

# GDDR Memory Features Compared

	GDDR3	GDDR4	GDDR5
DRAM Density	256Mb to 1Gb	512Mb	512Mb to 2Gb
Data Rate	1.0Gb/s to 2Gb/s	1.6Gb/s to 3.2Gb/s	3.6Gb/s to 6.0Gb/s
VDD/VDDQ Voltage	1.8v/1.8v	1.5v/1.5v or 1.8v/1.8v	1.5v /1.5v
Pre-Fetch Scheme	4 bit	8 bit	8 bit
Burst Length	4 or 8 bit	8 bit	8 bit
Real-World Memory Bandwidth Example	Nvidia GeForce GTX 280 (1GB frame buffer with a 512-bit memory interface): 142GB/s	AMD Radeon HD 3870 (512MB frame buffer with 256-bit interface): 72GB/s	AMD Radeon HD 4870 (512MB frame buffer with a 256-bit interface): 115GB/s