

# SMART RUGGED SSD Product Comparison Chart

Rugged,  
Reliable,  
Secure  
SSDs



	HRS-T5E	HRS-S5E	HRS-M4 & M4P	HRS-M1HC	HRS-M1 & M2
<b>NAND Flash Type</b>	3D TLC	SLC	MLC	MLC	MLC
<b>Capacity Range</b>	120GB-4TB	120GB-480GB	240GB - 2TB	240GB-1TB for M4 240-2TB for M4P	240GB - 2TB
<b>Read/Write Performance</b>	550MB/s Read 535MB/s Write	530MB/s Read 530MB/s Write	500MB/s Read, 260MB/s Write 525MB/s Read for M4P, 500MB/s Write for M4P	480MB/s Read, 480MB/s Write	525MB/s Read, 500MB/s Write
<b>Applications</b>					
<b>Industrial</b>	●	●	●	●	●
<b>Defense</b>	●	●	●	●	●
<b>Data Recording</b>	●	●	●	●	●
<b>Mission Critical</b>	●	●	●	●	
<b>Surveillance</b>	●	●	●	●	
<b>Telemetry</b>	●	●	●	●	
<b>Reliability</b>					
<b>MTBF</b>	2M hours, Telcordia 25°C	2M hours, Telcordia 25°C	>3M Hours >2M Hours for M4P	1.5M Hours	2M Hours
<b>Data Reliability</b>	1 in 10 <sup>17</sup> bits read	1 in 10 <sup>17</sup> bits read	1 in 10 <sup>15</sup> bits read for M4 1 in 10 <sup>17</sup> bits read for M4P	1 in 10 <sup>15</sup> bits read	1 in 10 <sup>17</sup> bits read
<b>Data Retention</b>	10 years @ 25°C	10 years @ 25°C	1 year @ 55°C 10 years @ 40°C for M4P	12 months @ 30°C	10 years @ 40°C
<b>Endurance</b>	1,000 Total Drive Writes	40,000 Total Drive Writes	1,200 total drive writes 2,100 total drive writes for M4P	2,000 total drive writes	2,100 total drive writes
<b>Power Loss Protection</b>	pFail	pFail	pFail	Fast Flush of Cached Data	Fast Flush of Cached Data for M1 pFail for M2
<b>Warranty</b>	1 Year	1 Year	1 Year	1 Year	1 Year
<b>Environmental</b>					
<b>Operating Temperature</b>	Industrial (-40° C to 85° C) Commercial (0° C to 70° C)	Industrial (-40° C to 85° C) Commercial (0° C to 70° C)	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
<b>Storage Temperature</b>	-55°C to 95°C	-55°C to 95°C	-55°C to 95°C	-55°C to 95°C	-40°C to 85°C
<b>Operating Shock</b>	50 g half-sine, 11 ms, 3 shocks along each axis	50 g half-sine, 11 ms, 3 shocks along each axis	50 g half-sine, 11 ms, 3 shocks along each axis	1000 g half-sine, 0.5ms	50 g half-sine, 11ms, 3 shocks along each axis
<b>Operating Vibration</b>	16.4 g rms, 15-2,000 Hz for M4	16.4 g rms, 15-2,000 Hz for M4	16.4 g rms, 15-2,000 Hz for M4 16.4 g rms, 10-2,000 Hz for M4P	16.3 g rms, 10-2,000Hz	16.4 g rms, 15-2,000Hz
<b>Relative Humidity</b>	5%-95% non-condensing	5%-95% non-condensing	5%-95% non-condensing	5%-95% non-condensing	5%-95% non-condensing
<b>Altitude</b>	24,384m (80,000 ft)	24,384m (80,000 ft)	24,384m (80,000 ft)	30,480m (100,000 ft)	24,384m (80,000 ft)
<b>Conformal Coating</b>	Optional	Optional	Optional	Optional	Optional
<b>Security (Protection &amp; Data Elimination)</b>					
<b>ATA Password</b>	■	■	■	■	■
<b>AES 256b</b>	■	■	■	■	■
<b>Write Protect</b>	■	■	■	■	
<b>External HW Trigger</b>	■	■	■	■	
<b>Erase Key and Flash</b>	■	■	■	■	■
<b>Mil Erase Sequences</b>					
<b>NSA/CSS Manual 9-12</b>	■	■	■	■	
<b>DoD NISPOM 5220.22-M</b>	■	■	■	■	
<b>DoD NISPOM 5220.22-M-Sup 1</b>	■	■	■	■	
<b>NSA/CSS Manual 130-2</b>	■	■	■	■	
<b>Army AR 380-19</b>	■	■	■	■	
<b>Navy NAVSO P-5239-26</b>	■	■	■	■	
<b>Air Force AFSSI-5020</b>	■	■	■	■	
<b>Custom Sequence</b>	■	■		■	

● Primary Application ■ Primary Security Feature

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