Hewlett Packard Enterprise HPE Support Center

HPE StoreEver 1/8 G2 Tape Autoloaders - Error Codes

Error codes

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Finding error code information on the RMI

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Error codes

If an error occurs during operation, the device stops the current operation and displays an error code on the LCD screen. Unless otherwise noted in Operation problems, record the error code or error message from the LCD screen, and then try to resolve the error by cycling power to the device and retrying the operation.

To check the overall operation of the device, run the wellness test from the RMI or OCP. The wellness test exercises all robotic movements and checks the status of the electrical components and communication.

If the error persists, contact support personnel. There are three ways to obtain error codes from the device:

- On the OCP
- On the RMI
- On an L&TT support ticket or report

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Finding error code information on the OCP

When an error first occurs, the error message and error code are displayed on the OCP.

Figure 1: Initial OCP error message

The code 9B is the main error code, and 37 is the error sub-code. On reviewing the Error Log in the Support menu, the OCP error log displays the error code:

Figure 2: Error code in the OCP Error Log

The code 9B is the main error code, 37 is the error sub-code, and 31 is sub-code specific information for factory use only. When you press Enter, the OCP displays the error message:

Figure 3: Error message in the OCP Error Log

If you press Next, the OCP will display additional information, if available, as shown below:

Figure 4: No additional information in the OCP error log

If you press Next again, the OCP will display the date and time in the format: YYYY-MM-DD followed by the time in 24–hour clock format, where 1:00 pm is 13:00, as shown below:

Figure 5: Date and time in the OCP error log

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Finding error code information on the RMI

The available logs are: Error Trace, Informational Trace, Warning Trace, Configuration Change Trace, and Standard Trace.

The log entries are displayed in order of most recent to oldest. The format for the log entries is: YY.MM.DD HH.MM.SS.ss LIB/ERR<80 89 62 40.

- YY.MM.DD — the date displayed as Year.Month.Day
- HH.MM.SS.ss — the time displayed as Hour.Minute.Second.Hundredths fo a second
- First code — hard or soft error. The code after LIB/ERR (80 in the example) will be 80 or 40. 80 indicates a hard error, 40 indicates a soft error.
- Second code — the main error code
- Third code — the sub-code
- Fourth code — sub-code-specific information for factory use only

Figure 6: Support > Autoloader logs page

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Finding error code information on an L&TT support ticket or report

An L&TTsupport ticket or report contains detailed information about the device configuration, along with errors and warnings. The support ticket and report contain the same information. The report is easier to read, but must be generated and read on the host computer. The support ticket can be downloaded from the device and then viewed on any computer with L&TT installed.

To generate and view a report or support ticket from L&TT:

1. In the L&TT By Product or By Connection tab, select the device from the device list.
2. Click the Health button on the main toolbar to generate and display a standard report or click the Support button on the main toolbar to display the Support screen for additional report or support ticket options.

   To download a support ticket from the device, do one of the following:

   - From the RMI **Support** > **Support ticket** screen, click **Download**.
   - Insert a USB flash drive into the USB port on the rear panel and then from the OCP, select **Download support ticket to USB**.

To view a downloaded support ticket:

1. From the L&TT File menu, select **Load Support Ticket**.
2. Select the support ticket file in the browser.

The top of the support ticket contains basic configuration information about the device, as shown below:

Figure 7: Support ticket in viewer

Expand HP Event Logs to see events divided into three categories:

- Events in the last 24 hours
- Events in the last 31 days
- Events older than 31 days

Set the Current Detail Level to see additional types of events:

- Normal will only show critical events or hard errors.
- More details will also show warning and configuration events.
- Everything shows all events.

Critical events are designated with a STOP sign icon. Expand the event for more information, as shown below:

Figure 8: Critical event details

- The time stamp is in the format hours : minutes : seconds. The hours are in 24–hour clock format. For example, in this case 14 is 2 p.m.
- The date is in the format year/month/day.
- The event ID is the number on the header line, 0x006E in this example. It uniquely maps to an error code.
- HE designates a hard error. The STOP sign icon and the word Crit before the event ID also indicate a hard error.
- The text description in the header (“robotic controller error” in this example) is the simple text description of the main error code.
- The main error code (0x83) is displayed in parenthesis as the Global error code. The text after the main error code (Robotic controller generic problem in this example) is the text description for the error code.
- The error sub-code (0x02) is displayed in parenthesis as the Module error code. The text after the error sub-code (Robotic: connection to slave robotic failed in this example) is name of the component followed by the text description of the error sub-code.
- The Current command provides information for factory use only.

