



Cloning Windows® 7 and 8 with Logicube® Duplicators



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Version: 3.1
WIN7WIN8-GUIDE
Date: 10/08/14

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1. Introduction

1.0 Introduction

This document provides guidelines on how drives with Windows 7 or Windows 8 can be cloned using Logicube disk drive duplicators. The following products are covered in this article:

- ZClone® Xi
- ZClone™
- SuperSonix®
- OmniSAS™
- OmniClone® 2Xi, 5Xi, and 10Xi
- Echo Plus™

1.1 Partitioning Schemes

There are two common partitioning schemes currently being used for Windows 7 and Windows 8; MBR and GPT.

MBR (Master Boot Record) – The older and currently more common partitioning scheme.

GPT (GUID Partition Table) – A newer (and at this time less common) partitioning scheme.

1.2 Cloning Modes

Different cloning modes are available on each of the Logicube products listed above.

1.2.1 Mirror Copy Mode

All of the Logicube products listed above have the Mirror Copy mode and will support the cloning of Windows 7 and Windows 8 using this mode. Mirror Copy mode performs a bit-for-bit copy of the Master drive, producing an exact duplicate of that drive. Please refer to the respective User's Manual of your Logicube device for complete instructions on how to use this cloning mode.

1.2.2 Clever Copy Mode

Clever Copy mode may work with the MBR partitioning scheme. The GPT partitioning scheme is only supported with the ZClone and ZXi. Clever Copy mode copies only the sectors with data from the Master drive. The Target drives must be the same size (specifically, they must have the same number of available sectors) as the Master drive. The OmniSAS does not support Windows 7 or 8 via Clever Copy. Also, the Master drive must contain no more than 3 partitions. For more information please see **Chapter 2: Charts**.



Due to the various numbers of ways a Windows 7 or Windows 8 drive can be created, there are times when Clever Copy will not work even if the drives are the same model and the Master drive has 3 or less partitions. In these cases, Selective mode is recommended. Mirror mode is always available as a way to clone these drives.

1.2.3 Selective Mode

Selective mode is available on the OmniClone Xi (an additional option), the SuperSonix, and the OmniSAS. Selective mode allows you to specify how each partition is going to be copied. For example, you can have one partition be copied using Mirror Copy mode, while another partition using Clever Copy mode. For more information on how Selective mode works, please refer to the respective User's Manual of your Logicube device for complete instructions on how to use this cloning mode.



When using Selective mode, Mirror Copy must be selected for any Recovery, Boot, Hidden, Utility, or Restore partitions. For Operating System partitions, Clever Copy or Mirror Copy can be used.

1.2.4 Master Manager Mode

At this time, drives with the Windows 7 and Windows 8 Operating Systems are not supported in the Master Manager™ mode.

2. Charts

2.0 Introduction

Here are two quick look-up charts for both Windows 7 and Windows 8. The first chart is for Master drives with the MBR partitioning scheme (maximum capacity is 2TB). The second chart is for Master drives with the GPT partitioning scheme.

The following chart is for Windows 7 and 8 with the MBR partitioning scheme:

Product	Minimum Software Requirement	Mirror Copy Mode	Clever Copy Mode	Selective Mode
ZClone Xi (ZXi)	1.0	Yes	Only OS partition can be expanded	N/A
ZClone	1.05-P03.05	Yes	Only OS partition can be expanded	N/A
SuperSonix	1.83RC28	Yes	Same size drives and only up to 3 partitions	Up to 3 partitions
OmniClone Xi	1.7RC55	Yes	Same size drives and only up to 3 partitions	Up to 3 partitions
OmniSAS	4.08	Yes	No	No
Echo Plus	2.5	Yes	Same size drives and only up to 3 partitions	N/A

Fig. 1 – Support chart for MBR partitioning scheme for Windows 7 and 8

The following chart is for Windows 7 and 8 with the GPT partitioning scheme:

Product	Minimum Software Requirement	Mirror Copy Mode	Clever Copy Mode	Selective Mode
ZClone Xi (ZXi)	1.0	Yes	Only OS partition can be expanded	N/A
ZClone	1.05-P03.05	Yes	Only OS partition can be expanded	N/A
SuperSonix	1.83RC28	Yes	No	No
OmniClone Xi	1.7RC55	Yes	No	No
OmniSAS	4.08	Yes	No	No
Echo Plus	2.5	Yes	No	N/A

