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You can read the recommendations in the user guide, the technical guide or the installation guide for MAXTOR ST9235AG. You'll find the answers to all your questions on the MAXTOR ST9235AG in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

**User manual MAXTOR ST9235AG**  
**User guide MAXTOR ST9235AG**  
**Operating instructions MAXTOR ST9235AG**  
**Instructions for use MAXTOR ST9235AG**  
**Instruction manual MAXTOR ST9235AG**



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*ST9235 Family:*

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**ST9080A**

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**ST9145A, ST9145AG**

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**ST9235A, ST9235AG**

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*Installation Guide*  
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**Manual abstract:**

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..... ST9235 Family: .....

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..... ST9080A .....

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..... ST9145A, ST9145AG ...  
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..... ST9235A, ST9235AG ..  
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..... Installation Guide .

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ST9235 Family Installation Guide, Rev. B 1 Read before you begin... Note. Drives in the ST9235 family are usually installed in notebook or laptop systems. Special training or tools may be needed to service these computers. In some instances, opening the case may void your warranty. Be sure to review the terms and conditions of your system warranty before opening the system enclosure. Warning.

@@ Observe static discharge precautions. @@ Do not touch the PC board or the I/O connector pins. Always handle the drive by its edges or frame. @@ Use a grounded wrist strap. @@ Use antistatic padding on all work surfaces and avoid static-inducing carpeted areas. Inspection. When you are familiar with the handling precautions listed above, inspect the drive. If it appears to be damaged, contact your distributor or dealer immediately. Handle drives carefully. Improper handling during transit or shipping accounts for many installation problems.

Even minor bumps can exert relatively large G forces on these drives. Always handle the drive carefully. In addition, do not attach any labels to the drive top

cover, as they may prevent proper ventilation. 2 ST9235 Family Installation Guide, Rev. B Warranty.

Contact your authorized Seagate distributor or dealer for warranty information. Maintenance and repair. Seagate drives do not require any preventive maintenance. The head/disc assembly is sealed and does not contain any user-serviceable components. Tampering with the factory seal voids the warranty. Seagate customer service centers are the only facilities authorized to service Seagate drives. Seagate does not sanction any third-party repair facilities. Shipping. When transporting or shipping a drive, you must use a Seagate-approved container. If possible, use an original Seagate shipping box with a Seagate Approved Package label. Shipping a drive in a nonapproved container voids the drive warranty. Seagate service centers may refuse receipt of components improperly packaged or obviously damaged in transit. Call your authorized Seagate distributor to purchase additional boxes. Seagate recommends shipping by an air-ride carrier experienced in handling computer equipment. Installation overview Drive installation can be divided into several logical steps: 1.

2. 3. 4. 5. Setting master/slave jumpers Connecting cables Mounting the drive Configuring the system BIOS Formatting and partitioning the drive Each of these steps is described in detail on the following pages. Some may not be applicable to your particular installation requirements. ST9235 Family Installation Guide, Rev. B 3 Setting master/slave jumpers Two drives may be controlled through a single drive controller cable with two connectors. In this case, one drive is designated as the master and the other is designated as the slave. As shown in Figure 1 on page 4, the jumpers on each drive must be set to identify which drive is master and which is slave.

Connecting cables The ST9235 Family drives use a 44-pin AT interface connector cable with two rows of 22 female contacts on 0.079 inch (2 mm) centers (see Figure 1). Pin assignments for the AT interface are listed in Appendix A. Most cables have a stripe down one side, which designates pin 1. Make sure pin 1 on the interface cable connector is aligned to pin 1 on the drive interface connector and pin 1 on the host connector.

To assist in cable alignment, pin 20 has been removed on the male interface connector on the drive. This type of connector is designed to be used with a keyed cable connector having a plug in place of pin 20. Before mounting the drive, be sure that the connecting cable is long enough to reach the drive, but not so long that it will be pinched when the system enclosure is replaced. Connecting cables for the ST9235 family drives must not be longer than 18 inches (457 mm). Power connections Power for the ST9235 family drives is supplied through the 44-pin interface connector (see Appendix A for specific pin assignments).

Caution. These drives can accept only +5 volts DC power. Do not use +12 volts DC power. 4 ST9235 Family Installation Guide, Rev. B Note. Drive is shown with circuit board up. Master/slave Pin 1 configuration jumpers Pin 20 removed for keying Circuit board A B C D Drive is master; no slave present Drive is master; Seagate slave drive present Drive is slave; Seagate master drive present Reserved positions (do not use) Figure 1. AT interface cable connector and master/slave configuration jumpers ST9235 Family Installation Guide, Rev. B 5 Mounting the drive You can mount (and operate) a ST9235 family drive in any orientation. However, you must securely attach the drive to a rigid frame using four side-mounting screws or four bottom-mounting screws.