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Main error code descriptions

Error code	Description	Details and solution
80	Cannot initialize bar code reader	Power-cycle the unit and retry the operation.
81	No response from bar code reader	• Power-cycle the unit and retry the operation. • Update the firmware to the latest version.
82	No response fromEEPROMon robotic controller	Power-cycle the unit and retry the operation.
84	Setting of gripper motor parameters failed	• Power-cycle the unit and retry the operation. • Update the firmware to the latest version.
85	Setting of slider motor parameters failed	
86	Setting of elevator motor parameters failed	
87	Setting of rotation motor parameters failed	
88	Setting of sled motor parameters failed	
89	Gripper obstructed	• Ensure that nothing is obstructing the gripper. • If the device was moved, verify that each of the tape cartridges is properly seated in a magazine. • Run the wellness test.
8A	Slider obstructed	• If this error occurs with subcode 45 and new media, remove the magazine and manually load and unload the new media five times for each new cartridge to condition the new cartridges. • Update the firmware to the latest version. Many firmware enhancements have been made to reduce the occurrence of this error. • If this error occurs with sub-code 43, it could be the result of a misaligned magazine in combination with failed sensor cable. Ensure that the magazine is fully and correctly inserted, and then check whether the device can detect when the magazine is removed. • Remove all magazines and ensure that nothing is obstructing the robot. With the magazines removed, you can see inside the device with a flashlight. For increased visibility, also remove the tape drive. • If this error occurs on a tape load or unload, power off the tape drive. Remove the drive and inspect the front of the drive for any obstructions, such as an improperly placed label. • Run the wellness test.
8B	Elevator obstructed	• Update the firmware to the latest version. There have been a few firmware enhancements to reduce the occurrence of this error. • Remove all magazines and ensure that nothing, such as a loose tape in the device, is obstructing the raising and lowering movement of the robot. • Run the wellness test.
8C	Rotation obstructed	• If the device wasmoved or shipped with tape cartridges in the magazines, verify that none of the cartridges is loose, obstructing access to the tape drive. • Remove all magazines and check for any kind of obstruction. • Run the wellness test.
8D	Sled obstructed	• If this error occurs on the first power-on after unpacking or moving the device, or after replacing the chassis, ensure that the shipping lock was removed from the top and stored on the back panel • If the device was moved or shipped with tape cartridges in the magazines, verify that the cartridges did not come out of the magazines to obstruct the robotic. • Ensure that nothing is stacked on top of the device because any weight on top of the device can bow the top cover down and interfere with the robotics. If the autoloader has a tabletop conversion cover, verify that no more than 15 kg (33 lb) is on top of the cover. • Ensure that the device is either mounted in a rack with its rack kit or in a tabletop conversion cover. If the autoloader is not mounted in a rack or in the tabletop conversion cover, ensure that the six support feet are installed and that all of them are standing on a flat surface. The device must be supported only under both of its side edges or the bottom can bow and impede robotic movement. • Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
8E	Ends of gripper movement not in expected range	• Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
8F	Ends of slider movement not in expected range	• If the error consistently happens on the same slot, try different tape cartridges in that slot. ◦ If the failure remains with the same slot, the magazine might be at fault. If the failure follows the tape cartridge, the tape cartridge might be at fault. • If the device is performing an operation that automatically returns a tape cartridge to a certain slot, make sure another tape is not loaded in that slot. • Run the wellness test.

Error code	Description	Details and solution
90	Ends of elevator movement not in expected range	• Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
91	Ends of rotation movement not in expected range	• Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
92	Ends of sled movement not in expected range	• Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
93	Gripper reached a position beyond expected range	• Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
94	Slider reached a position beyond expected range	
95	Elevator reached a position beyond expected range	
96	Rotation reached a position beyond expected range	
97	Sled reached a position beyond expected range	
98	Cartridge present sensor not found	• Power cycle the device and retry the operation.
99	Slider home sensor not found	
9A	Rotation home sensor not found	
9B	Sled position sensor not found	• Power cycle the device and retry the operation. • Remove the magazines and verify that all the clear plastic inserts in the magazine storage slots, except the mailslots, are present and firmly seated. • Run the wellness test.
9C	Gripper range of motion out of specification	• Remove all magazines and look for any obstructions to the robot. • Update the firmware to the latest version. • Run the wellness test.
9D	Slider range of motion out of specification	• Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
9E	Elevator range of motion out of specification	
9F	Rotation range of motion out of specification	• Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
A0	Sled range of motion out of specification	• Remove all magazines and look for any obstructions to the robot. • Run the wellness test.
A1	Open Mailslot failed	• Retry the operation. • Ensure that nothing is obstructing the opening of the mailslot. • Remove the magazine and check for issues such as a tape label preventing the mailslot from opening.
A2	Error during elevator locking.	• Remove magazines and look for any obstructions to the robot. • Run the wellness test.
B0	Command from the autoloader controller to robotics controller did not complete in time allotted	Reset the device and retry the operation.
B1	Robot controller reported format error on command from autoloader controller	Reset the device and retry the operation.
B2	Communication to robot from autoloader controller failed	• Update the firmware to the latest version. • Power cycle the device and retry the operation.
B3	Robot stopped due to a released magazine	• Check that all magazines are completely inserted and retry the operation. • If this error was caused by a manual magazine removal, replace the magazine and try the operation again. • In earlier firmware versions, the device could appear unresponsive if a magazine was left out of the device too long. Power cycle the device to restore operation. Update to the latest firmware version to prevent this issue in the future.

