


Product Comparison

APRO MLC USB Flash Disk

HAMMER Series VS. DEMETER Series

Series		HAMMER Series	DEMETER Series
Part Number	Standard Grade	SMUFDXXXX-ACCMC / 3	SMUFDXXXX-UBCMC / 3
	Industrial Grade	WMUFDXXXX-ACCMC / 3C (with Conformal Coating)	NA
Photo			
Casing Design	Casing Material	Aluminum alloy & plastic	
	Casing Hardness	Tiny and semi-metal casing design	
	Waterproof	NA	
	LED Indicator	Yes	
Controller Brand		Alcor	UBest
Controller Version		AU6986	UT165
MLC Flash IC		Samsung MLC Flash IC	Unrestricted (Samsung / Intel/Micron/Hynix)
Wear-Leveling		Dynamic Wear-leveling Algorithms	Embedded “ Dynamic Wear-Leveling” algorithm to have flash data WRITE to be evenly distributed over the storage area and the end product life time will be extended
ECC		8bit/ 512Bytes and 15bit/512Bytes BCH ECC engines)	8bit/ 12bit and 14bit/ 512Bytes BCH error correction
Compatibility		USB v2.0and USB 1.1 backwards	
Performance.		Sequential Read: 18.5Mbytes/sec	Sequential Read: 25.0Mbytes/sec
		Sequential Write: 9.6Mbytes/sec	Sequential Write: 18.0Mbytes/sec
		Average access time: 0.6ms	Average access time: 0.6ms
Capacity		1GB, 2GB, 4GB, 8GB, 16GB	1GB, 2GB, 4GB, 8GB, 16GB

Summary

- In general: APRO have been using Alcor controller for Industrial SLC USB flash disk so-called HAMMER Series for 3 years for the most reliable design and aggressive supporting from Alcor engineer team. APRO only use Samsung’s SLC & MLC Flash IC for industrial applications. However, more and more customers are chasing low price but fixed solution (controller) USB flash disk for their application. Therefore, UBest controller USB Flash disk so called DEMETER Series, we will use cheaper MLC flash IC only.
- Price: Samsung MLC flash IC is two times more or less expensive than Intel’s, Micron’s & Hynix’ MLC Flash IC. In pricing point of view, DEMETER Series is cheaper than HAMMER Series.
- Reliability: Samsung MLC Flash IC is more reliable than others for bad block. For other brands’ MLC flash ICs have bad block issues. If your customers’ applications are more pricing oriented than reliability, you may suggest DEMETER Solution.