

TABLE 1—MEMORY CHARACTERISTICS

	MRAM	FRAM	3DM	Ovonyx Unified Memory
Cell size	Large	Moderate	Very small	Small
CMOS-integration issues	Intolerant of high temperatures, requires specialized materials	Intolerant of hydrogen exposure, requires specialized materials	Requires specialized materials	Requires specialized materials
Read speed	Fast, nondestructive	Moderate, destructive	Slow (random), moderate (sequential), nondestructive	Moderate, nondestructive
Write speed and power consumption	Fast, high power	Moderate speed, moderate power	Slow, moderate power	Moderate speed, moderate power
Cycling endurance	Theoretically infinite	10 billion to 1 trillion, claimed "unlimited" on latest generation devices	Not applicable (one-time programmable)	As many as 1 trillion claimed