Error code	Description	Details and solution
B4	"Tape in gripper" sensor did not report the expected value	• Update the firmware to the latest version. • Remove the magazines and inspect them for a stuck tape. If no tapes are stuck in the magazines, shine a light in one of the open magazine bays to see if there is a tape in the robot or drive. If there is a tape in the robot, replace the magazines and power-cycle the device. If there is a tape in a drive, replace the magazines and run the Force Tape Eject operation. • Run the wellness test
B5	Robotic controller not responding to command from autoloader controller	• Update the firmware to the latest version. • Power cycle the device and retry the operation.
C0	Network initialization failed	• Check the network cable. • Check that the network configuration is correct. • If DHCP is enabled, ensure that a DHCP server is up an running on the device's network. • Power cycle the device and try again.
C1	Telnet interface initialization failed	• Check the network cable. • Check that the network configuration is correct. • Power cycle the device and try again.
C2	Web server initialization failed	
C3	EEPROM parameter failure	Power cycle the device and try again.
C4	LAN card initialization failed.	
C5	EEPROM write data to failure.	
C6	Ping command did not reach target	• Check the network cable. • Check that the network configuration is correct. • Power cycle the device and try again.
C7	Cannot upgrade firmware from USB	• Ensure that the correct file was selected. • Retry firmware upgrade. • If not successful, attempt a different firmware upgrade method.
C8	Cannot upgrade firmware from FTP	
C9	Cannot upgrade robotic firmware from Flash.	• Retry firmware upgrade. • If not successful, attempt a different firmware upgrade method. • If still not successful, contact Hewlett Packard Enterprise customer support.
D0	ROM checksum incorrect	• Retry autoloader firmware upgrade. • Ensure that the firmware is correct for the device. • If the device continues to fail, contact Hewlett Packard Enterprise customer support.
D1	RAM error during Power-On-Self-Test	Power-cycle the unit.
D2	Read or Write to NVRAM on autoloader controller failed	
D3	Time controller failed during Power-On-Self-Test	
D4	Internal UART serial communication error	
D5	Communication to display failed	
D6	Autoloader controller memory error	
D7	Firmware upgrade error	This error can occur is an attempt is made to upgrade a drive with the wrong personality or version for that drive. • Ensure that the correct drive firmware is being used to update the drive. • If the correct drive firmware is being used, update the autoloader firmware. • Power cycle the device and attempt the operation again.
D8	Autoloader controller data base error	Power-cycle the unit.
D9	No SCSI IC detected	
DA	When running the wellness test, the bar code did not match the previous value for that tape	• Check the bar code label for proper application and damage. • Run the wellness test again.
DC	I2C Bus failure.	Power-cycle the device.

Error code	Description	Details and solution
E1	Key server token backup not successful (not enough available space on target token)	Retry the backup with a token with space for more keys. **NOTE:** Each token can hold 100 keys. Keys cannot be overwritten or deleted; only unique keys will be written to the token.
E2	Unsupported hardware detected. Some hardware that is connected to the autoloader requires updated autoloader firmware.	Update the autoloader firmware to the current version.
E3	Error during key server token backup; backup process unsuccessful.	• Retry the backup with a different token. • If the error occurs again, contact Hewlett Packard Enterprise customer support.

E4	Drive firmware does not support encryption.	• Ensure that all tape drives that support encryption (LTO-4 and later generations) are at the minimum firmware required for the Encryption Kit:
		  ◦ Ultrium 1760 SCSI: W22W
		  ◦ Ultrium 1760 SAS: U26W
		• If necessary, update the tape drive firmware to the current version.