Caution: To avoid damaging the drive: · Use M3X0.5 metric mounting screws only. · Do not insert mounting screws more than 0.150 inches (3.81 mm) into the mounting holes (except: 0.190 inches (4.82 mm) for the bottom-mounting holes of the ST9235A and ST9235AG). · Do not overtighten the screws (maximum torque: 3 inch-lb). Allow a minimum clearance of 0.030 inches (0.

762 mm) around the entire perimeter of the drive for cooling airflow. Mounting dimension drawings for the ST9235 family drives are provided in Appendix B. @@@@ drive types your BIOS supports. @@The methods used to configure system BIOS vary from system to system. In many cases you can run a setup program from the DOS prompt.

@@@@@Drive Specification No. cylinders No. read/write heads No. sectors per track Total No. @@@@ table above.

This value will be lower than the usable drive capacity. @@@@In other words: Total sectors per drive (No. cylinders) × (No. read/write heads) × (No. @@@@Several key compatibility issues are discussed below.



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@@@Depending on the drive type, 8 ST9235 Family Installation Guide, Rev. B your system BIOS may look for 4 bytes of ECC. If your system BIOS expects 4 bytes of ECC and the drive supplies a different number of bytes, some drive diagnostic programs may fail, typically resulting in time-out errors. Consult your system documentation or call your system dealer or manufacturer for information on configuring your system to receive 11 bytes of ECC. Formatting and partitioning the drive Caution.

Formatting or partitioning a drive that contains data may result in a partial or complete loss of that data. Make sure all data has been safely backed up before repartitioning or reformatting a drive. Seagate Technology assumes no liability for lost data. Low-level formatting Seagate AT Interface drives are low-level formatted at the factory and do not require additional low-level formatting prior to use. Partitioning A single disc drive can be subdivided into partitions that behave as separate drives (labeled C, D, E, etc.). Versions of DOS prior to Version 4.0 are not able to access more than 32 Mbytes of disc space as a single drive. Therefore, drives having a capacity of over 32 Mbytes must be divided into several smaller partitions for use with these older versions of DOS. Seagate does not recommend using ST9235 family drives with DOS versions prior to Version 3.

3. To partition a drive, you must first boot the system using a floppy disk that contains system files. Partition the drive using the DOS FDISK utility program (described in your DOS manual). If you are partitioning a drive that will be used to boot the system, make sure that the primary DOS partition is marked active. ST9235 Family Installation Guide, Rev.

B 9 High-level formatting Once the drive is partitioned, 34 35 36 37 38 39 40 Host Reset Ground Host Data Bus Bit 7 Host Data Bus Bit 8 Host Data Bus Bit 6 Host Data Bus Bit 9 Host Data Bus Bit 5 Host Data Bus Bit 10 Host Data Bus Bit 4 Host Data Bus Bit 11 Host Data Bus Bit 3 Host Data Bus Bit 12 Host Data Bus Bit 2 Host Data Bus Bit 13 Host Data Bus Bit 1 Host Data Bus Bit 14 Host Data Bus Bit 0 Host Data Bus Bit 15 Ground (No Pin) DMA Request Ground Host I/O Write Ground Host I/O Read Ground I/O Channel Ready Spindle sync or Cable Select DMA Acknowledge Ground Host Interrupt Request Host 16 Bit I/O Host Address Bus Bit 1 Passed Diagnostics Host Address Bus Bit 0 Host Address Bus Bit 2 Host Chip Select 0 Host Chip Select 1 Drive Active/ Drive 1 Present Ground \*Indicates master-slave signals (details shown below). Drive 1 (slave) 28 34 39 Drive 0 (master) 28 34 39 Host SPSYNC:CSEL PDIAG DASP 28 34 39 12 ST9235 Family Installation Guide, Rev. B Appendix B. Mounting dimension drawings Dimensions are in inches (mm) 0.492 ± 0.

005 (12.50 ± 0.13) 0.066 ± 0.020 (1.68 ± 0.51) 0.000 0.100 ± 0.010 (2.

54 ± 0.25) 4X 3 mm × 0.5 mm 0.15 in (3.81 mm) min. full thread 0.146 +0.011, 0.008 (3.71 +0.

28, 0.20) 1.227 ± 0.025 (31.17 ± 0.

64) 4.010 (101.85) max 1.500 ± 0.010 (38.

10 ± 0.25) 0.000 1.375 ± 0.015 (34.93 ± 0.38) 0.155 ± 0.025 (3.94 ± 0.

64) 0.000 0.275 ± 0.025 (6.99 ± 0.64) 2.760 (70.10) max 2.430 ± 0.020 (61.

