BackupAssist and CRU Encryption

A hardware based solution for data encryption

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Agenda

1. The importance of encryption

2. Limitations of Native Windows

3. Why I like the CRU Solution

4. Limitations of the CRU Solution

5. Affordability

BackupAssist™
Windows® Backup Made Easy!

The importance of data encryption

At BackupAssist, we like to use non-proprietary formats:

- It means you can get to your data!
- "Restore anywhere" principle
    - On any Windows machine
    - On any recent operating system
    - No proprietary software required

The importance of data encryption

However, encryption might be required for businesses that store sensitive data, especially client data:

- Medical practices
- Legal firms
- Insurance companies

Limitations of Native Windows

None of the backups are encrypted:

- NTBackup – bkf format
- Drive Imaging – vhd format

However, the BackupAssist ZIP Engine does provide AES encryption in its ZIP engine:

- ZIP & Burn
- ZIP & FTP
- Generally these are "secondary backups"

Hardware based – the entire disk is scrambled

- ■ If you plug the disk into a SATA port, it looks like an uninitialized disk
- ■ Super fast – 200GB / hr imaging speed

Works for all versions of Windows!

- ■ NTBackup
- ■ Drive Imaging

Fully transparent, so it's fully compatible with BackupAssist technologies

- ■ File replication
- ■ SQL
- ■ Exchange Mailboxes

Limitations of the CRU Solution

⚠️ Drive letter assignment will be challenging

⚠️ Need to "safely remove" the disk before changing it

- You'll see "Delayed Write Failures" in the Windows event logs, or the machine will BSOD

⚠️ If using a non-hot-swap SATA controller, swapping disks will cause the machine to crash

All fixed by BackupAssist:

✅ Drive letter automatically re-assigned

✅ Drives "safely removed" after each backup

✅ No crashes when disks are swapped.

Affordability

Assume a 5 disk rotation (2x daily, 2x weekly, 1x monthly)

Product	Quantity	Unit Dealer Price (est)	Unit Retail Price	Margin
CRU DataPort 10 Secure (internal)	1	168.00	219.00	51.00
CRU DataPort 10 Secure (external)	1	224.00	274.00	50.00
CRU SATA Carriers	4	40.00	52.00	12.00
1TB SATA HDD	5	80.00	90.00	10.00
Total Price – internal	Package	$728.00	$877.00	149.00
Total Price – external	Package	$784.00	$932.00	148.00

*Prices are in US dollars.

Affordability

Comparison

Product	Price
Seagate FreeAgent Go 500 GB	$139.99
Seagate FreeAgent 1TB	$139.99
Seagate FreeAgent GoFlex Ultra-portable 1TB (includes Powered eSATA upgrade cable)	$189.98

*Prices are in US dollars.

Affordability

Summary of hardware options:

Solution	Non-encrypted USB		Non-encrypted SATA	Encrypted – CRU SATA	
Details	2.5" Seagate FreeAgent Go 500GB	3.5" Seagate FreeAgent 1TB	2.5" Seagate FreeAgent GoFlex Ultra–portable Drive 1TB	CRU DataPort 10 Secure, Carriers, 1TB HDDs	CRU DataPort 10 SecureDock, Carriers, 1TB HDDs
Unit price	5x $139.99	5x $139.99	5x $189.98		
Total price	$699.95	$699.95	$949.90	$877.00	$932.00

*Prices are in US dollars.

Affordability

When comparing apples with apples, we find that:

	Non-encrypted SATA	Encrypted SATA (external)
Total price	$949.90	$932.00 **$17.90** less expensive!

Advantages:

- ✅ Encryption
- ✅ Robust steel case
- ✅ Easy swap in/out

Affordability
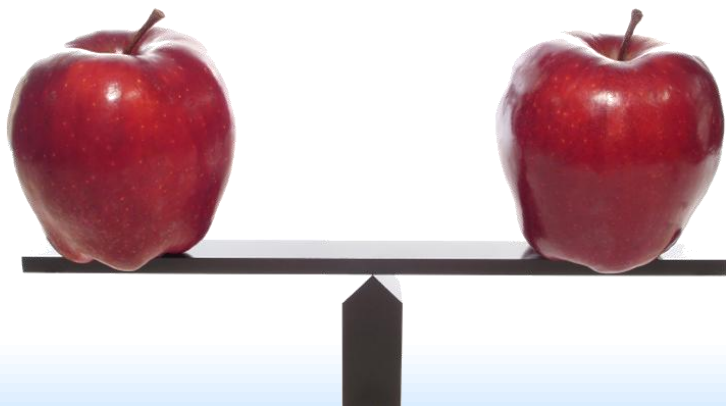
BackupAssist software costs:

Product	Unit Dealer Price	Unit Retail Price	Margin
BackupAssist	174.30	249.00	74.70
BackupAssist VM Granular Restore Console	174.30	249.00	74.70
BackupAssist Exchange Mailbox	90.30	129.00	38.70
Total	**$438.90**	**$627.00**	**$188.10**

*Prices are in US dollars.

Affordability

Cost of a complete solution:

	RRP – CRU internal unit	RRP – CRU external unit
Hardware	877.00	932.00
Software	627.00	627.00
Total	$1504.00	$1559.00

Summary

1. The importance of encryption

2. Limitations of Native Windows
    - Backups are not encrypted (.vhd, .bkf)
    - But the BackupAssist ZIP engine offers AES encryption

3. Why I like the CRU Solution
    - Hardware based, super fast, Windows compatible

4. Limitations of the CRU Solution
    - No drive letter re-assignment, safely remove not automated, disk swapping

5. Affordability
    - Encrypted SATA less expensive than non-encrypted
    - Complete solution (hardware + software) for under $1600

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Windows® Backup Made Easy!