E6	Key Server Token restore process did not complete, Key Server Token restore failed.	• Retry the operation on the same key server token. • Retry the operation on a new key server token.
E7	Incorrect Key Server Toke Type. Token not supported within this device.	• Verify that the USB device is an HPE key server token from the 1/8 G2 & MSL Encryption Kit. • Verify that the USB device is a key server token from the Encryption Kit. • Retry the operation on a new key server token.
F0	Drive exceeded temperature specification	• Check ambient temperature to ensure that it is within operating specifications. • Check all fans to determine whether they are working properly.
F1	Autoloader controller lost communication with the drive	• Power-cycle the device and retry the operation. • Update autoloader and drive firmware to the latest versions. • Re-seat the tape drive to ensure a good connection to the device. • If possible, try the drive in another drive bay.
F2	Drive sled not present	
F3	Drive hardware error	Cycle power, after several occurrences, contact technical support.
F4	Load time-out. The drive has run into a time-out while loading a tape.	• Check that the tape cartridge is supported and has not exceeded its usage life. Inspect it for damage. • Retry the operation. • Clean the drive. • If the issue continues, remove the drive and inspect the opening for any obstructions. • Attempt the Force Tape Eject process. Once the tape cartridge is ejected, unlock the magazine holding the cartridge and inspect the cartridge for damage. Discard the tape cartridge if it is damaged.
F5	Time allotted for drive unloading exceeded	• Retry the operation. • Attempt the Force Tape Eject process. Once the tape cartridge is ejected, unlock the magazine holding the cartridge and inspect the cartridge for damage. Discard the tape cartridge if it is damaged.
F6	No drive installed. A tape drive has never been installed.	• Install a tape drive. • If a tape drive is installed, re-seat it by removing it and replacing it.
F7	Support ticket download fromdrive not possible.	• Upgrade the tape drive firmware to the current version and try to download the support ticket again. • Use the OCP or RMI to power cycle the tape drive and then retry the operation. • Attempt to use L&TT to get the tape drive support ticket.
F8	Invalid drive command	• Update the tape drive firmware to the current version. • Try the operation again. • If the error occurs again contact Hewlett Packard Enterprise customer support.
F9	Invalid drive parameter	
FA	SDCI microcode error	
FB	Drive logged out	• Update the tape drive firmware to the current version. • Try the operation again. • If the error occurs again contact Hewlett Packard Enterprise customer support.
FC	Internal SCSI command failed with check condition	
FD	Internal SCSI command timeout	

NOTE: **Gripper:** The part of the robotics assembly that pinches media in order to grip it.

Slider: The part of the robotics assembly that plunges in and out for get and put operations.

Elevator: The part of the robotics assembly that moves in the vertical direction.

Rotation: The part of the robotics assembly that turns the robot to face each magazine and the drive.

Sled: The part of the robotics assembly that moves the robot towards the OCP or back towards the drive.

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Error sub-code descriptions

Robotic error sub-codes

Sub-code	Description
01	Mechanical initialization failure
02	Connection to slave robotic failed
03	Error motor initialization
04	Error during gripper[1] close
05	Error slider[2] home positioning
06	Error elevator[3] home movement
07	Error during sled[5] movement to rotation[4] position
08	Error during rotation[4] initialization, get range failed
09	Error elevator[3] init
0A	Error during rotation[4] to far position
0B	Error first sled[5] init, move to sensor failed
0C	Error during sled[5] movement to rotation[4] position
0D	Error during rotation[4] to slide position
0E	Error slider[2] init, get range failed
0F	Error during slider[2] forward movement
10	Error gripper[1] init, get range failed
11	Error during slider[2] home movement
12	Error during rotation[4] to FAR position
13	Error sled[5] init, move to sensor failed
14	Error during sled move — check shipping lock
20	Error inventory scan
21	Error during gripper[1] close
22	Error slider[2] home movement
23	Error during move gripper[1] to scan pos
24	Error reading bar code label
28	Error Extra inventory scan
29	Error during closing gripper[1]
2A	Error slider[2] preposition movement
2B	Error during opening gripper[1]
2C	Error during sled[5] movement up to sensor
2D	Error slider[2] preposition backwards movement
30	Error slot preposition
31	Error during sled[5] movement in FLMoveRotation
32	Command sending to robotic failed
33	Error during elevator[3] movement in FLMoveRotation function
34	Error during rotation[4] in FLMoveRotation function
35	Error during elevator[3] movement in FLMoveRotation function
36	Error during sled[5] movement in FLMoveSled function
37	Error during sled[5] positioning to sensor in FLMoveSled function
38	Error during sled[5] positioning to mailslot in FLMoveSled function
39	Error during sled[5] positioning without sensor