72 ± 0.51) 4X 3 mm × 0.5 mm 0.15 in (3.81 mm) min.

full thread Pin 20 removed for keying 0.079 (2.00) Pin 1 0.166 ± 0.015 (4.

22 ± 0.38) 0.079 (2.00) 1.654 (42.00) Figure 2. Mounting dimensions for the ST9080A ST9235 Family Installation Guide, Rev. B Dimensions are in inches (mm) 2.875 (73.03) 1.

375 (34.93) 0.750 max (19.05) 0.157 ± 0.020 (3.99 ± 0.51) 0.000 0.118 (3.

00) 4X 3 mm × 0.5 mm, 0.15 in (3.81 mm) min full thread 1.227 ± 0.

025 (31.17 ± 0.64) 0.146 +0.011, 0.

008 (3.71 +0.28, 0.20) 13 4.010 max (101.85) 2.875 (73.03) 1.375 (34.93) 0.

000 0.000 0.160 (4.06) 2.590 (65.79) 2.760 max (70.10) 4X 3 mm × 0.5 mm, 0.15 in (3.

81 mm) min full thread 0.394 ± 0.025 (10.01 ± 0.64) 0.

079 (2.00) pin spacing Pin 1 0.079 (2.00) pin spacing Pin 20 removed for keying Notes: 1. The ST9145A form-factor complies with MCC mounting standards.

2. All dimensional tolerances are ± 0.010 inch (± 0.25 mm) maximum unless otherwise specified. Figure 3. Mounting dimensions for the ST9145A and the ST9145AG 14 ST9235 Family Installation Guide, Rev. B Dimensions are in inches (mm) 0.750 (19.05) max 0.066 ± 0.

020 (1.68 ± 0.51) 0.039 ± 0.020 (0.99 ± 0.51) 0.000 0.230 ± 0.010 (5.

84 ± 0.25) 0.118 ± 0.010 (3.00 ± 0.

25) 4X 3 mm × 0.5 mm 0.15 in. (3.81 mm) min.

full thread 0.146 +0.011, 0.008 (3.71 +0.28, 0.20) 1.227 ± 0.025 (31.17 ± 0.

64) 4.010 (101.85) max 1.500 ± 0.010 (38.10 ± 0.25) 0.000 1.375 ± 0.015 (34.

93 ± 0.38) 0.155 ± 0.025 (3.94 ± 0.

64) 0.000 0.275 ± 0.025 (6.99 ± 0.

64) 0.239 ± 0.025 (6.07 ± 0.64) 2.760 (70.10) max 2.430 ± 0.020 (61.72 ± 0.

51) 4X 3 mm × 0.5 mm 0.15 in (3.81 mm) min. full thread Pin 20 removed for keying 0.079 (2.00) Pin 1 0.166 ± 0.015 (4.22 ± 0.

38) 0.157 ± 0.009 (3.99 ± 0.23) 0.

079 (2.00) 1.654 (42.00) Key to mounting specifications: non-MCC mount MCC mount Figure 4. Mounting dimensions for the ST9235A and the ST9235AG ST9235 Family Installation Guide, Rev.

B 15 Appendix C. Technical support services Product technical support is available for all Seagate products by calling the SeaFAX, SeaFONE, SeaTDD and SeaBOARD services described below. These services are free, but long-distance charges (if any) are paid by the user. SeaFAX. 408/438-2620 You can use a touch-tone telephone to access Seagate's automated FAX system and select technical support information by return FAX. This service is available 24 hours a day, 7 days a week. SeaFONE. 408/438-8222 Seagate's phone system provides recorded technical information on selected Seagate products while you are on hold. Technical support specialists are available to answer questions from 8:00 A.M.

to 5:00 P.M. (PST), Monday through Friday. Recordings are accessible 24 hours a day, 7 days a week. SeaTDD. 408/438-5382 Using a TDD

*(Telecommunications Device for the Deaf) device, you can send questions or comments 24 hours a day, or communicate with a technical support specialist between 8:00 A.M. and 5:00 P.M. (PST), Monday through Friday.*

*SeaBOARD. The Seagate Technical Support Bulletin Board System (BBS) is available 24 hours a day, 7 days a week. A modem is required to access this service. @@@@. The FINDTYPE.EXE utility program, which can be very useful in drive installation.*

*It compares the drive's geometry with all geometries supported by your system BIOS. This program either signals that an exact match exists between the drive geometry and the system BIOS, or recommends the closest drive type supported by your system BIOS. Maximum baud rate 9600 9600 9600 2400 9600 9600 BBS location United States England France Germany Singapore Australia Modem number 408-438-8771 44-62-847-8011 33-1-40 67 10 34 49-89-140-9331 65-292-6973 61-2-756-2359 Seagate Technology, Inc.*



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