

**HP StorageWorks Tape Automation**  
**MSL2024 - MSL4048 - MSL8096 drive upgrade matrix**

| Upgrade to drive | Ultrium 448   | Ultrium 920   | Ultrium 960  | Ultrium 1760  | Ultrium 1840   | Mixed Drives<br>(Ultrium 448, 920, 960, 1760 & 1840) |
|------------------|---|---|--|---|--|--|
| Drive interface  | Ultra 160 SCSI  | Ultra 320 SCSI or 3Gb/s SAS   | Ultra 320 SCSI or Native Fibre Channel   | 3Gb/s SAS   | Ultra 320 SCSI or Native Fibre Channel   |  |
| <b>MSL2024</b>   | Supported   | Supported   | Supported  | Supported   | Supported  | Supported*   |
| <b>requires</b>  | <b>AG118A</b> LTO-2 Ultrium 448 SCSI Drive Upgrade Kit (maximum of two drives)  | <b>AH173A</b> LTO-3 Ultrium 920 SCSI Drive Upgrade Kit (maximum of two drives)<br><br><b>AH562A</b> LTO-3 Ultrium 920 SAS Drive Upgrade Kit (maximum of two drives)   | <b>AG327A</b> LTO-3 Ultrium 960 SCSI Drive Upgrade Kit (maximum of one drive)<br><br><b>AG328B</b> LTO-3 Ultrium 960 4Gb FC Drive Upgrade Kit (maximum of one drive)     | <b>AK383A</b> LTO-4 Ultrium 1760 SAS Drive Upgrade Kit (maximum of two drives)  | <b>AJ041A</b> LTO-4 Ultrium 1840 SCSI Drive Upgrade Kit (maximum of one drive)<br><br><b>AJ042A</b> LTO-4 Ultrium 1840 4Gb FC Drive Upgrade Kit (maximum of one drive)     | <b>X</b>   |
| <b>MSL4048</b>   | Supported   | Supported   | Supported  | Supported   | Supported  | Supported*   |
| <b>requires</b>  | <b>AG118A</b> LTO-2 Ultrium 448 SCSI Drive Upgrade Kit (maximum of four drives) | <b>AH173A</b> LTO-3 Ultrium 920 SCSI Drive Upgrade Kit (maximum of four drives)<br><br><b>AH562A</b> LTO-3 Ultrium 920 SAS Drive Upgrade Kit (maximum of four drives) | <b>AG327A</b> LTO-3 Ultrium 960 SCSI Drive Upgrade Kit (maximum of two drives)<br><br><b>AG328B</b> LTO-3 Ultrium 960 4Gb FC Drive Upgrade Kit (maximum of two drives)   | <b>AK383A</b> LTO-4 Ultrium 1760 SAS Drive Upgrade Kit (maximum of four drives) | <b>AJ041A</b> LTO-4 Ultrium 1840 SCSI Drive Upgrade Kit (maximum of two drives)<br><br><b>AJ042A</b> LTO-4 Ultrium 1840 4Gb FC Drive Upgrade Kit (maximum of two drives)   | <b>X</b>   |
| <b>MSL8096</b>   | Supported   | Supported   | Supported  | Supported   | Supported  | Supported*   |
| <b>requires</b>  | <b>AG118A</b> LTO-2 Ultrium 448 SCSI Drive Upgrade Kit (maximum of four drives) | <b>AH173A</b> LTO-3 Ultrium 920 SCSI Drive Upgrade Kit (maximum of four drives)<br><br><b>AH562A</b> LTO-3 Ultrium 920 SAS Drive Upgrade Kit (maximum of four drives) | <b>AG327A</b> LTO-3 Ultrium 960 SCSI Drive Upgrade Kit (maximum of four drives)<br><br><b>AG328B</b> LTO-3 Ultrium 960 4Gb FC Drive Upgrade Kit (maximum of four drives) | <b>AK383A</b> LTO-4 Ultrium 1760 SAS Drive Upgrade Kit (maximum of four drives) | <b>AJ041A</b> LTO-4 Ultrium 1840 SCSI Drive Upgrade Kit (maximum of four drives)<br><br><b>AJ042A</b> LTO-4 Ultrium 1840 4Gb FC Drive Upgrade Kit (maximum of four drives) | <b>X</b>   |

\* Mixed drive capability requires library partitioning (zoning) support by ISV backup application software; confirm if your backup software supports media partitioning.