Sub-code	Description
3A	Error during elevator movement without sensor
3B	Error slot position sensor not found
40	Movement to/from slot failed
41	Error during first slider[2] movement
42	Error during first gripper[1] movement
43	Error during second slider[2] movement
44	Error during second gripper[1] movement, get range failed
45	Error during third slider[2] movement, move home failed
46	Error during set hold current to avoid torsion
47	Negative direction blocked — the robot cannot move backward
48	Positive direction blocked — the robot cannot move forward
49	Robot is blocked in both directions
4A	Cartridge present sensor failure
4B	Destination blocked or full
4C	Source location empty
4D	Could not pull tape out of slot
4E	Unexpected tape on elevator, possible inventory lost
50	Preposition to drive failed
51	Elevator[3] movement to home sensor failed
52	Sled[5] movement to home sensor failed
53	Error during sled[5] movement to drive position
54	Error during rotation[4] to drive position
55	Error during elevator[3] movement in drive position
56	Error during sled[5] movement to rotation position.
57	Error during rotation to end position.
60	Move from/to drive failed
61	Error during first slider[2] movement
62	Error during first gripper[1] movement
63	Error during second slider[2] movement
64	Error during second gripper[1] movement, get range failed
65	Error during third slider[2] movement, move home failed
70	Release magazine failed
71	Error during sled[5] movement to rotation[4] position
72	Error during rotation[4] to unlock position
73	Error during move sled[5] to block
80	Opening mailslot failed
81	Error during movement to mailslot open position
82	Error during moving back, sensor was found
90	Movement to home position failed
91	Elevator[3] movement to home position failed
92	Error during sled[5] movement to rotation[4] position
93	Error during rotation[4] to home or far position
94	Sled[5] movement to home sensor position failed
95	Sled[5] movement to transport position failed
99	Error during rotation movement to rotation minimum position

Sub-code	Description
A0	Movement to mailslot failed
A1	Sled[5] movement to sensor failed
A2	Sled[5] movement to rotation[4] position failed
A3	Elevator[3] movement to home position failed
A4	Error during rotation[4] to far position
A5	Sled[5] movement to mailslot position failed
A6	Error during elevator movement to position
A7	Error during mailslot detection
B0	EEPROM on robotics controller not accessible or error during read/write operation
B1	Save/restore configuration settings: not enough internal memory available for creating the file and restoring the file respectively
B2	Save/restore configuration settings: restore buffer corrupted, checksum calculation failed
B3	Save/restore configuration settings: database field corrupted
B4	Save/restore configuration settings: invalid personality
B5	Save/restore configuration settings: invalid file
C0	Check on magazine type failed
C1	Rotation[4] movement during check on magazine type failed
C2	Elevator[3] movement during check on magazine type failed
C3	Sled[5] movement during check on magazine type failed
C4	Sled[5] movement to sensor during check on magazine type failed
D0	12-mailslot magazine release failed
D1	Elevator[3] movement to home position during 12-mailslot magazine release failed
D2	Sled[5] movement to rotation position during 12-mailslot magazine release failed
D3	Rotation[4] movement to far position during 12-mailslot magazine release failed
D4	Sled[5] movement to home position during 12-mailslot magazine release failed
D5	Sled[5] movement during 12-mailslot magazine release failed
D6	Rotation[4] movement during 12-mailslot magazine release failed
D7	Elevator[3] movement during 12-mailslot magazine release failed
D8	Slider[2] pre-position during 12-mailslot magazine release failed
D9	Open gripper[1] movement during 12-mailslot magazine release failed.

NOTE: 1: Gripper: The part of the robotics assembly that pinches media in order to grip it.
2: Slider: The part of the robotics assembly that plunges in and out for get and put operations.
3: Elevator: The part of the robotics assembly that moves in the vertical direction.
4: Rotation: The part of the robotics assembly that turns the robot to face each magazine and the drive.
5: Sled: The part of the robotics assembly that moves the robot towards the OCP or back towards the drive.

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Device error sub-codes

Error code	Description
90	Robotic load not reached Cartridge Present sensor
91	No activity after Load command
92	Time-out while loading tape
93	No activity after load command
94	Time-out drive Unload

Error code	Description
95	Drive terminated unsuccessfully
96	Tape not ejected at robot unload
97	Slot not free at robot unload
98	Cartridge not seated in load phase 1

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Drive error codes

Error code	Description
01	Drive broken
02	Temperature exceeds limit
03	Tape error
04	Cleaning cartridge is expired
05	Drive needs cleaning
06	Autoloader lost communication with the drive
07	Warning that the tape is nearing its end of life

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