 2,097, 4,092
- **Heads**: 16, 16
- **Sectors**: 63, 63

### Performance Specifications

- **Typical Seek Times\(^2\)** (ms):
  - **Average**: 12
  - **Track-to-Track**: 4
  - **Full Stroke**: 26
- **Average Rotational Latency (ms)**: 6.7
- **Rotational Speed (RPM)**: 4,500
- **Internal Data Rate (Mb/sec)**: Up to 101

- **Data Transfer Rates (Buffer-to-Host)**:
  - **Fast ATA-2 (MB/sec)**:
    - **PIO Mode 4**: 16.6
    - **DMA Mode 2**: 16.6
    - **Buffer Size (KB)**: 64
    - **Typical Power On to Drive Ready (sec)**: 10.5

### Reliability Specifications

- **Start/Stop Cycles (ambient)**: 40,000
- **Non-recoverable Data Errors**: <10 per 10\(^{15}\) (per bits read)
- **Warranty\(^3\)** (years): 3

### Physical Specifications

- **Dimensions - inches (mm)**:
  - **Width**: 4.00 (101.6)
Length 5.75 (146.1)
Height 1.00 (25.4)
Weight - pounds (kg) 0.90 (0.41)

**Environmental Limits**

Operating
- Temperature (°C) 5 to 55
- Non-Condensing Humidity (%) 5 to 85
- Shock (G, 11 ms) 10
- Vibration (G) 1 (5 to 300 Hz, peak-to-peak)
- Altitude (ft.) -650 to 8,000

Non-Operating
- Temperature (°C) -40 to 65
- Non-Condensing Humidity (%) 5 to 95
- Shock (G, 11 ms) 70
- Vibration (G) 2 (5 to 300 Hz, peak-to-peak)
- Altitude (ft.) -650 to 40,000

Idle Sound (typ) (Quantum Pioneer SG 2.1)
- Pressure (dBA) 30
- Power (bels) 3.5

**Power Specifications**

- Nominal Voltage (V) + 5 / + 12
- Voltage Margin (%) ± 5 / ± 10

Typical Power Draw (W) (Quantum Pioneer SG 2.1)
- Standby 0.8
- Idle 3.7
- Operating 5 5.2
- Peak Current (mA on +5/+12V) 480 / 1,000

1. Quantum defines a megabyte (MB) as $10^6$ or 1,000,000 bytes.
2. Seek times are at nominal conditions and include settling for read.
3. This warranty is standard when products are purchased directly through authorized Quantum distributors/dealers. Unless otherwise agreed, a one-year warranty is provided to all OEMs purchasing directly from Quantum. End-user warranties provided by computer manufacturers may vary.
4. Operating is defined as 40% seeking, 30% reading, 10% writing, and 20% idle.