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## **Image MASter™ 4000PRO X2 SAS**

*Faster Copy and Wipe Operations with  
Built-In Expansion Capability, offering  
the Flexibility of Extending the unit's  
standard Eight Target drive design to  
16 Target drives*

1. *High-end Processing Power*
2. *Hard Drive Support*
3. *Cable Free Drive Caddies*
4. *Compact size*
5. *Versatile "Source" Drive Ports:*
6. *Multi-Session Capability*
7. *Available Drive Caddy Options*
8. *Optional 8 Port Add-On Module*
9. *Multiple Interface Ports*
10. *Multiple Modes of Operation*
11. *Multiple Hash Verifications*
12. *External Storage*
13. *Upload and Download Images to  
Network Storage Area*
14. *Optional IDE Drive Caddies*
15. *Optional PCIe Expansion Cards*
16. *"On the fly" Drive Image  
Encryption\**
17. *Convenient and Easy Upgrades*
18. *Logging*
19. *8" Full Color Touch screen*



**Image MASter™**  
**4000PRO X2**

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# Image MASter™ 4000PRO X2 SAS

**Faster Copy and Wipe Operations with Built-In Expansion Capability, offering the Flexibility of Extending the unit's standard Eight Target drive design to 16 Target drives!**

The Image MASter™ 4000PRO X2 SAS units are the new members of the Image MASter™ 4000PRO Family of Duplicators. With twice the processing power of its original version, all units feature native support for SAS, SATA, USB 2.0 and USB 3.0 drives as well as other common drive interfaces through the use of optional adapters. Highly scalable, the Image MASter™ 4000PRO X2 SAS units come with built-in support to connect an optional Eight Drive Add-on Module, providing the capability to copy and wipe up to 16 drives simultaneously. The Image MASter™ 4000PRO X2 SAS units support SHA-1 and SHA-2 Hardware Accelerated Drive Hashing as well as the standard MD-5 Hashing method. With built-in Hard Drive Encryption support, target drive's data can be Secured utilizing the NIST approved AES-256 Encryption standard. Additionally, units feature a native 1 Gigabit Ethernet connection to upload or download drive images to or from a Network Storage Area. The unit's internal PCIe Bus allows users to easily add a wide array of PCIe cards to expand the unit's support for additional drive interfaces such as SCSI, Fibre Channel, FireWire, 10 Gigabit Ethernet connectivity and more. Fast and reliable, the Image MASter 4000PRO X2 SAS IT Duplicators are designed to fit the unique needs of the mid-size IT organization with all the power of an Enterprise Level Duplicator.

## FEATURES:

### 1. High-end Processing Power

The Image MASter™ 4000 PRO X2 SAS units come standard with a powerful i7 CPU and are designed to support today's High Performance drives as well as future hard drive speed improvements, using 6Gb/s SAS Controller technology. The units support advanced Duplication Technology that can perform multiple operations simultaneously, copy and wipe drives exceeding 7GB/min with a potential of exceeding 18GB/min.

### 2. Hard Drive Support

Offers native support for SAS, SATA and USB 2.0 as well as 3.0 drives. Optional adapters are available to support IDE Drives\*, Micro SATA\*, e-SATA Drives\*, 2.5", 1.8" IDE Notebook Drives\*, ZIF drives\*, and Flash media\*. The unit offers an internal PCIe expansion bus which can be used to expand the unit's capability to support additional drive interfaces such as SCSI and FireWire. \*Available for purchase/Optional Adapters Required

### 3. Cable Free Drive Caddies

The unit offers a Cable Free Drive Insertion Solution.

### 4. Compact size

The unit's Small Footprint design saves work space.

### 5. Versatile "Source" Drive Ports

Flexible design allows any port to be configured as the "Source" port.

### 6. Multi-Session Capability

Copy multiple Source drives simultaneously or run multiple operations simultaneously. Multi-Session supports the high-speed duplication of up to 4 Source drives simultaneously. Copy and Sanitize drives at the same time. Units equipped with the 8 Port Add-on Module can support the duplication of up to 8 source drives simultaneously.

### 7. Available Drive Caddy Options

The units are offered with a 2.5"/1.8" or 3.5" Cable-Free Drive Caddy. Both options support cable-free insertion of eight 2.5"/1.8" or eight 3.5" Form Factor SATA/SAS drives, respectively. The Cable-Free Caddies are designed with replaceable, low cost, SATA/SAS interface boards. The units are also offered with an Open Drive Tray mounting option, providing a flexible drive mounting solution for non-standard Form Factor 2.5" and 3.5" drives, including Solid State drives and Flash Media devices.