Fig. 2 – Support chart for GPT partitioning scheme for Windows 7 and 8

3. Scenarios

3.0 Introduction

The following are examples of what settings can be tried when Clever Copy mode does not work, or if Selective Mode needs to be used. Due to the various numbers of ways a Windows 7 or Windows 8 drive can be created, there are times when the examples in this section will not work. Mirror mode is always available as a way to clone these drives.

3.1 Scenario 1: Master and Target drives are the same size, and the partitioning scheme is MBR

Use Clever Copy mode first. If the Target drive does not boot, try Selective mode, if available.

For the ZClone or ZXi, set any Recovery, Boot, Hidden, Utility, or Restore partition to 0% and set the Operating System partition to 100%.

Please refer to the Cloning Modes section of the respective Users Manual for your Logicube device for complete instructions on using Clever Copy or Selective mode in this scenario.



If the Master drive has the MBR partitioning scheme and has more than 3 partitions, use Mirror Copy mode except on the ZClone or ZXi where Clever Copy mode can be used.

3.2 Scenario 2: Master and Target drives are the same size, and the partitioning scheme is GPT

Use Mirror Copy mode except on the ZClone or ZXi where Clever Copy mode can be used.

3.3 Scenario 3: When the Target drive is larger than the Master drive



Please note that you will need to have purchased and enabled the Selective Partitions option on the OmniClone Xi duplicator. Contact our sales department if you do not have this option. Selective Partitions is already activated on the SuperSonix and OmniSAS. The Echo Plus does not have Selective mode.

This scenario is seen in most installations of Windows 7 or 8. Computer manufacturers place a recovery partition on the hard disk so users can restore the PC to its original, factory installation. Some computer manufacturers also include a utility partition with various utility programs. Other partitions may be included by the computer manufacturer. On Microsoft DVD installations (non-OEM) the principle of this scenario is the same. The following steps are recommended to create a bootable clone (except on the Echo Plus, ZClone or ZXi):

1. Use Selective mode (Please refer to the respective User's Manual of your Logicube device for complete instructions on how to use this cloning method).
2. The Logicube unit will report two or more partitions. They should be cloned as follows:
 - a. For all Recovery, Boot, Hidden, Utility, or Restore partitions: Set the partition cloning mode to Mirror.
 - b. For the Operating System partition: Set the partition cloning mode to Clever Copy.

The ZClone and ZXi do not have Selective mode. Clever mode can be used. Set any Recovery, Boot, Hidden, Utility, or Restore partition to 0% and set the Operating System partition to 100%.

Echo Plus does not have Selective mode. Mirror mode must be used in this scenario.



If the Master drive has the MBR partition scheme and has more than 3 partitions, use Mirror Copy mode except on the ZClone or ZXi where Clever Copy mode can be used.



If the Master drive has the GPT partition scheme, use Mirror Copy mode except on the ZClone or ZXi where Clever Copy mode can be used.

3.4 Scenario 4: Target drives are smaller than the Master drive

When attempting to clone to a Target drive that is smaller in capacity than the Master drive, the partitions on the Master drive need to be adjusted to be no more than the same size of the Target drives. This scenario applies for any Windows Operating System (not just Windows 7 or 8).

Windows 7 has a built-in partition utility that can shrink volumes or partitions. For more information on how to shrink volumes, you can search the Internet for **technet shrink volume**. Although there are several ways of shrinking a partition or volume, we recommend using the

same recommendation that Microsoft uses. At this time, Microsoft does not have a recommended way of shrinking a volume in Windows 8.

Once the partitions have been adjusted to fit the Target drive, you can use the same steps found in Scenario 1 or 2 and use either Clever mode, Selective mode, or Mirror mode based on the scenario.

4. Technical Support Information

For further assistance please contact
Logicube Technical Support at: (001) 818 700 8488 7am-5pm PST, M-F
(excluding US legal holidays)
or by email to techsupport@logicube.com