**HP StorageWorks Tape Automation**  
**1/8 G2 - MSL2024 - MSL4048 - MSL8096 drive interoperability matrix**

| Upgrade to drive | Ultrium 232    | Ultrium 448    | Ultrium 920                 | Ultrium 960                            | Ultrium 1760 | Ultrium 1840                           | Mixed Drives<br>(Ultrium 448, 920, 960,<br>1760 & 1840) |
|------------------|----------------|----------------|-----------------------------|--|--------------|--|---|
| Drive interface  | Ultra 160 SCSI | Ultra 160 SCSI | Ultra 320 SCSI or 3Gb/s SAS | Ultra 320 SCSI or Native Fibre Channel | 3Gb/s SAS    | Ultra 320 SCSI or Native Fibre Channel |   |
| <b>1/8 G2 AL</b> | Supported      | Supported      | Supported                   | Not Supported                          | Supported    | Not Supported                          | Not Supported   |
| <b>MSL2024</b>   | Supported      | Supported      | Supported                   | Supported                              | Supported    | Supported                              | Supported*  |
| <b>MSL4048</b>   | Supported      | Supported      | Supported                   | Supported                              | Supported    | Supported                              | Supported*  |
| <b>MSL8096</b>   | Supported      | Supported      | Supported                   | Supported                              | Supported    | Supported                              | Supported*  |

NOTE: Drive SKU's can be re-deployed in each autoloader or library platform where appropriate

\* Mixed drive capability requires library partitioning (zoning) support by ISV backup application software; confirm if your backup software supports media partitioning.

HP StorageWorks Tape Automation  
MSL6000 drive upgrade matrix

| Upgrade to drive                                   | SDLT 600  | Ultrium 960   | Ultrium 1840  | Mixed Drives<br>(DLT8000 & SDLT) | Mixed Drives<br>(SDLT & Ultrium) | Mixed Drives<br>(Ultrium 460, 960 & 1840) |
|--|---|---|---|----------------------------------|----------------------------------|---|
| Library interface                                  | Ultra 160 SCSI  | Ultra 320 SCSI  | Ultra 320 SCSI  |                                  |                                  |   |
| <b>MSL6030 &amp; MSL6060 (6-3 part number)</b>     | Not supported   | Supported   | Supported   | Not supported                    | Not supported*                   | Supported**                               |
| <b>requires</b>                                    | X   | <b>AD612B</b> Ultrium 960 Drive Upgrade Kit (maximum of two drives in MSL6030; maximum of four drives in MSL6060) ***<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†   | <b>AJ028A</b> Ultrium 1840 Drive Upgrade Kit (maximum of two drives in MSL6030; maximum of four drives in MSL6060) ***<br><br>Configure single tape drive per SCSI bus.<br><br>Use the e1200-320 4Gb FC interface controller for best performance. NSR M2402 and e1200-160 are still supported, but performance will be limited.†   | X                                | X                                | X   |
| <b>MSL6030 &amp; MSL6060 (5 digit part number)</b> | Not supported   | Supported   | Supported   | Not supported                    | Not supported*                   | Supported**                               |
| <b>requires</b>                                    | X   | <b>AD612B</b> Ultrium 960 Drive Upgrade Kit (maximum of two drives in MSL6030; maximum of four drives in MSL6060) ***<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†   | <b>AJ028A</b> Ultrium 1840 Drive Upgrade Kit (maximum of two drives in MSL6030; maximum of four drives in MSL6060) ***<br><br>Configure single tape drive per SCSI bus.<br><br>Use the e1200-320 4Gb FC interface controller for best performance. NSR M2402 and e1200-160 are still supported, but performance will be limited.†   | X                                | X                                | X   |
| <b>MSL6026 &amp; MSL6052</b>                       | Supported   | Supported   | Supported   | Not supported                    | Not supported*                   | Supported**                               |
| <b>requires</b>                                    | <b>AD589B</b> SDLT600 Drive Upgrade Kit<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.† | <b>AD612B</b> Ultrium 960 Drive Upgrade Kit (maximum of two drives in MSL6030; maximum of four drives in MSL6060) ***<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†<br><br><b>AD621A</b> MSL Ultrium Dual Magazine Kit (one required for MSL6026; two required for MSL6052) | <b>AJ028A</b> Ultrium 1840 Drive Upgrade Kit (maximum of two drives in MSL6030; maximum of four drives in MSL6060) ***<br><br>Configure single tape drive per SCSI bus.<br><br>Use the e1200-320 4Gb FC interface controller for best performance. NSR M2402 and e1200-160 are still supported, but performance will be limited.†<br><br><b>AD621A</b> MSL Ultrium Dual Magazine Kit (one required for MSL6026; two required for MSL6052) | X                                | X                                | X   |

NOTE: MSL6000 tape libraries with a 5 digit part number were available starting April 2005. These libraries offer the same number of slots, tape drives and specifications as the MSL6000 tape libraries with 6-3 part numbers, but use a different tape drive shoe.

\* MSL libraries will not support SDLT and Ultrium cartridges in the same library module because of differences in media magazine size. However, support for MSL libraries with SDLT and Ultrium drives in separate modules in a multi-unit stack is supported.