### 8. Optional 8 Port Add-On Module

The Image MASter™ 4000PRO X2 SAS is designed with built-in support to connect an optional Eight Port Extension Module, providing the capability to copy and wipe up to 16 drives simultaneously. The Optional Eight Port Add-on Module can be purchased with either a 3.5" Drive Caddy or a 2.5" Drive caddy. Additional 2.5" and 3.5" Caddies can be purchased with either the 3.5" or 2.5" Eight Port Add-on Modules. **NOTE:** The Open Drive Tray Option is not available for the 8 Port Add-on Module.

### 9. Multiple Interface Ports

The unit offers eight native SATA/SAS Drive ports, 1 dedicated SATA drive port, five USB 2.0 ports, one USB 3.0 port, one e-SATA port, and a Gigabit Ethernet port. Additionally, the unit is designed with an available internal PCIe Bus which can be used to expand the unit's capability to support additional drive interfaces.

### 10. Multiple Modes of Operation

**IQ Copy:** Used to copy only allocated data of Source Drives configured with Windows Based O/S and File Systems, greatly reducing the time required to copy data. IQ Copy supports partition scaling allowing duplication of smaller capacity drives to larger capacity drives. **Percent of Copy:** Used to copy a Source drive's allocated data and unallocated data, creating a "mirror" image of the Source drive. O/S and File System independent. **MultiMASter:** Supports storing one or multiple Source drive images on a single "Target" drive using the Segmented File Format. The format copies both allocated and unallocated data. **VHD Capture:** Supports storing one or multiple Source drive images on a single "Target" drive using the VHD File Format. The format copies only allocated data. **WipeOut:** Sanitize drives utilizing the DoD Standard, Secure Erase or User Defined Methods. The unit has the ability to copy and wipe Hidden HPA or DCO areas which may exist on hard drives. **Optional\* Linux IQCopy:** Provides IQCopy Support for the Linux Extended 2 (EXT2), Extended 3 (EXT3) and Extended 4 (EXT4) File Systems. \* Available as an add-on purchase.

### 11. Multiple Hash Verifications

The Image MASter 4000PRO X2 SAS supports SHA-1 and SHA-2 Hardware Accelerated Hashing and Software based MD-5 Hashing.

### 12. External Storage

Images can be stored externally to a Shared Network folder, e-SATA drive or USB drive.

### 13. Upload and Download Images to Network Storage Area

Images files can be uploaded and downloaded to a Network Storage Area allowing the user to take advantage of large storage platforms for the purpose of processing and archiving images. With the use of the Optional 10 Gigabit Ethernet connection, units can copy and upload at speeds exceeding 4GB/min.

### 14. Optional IDE Drive Caddies

IDE Drive Caddies are available for 2.5"/1.8" and 3.5" IDE drives. The IDE Drive Caddies require the use of IDE Data and Power Cables.

### 15. Optional PCIe Expansion Cards

- The unit is equipped with an internal PCI-e Bus for upgradeability and additional device support. Examples of available PCIe Controller cards include the following:
- PCIe SCSI 320Mbit/sec Controller. PCIe FireWire Controller with two (2) 1394B ports and one (1) 1394A port.
- PCIe Express Card Reader Controller which can be used to connect a broad range of Express Card compliant cards such as Express Card Memory devices (not USB based).
- PCIe WiFi Controller.
- PCIe 10 Gigabit Ethernet Card and more.

### 16. "On the fly" Drive Image Encryption\*

Utilizing the built- in AES 256 Encryption Technology the Image MASter 4000PRO X2 SAS encrypts with minimal speed degradation all digital data during the Cloning Process for the purpose of safe guarding sensitive information. The Image

MASter™ 4000PRO X2 SAS creates a secure key with a user-chosen pass phrase. An AES 256 encryption key is then generated by the unit and can be saved to any USB thumb drive. The encrypted drive can be decrypted on the fly utilizing the Image MASter™ 4000PRO X2 SAS or any regular PC loaded with the ICS free decryption utility and the USB thumb drive containing the saved key. User can then safely image the decrypted data to an additional target drive.

\* This process is NOT compatible with the DiskCypher product line.

### 17. Convenient and Easy Upgrades

Easily updates Software through the USB port. Free Software Updates are provided periodically.

