

Attachment

Key specifications of the USB 3.0 - SATA bridge IC, MB86C30A

		MB86C30A
USB	Standard	Universal Serial Bus Specification 3.0, Revision 1.0 Universal Serial Bus Specification, Revision 2.0
	Bit Rate	5Gbps (SuperSpeed) / 480Mbps (High-Speed)
	Device Class	Mass Storage Class Bulk-Only Transport, Revision 1.0
SATA	Standard	Serial ATA Specification Revision 2.6
	Bit Rate	3Gbps (Gen2i) / 1.5Gbps(Gen1i)
	ATA/ATAPI Device	HDD/SSD/Blu-ray/DVD/CD
Encryption Hardware	Algorithm	AES
	Mode	CBC / XTS*
	Block Size	128bit
	Key Length	128bit/256bit(CBC mode) 128bit+128bit/256bit+256bit(XTS mode)
	Throughput	200MB/s (CBC mode, 128bit) 150MB/s (CBC mode, 256bit) 300MB/s (XTS mode, 128bit+128bit) 270MB/s (XTS mode, 256bit+256bit)
MPU	Core	ARM7TDMI-S™
	Max. Operating Frequency	75MHz
	RAM Size	64KByte
Package	LQFP 64 pin 7mm x 7mm (0.4mm pitch)	
Process Technology	65nm CMOS	

*CBC (Cipher Block Chaining):

An AES mode suited for encrypting block data.

*XTS (XEX encryption mode with tweak and ciphertext stealing):

An AES mode adopted by IEEE1619 (Standard for Cryptographic Protection of Data on Block-Oriented Storage Devices), suited for encrypting block data.

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