\*\* Mixed drive/media capability requires library partitioning (zoning) support by ISV backup application software; confirm if your backup software supports media partitioning.

\*\*\* ADXXXX drive upgrade kit is limited to Ultra 160 speeds; no limits on AJXXXX drive upgrade kit

† Interface controller cards should be installed in the left most slot for better cooling in the tape library.

HP StorageWorks Tape Automation  
MSL5000 drive upgrade matrix

| Upgrade to drive                                  | SDLT 600   | Ultrium 960   | Ultrium 1840   | Mixed Drives<br>(DLT8000 & SDLT) | Mixed Drives<br>(SDLT & Ultrium) | Mixed Drives<br>(Ultrium 460, 960 & 1840) |
|---|--|---|--|----------------------------------|----------------------------------|---|
| Library interface                                 | Ultra 160 SCSI   | Ultra 320 SCSI  | Ultra 320 SCSI   |                                  |                                  |   |
| <b>MSL5026DLX<br/>(opal)</b>                      | Supported  | Not supported   | Not supported  | Supported***                     | Not supported                    | Not supported                             |
| <b>requires</b>                                   | <b>AD589B</b> SDLT600 Drive Upgrade Kit*<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.† | <b>X</b>  | <b>X</b>   | <b>X</b>                         | <b>X</b>                         | <b>X</b>                                  |
| <b>MSL5026SL<br/>(opal)</b>                       | Supported  | Not supported   | Not supported  | Supported***                     | Not supported                    | Not supported                             |
| <b>requires</b>                                   | <b>AD589B</b> SDLT600 Drive Upgrade Kit*<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.† | <b>X</b>  | <b>X</b>   | <b>X</b>                         | <b>X</b>                         | <b>X</b>                                  |
| <b>MSL5026SL<br/>(graphite)<br/>and MSL5052SL</b> | Supported  | Supported (capacity upgrade only)   | Supported (capacity upgrade only)  | Supported***                     | Not supported**                  | Not supported                             |
| <b>requires</b>                                   | <b>AD589B</b> SDLT600 Drive Upgrade Kit*<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.† | <b>AD612B</b> Ultrium 960 Drive Upgrade Kit *<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†<br><br><b>AD621A</b> MSL Ultrium Dual Magazine Kit (one required for MSL5026; two required for MSL5052) | <b>AJ028A</b> Ultrium 1840 Drive Upgrade Kit *<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†<br><br><b>AD621A</b> MSL Ultrium Dual Magazine Kit (one required for MSL5026; two required for MSL5052) | <b>X</b>                         | <b>X</b>                         | <b>X</b>                                  |
| <b>MSL5030L1 &amp;<br/>MSL5060L1</b>              | Not supported  | Supported (capacity upgrade only)   | Supported (capacity upgrade only)  | Not supported                    | Not supported**                  | Supported***                              |
| <b>requires</b>                                   | <b>X</b>   | <b>AD612B</b> Ultrium 960 Drive Upgrade Kit *<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†   | <b>AJ028A</b> Ultrium 1840 Drive Upgrade Kit *<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†   | <b>X</b>                         | <b>X</b>                         | <b>X</b>                                  |
| <b>MSL5026S2 &amp;<br/>MSL5052S2</b>              | Supported  | Supported (capacity upgrade only)   | Supported (capacity upgrade only)  | Supported***                     | Not supported**                  | Not supported                             |
| <b>requires</b>                                   | <b>AD589B</b> SDLT600 Drive Upgrade Kit*<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.† | <b>AD612B</b> Ultrium 960 Drive Upgrade Kit *<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†<br><br><b>AD621A</b> MSL Ultrium Dual Magazine Kit (one required for MSL5026; two required for MSL5052) | <b>AJ028A</b> Ultrium 1840 Drive Upgrade Kit *<br><br>Configure single tape drive per SCSI bus.<br><br>Use with e1200-320 4Gb FC interface controller; NSR M2402 and e1200-160 are still supported.†<br><br><b>AD621A</b> MSL Ultrium Dual Magazine Kit (one required for MSL5026; two required for MSL5052) | <b>X</b>                         | <b>X</b>                         | <b>X</b>                                  |

\*\* Upgrading a MSL5000 Tape Library with SDLT 600 or Ultrium tape drives will limit the transfer rate to Ultra 80 SCSI speed.

\*\* MSL libraries will not support SDLT and Ultrium cartridges in the same library module because of differences in media magazine size. However, support for MSL libraries with SDLT and Ultrium drives in separate modules in a multi-unit stack is supported.

\*\*\*Mixed drive/media capability requires library partitioning (zoning) support by ISV backup application software, confirm if you backup software supports media partitioning

† Interface controller cards should be installed in the left most slot for better cooling in the tape library.