### 18. Logging

The unit records and saves detailed log information.

### 19. 8" Full Color Touch screen

Built-in touch screen eliminates the need of connecting an external monitor, mouse or keyboard.

#### TECHNICAL SPECS:

Unit Weight: 15lbs (6.8kg)






#### OVERALL DIMENSIONS:

15" x 3.8" x 15.5" (400mm x 100mm x 400mm)

#### WARRANTY:

One year part and Labor with an optional one year extended warranty.

## OPTIONS:

| IM4000PRO X2 SAS Open Tray Unit (F.GR-4222-000A)  | IM4000PRO X2 SAS - 2.5" Unit (F.GR-4221-000A)  | IM4000PRO X2 SAS - 3.5" Unit (F.GR-4220-000A)  |
|---|--|--|
| <p>The unit ships with the Open Drive Tray and with 8 SAS cables.</p>    | <p>The unit ships with the 2.5" Cable-Free Drive Caddy, including 8 uSATA adapters.</p>   | <p>The unit ships with the 3.5" Cable-Free Drive Caddy.</p>  |
| <p><b>IM4000PRO X2 SAS - 2.5" - 8 Drive Extension Module + PCIe Memory Card Reader (F.GR-4226-000A)</b></p>   | <p><b>IM4000PRO X2 SAS - 3.5" - 8 Drive Extension Module + PCIe Memory Card Reader (F.GR-4225-000A)</b></p>  |  |
| <p>The unit ships with the 2.5" Cable-Free Drive Caddy, including 8 uSATA adapters an installed PCIe Memory Card and the 8 2.5" Drive Extension Module.</p>  | <p>The unit ships with the 3.5" Cable-Free Drive Caddy, including 8 uSATA adapters an installed PCIe Memory Card and the 8 3.5" Drive Extension Module.</p>  |  |

# Next Generation ICS IT Product Comparison Chart

| Features  | IMSolo-101 IT                               | IMSolo-4 IT                    | 4000PRO IT                     | Rapid Image 7012                            | Rapid Image 7020                            | WipePRO                        |
|---|---|--------------------------------|--------------------------------|---|---|--------------------------------|
| <b>Copy Configurations:</b>   |   |                                |                                |   |   |                                |
| Max # of Deployed Targets   | 1   | 3                              | 8                              | 11  | 19  | 9                              |
| Max 1:1   | 1   | 2                              | 4                              | 6   | 10  | N/A                            |
| Max 1:2   | N/A   | 1                              | 3                              | 3   | 6   | N/A                            |
| Max 1:3   | N/A   | 1                              | 2                              | 3   | 5   | N/A                            |
| Maximum Combination of Copy Operations  | 1   | 2                              | 4                              | 6   | 10  | N/A                            |
| <b>Interfaces Supported:</b>  |   |                                |                                |   |   |                                |
| SATA  | 2   | 4                              | 8                              | 11  | 19  | 8                              |
| SAS   | N/A   | 4                              | 8                              | 11  | 19  | 8                              |
| SCSI  | 1<br>Requires 3rd Party SCSI-to-USB Adapter | 3<br>Optional Expansion Module | 3<br>Optional Expansion Module | 1<br>Requires 3rd Party SCSI-to-USB Adapter | 1<br>Requires 3rd Party SCSI-to-USB Adapter | 3<br>Optional Expansion Module |
| USB 2.0   | 2   | 4                              | 5                              | 4   | 4   | 5                              |
| USB 3.0   | N/A   | Optional Expansion Module      | Optional Expansion Module      | N/A   | N/A   | Optional Expansion Module      |
| e-SATA  | 2<br>Optional Adapter                       | 1<br>Optional Adapter          | Optional Adapter               | Optional Adapter                            | Optional Adapter                            | Optional Adapter               |
| 3.5"/2.5"IDE  | Optional Adapter                            | Optional Adapter               | Optional Adapter               | Optional Adapter                            | Optional Adapter                            | Optional Adapter               |
| Micro SATA  | Optional Adapter                            | Optional Adapter               | Optional Adapter               | Optional Adapter                            | Optional Adapter                            | Optional Adapter               |
| ZIF Drives  | Optional Adapter                            | Optional Adapter               | Optional Adapter               | Optional Adapter                            | Optional Adapter                            | Optional Adapter               |
| 1.8" Drives   | Optional Adapter                            | Optional Adapter               | Optional Adapter               | Optional Adapter                            | Optional Adapter                            | Optional Adapter               |
| FireWire  | N/A   | Optional Expansion Module      | Optional Expansion Module      | N/A   | N/A   | Optional Expansion Module      |
| Fibre   | N/A   | Optional Expansion Module      | Optional Expansion Module      | N/A   | N/A   | Optional Expansion Module      |
| Flash Devices   | Optional Adapter                            | Optional Adapter               | Optional Adapter               | Optional Adapter                            | Optional Adapter                            | Optional Adapter               |
| <b>Ethernet Connection</b>  | Gigabit                                     | Gigabit                        | Gigabit                        | Gigabit                                     | Gigabit                                     | Gigabit                        |
| <b>Maximum Speed Capability</b>   | 6.2 GB/min                                  | 18 GB/min                      | 18 GB/min                      | 18 GB/min                                   | 18 GB/min                                   | 18 GB/min                      |
| <b>Average Speed</b>  |   |                                |                                |   |   |                                |
| SATA  | 5.5 GB/min                                  | 6 GB/min                       | 6 GB/min                       | 6 GB/min                                    | 6 GB/min                                    | 6 GB/min                       |
| SAS   | N/A   | 7 GB/min                       | 7 GB/min                       | 7 GB/min                                    | 7 GB/min                                    | 7 GB/min                       |
| Solid State Drives  | 6.2 GB/min                                  | 12 GB/min                      | 12 GB/min                      | 12 GB/min                                   | 12 GB/min                                   | 12 GB/min                      |
| USB   | 1.4GB/min                                   | 1.4GB/min                      | 1.4GB/min                      | N/A   | N/A   | 1.4GB/min                      |
| 1394B   | N/A   | 2.4GB/min                      | 2.4GB/min                      | N/A   | N/A   | 2.4GB/min                      |
| SCSI  | N/A   | 4GB/min                        | 4GB/min                        | N/A   | N/A   | 4GB/min                        |
| <b>SHA-1/SHA-2 HASH H/W Acceleration</b>  | YES   | YES                            | YES                            | N/A   | N/A   | N/A                            |
| <b>AES Encryption</b>   | YES   | YES                            | YES                            | N/A   | N/A   | N/A                            |
| <b>Copy Modes</b>   |   |                                |                                |   |   |                                |
| IQ Copy   | YES   | YES                            | YES                            | YES   | YES   | N/A                            |
| Image Copy  | YES   | YES                            | YES                            | YES   | YES   | N/A                            |
| MultiMASter/VHD   | YES   | YES                            | YES                            | YES   | YES   | N/A                            |
| <b>Image to or from External Storage</b>  |   |                                |                                |   |   |                                |
| SAN   | YES   | YES                            | YES                            | YES   | YES   | N/A                            |
| USB   | YES   | YES                            | YES                            | N/A   | N/A   | N/A                            |
| e-SATA  | YES   | YES                            | Optional eSATA Cables          | N/A   | N/A   | N/A                            |
| FireWire  | N/A   | Optional Expansion Module      | Optional Expansion Module      | YES   | YES   | N/A                            |
| <b>Wiping</b>   |   |                                |                                |   |   |                                |
| DoD   | YES   | YES                            | YES                            | YES   | YES   | YES                            |
| Single Pass   | YES   | YES                            | YES                            | YES   | YES   | YES                            |
| Secure Erase  | YES   | YES                            | YES                            | YES   | YES   | YES                            |
| <b>Portability</b>  | Handheld                                    | Handheld                       | Small Footprint                | Industrial                                  | Industrial                                  | Small Footprint                |
| <b>Design Usage</b>   | Single user                                 | Single user                    | Mid Size                       | Large                                       | Large/Production                            | Large                          |
| <b>SAS/SATA Drive Caddy Cable Free with Built-in Fans (Select between 2.5" or 3.5")</b> | N/A   | N/A                            | One Standard                   | One Standard                                | Two Standard                                | One Standard                   |
| <b>IDE Drive Caddy Built-in Fans</b>  | N/A   | N/A                            | Optional                       | Optional                                    | Optional                                    | Optional                       |
| <b>Open Drive Tray</b>  | Optional                                    | Optional                       | Optional                       | N/A   | N/A   | Optional                       |
| <b>Operating System</b>   | Windows Embedded Standard                   | Windows Embedded Standard      | Windows Embedded Standard      | Windows Embedded Standard                   | Windows Embedded Standard                   | Windows Embedded Standard      |



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