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RMA Shim Flow for Self-Repair

Introduction

After replacing the **motherboard**, **memory** or **Wi-Fi module**, the RMA shim flow must be performed to reinstall the firmware, software, and device information of the Chromebox.

Please make sure the device is deprovisioned before you start. Please visit <u>here</u> for more information about deprovision a device.

Preparation

- 1) A computer with Internet connection
- 2) An USB flash drive with at least 8GB capacity

Create RMA Shim Bootable USB Drive

- 1) Access <u>here</u> to download the corresponding RMA shim image. Extract the file after the download is complete, there will be a .bin file.
- Please download Chromebook Recovery Utility <u>here</u> or open a web browser and search for recovery extension tool.



3) Click Add to Chrome or Get if you're using Edge.





5) Click extension icon or on the browser, find and click **Chromebook Recovery**

	Extensions
S	No access needed These extensions don't need to see and change information on this site.
	Schromebook Recovery Utility

6) Insert the USB drive and then click **Get started**.



C



7) Click ① Select a model from a list, find ② The name of the Chromebook model you want to restore, and click ③ Continue.

Chromebook Recovery Utility	> Step 1 of 3	\$
Identify your Ch	romebook	
Enter the model number of the recovery screen.	the Chromebook to recover. It can be found on	
e.g. LINK DALE A-C 1126		
Select a model from a list	1	



ASUS Chromebox 3 (CN65)	×	
		6
ASUS Chromebox 3 (CN65) (13505.73.0)		
Go back Continu	3	
	ASUS Chromebox 3 (CN65)	ASUS Chromebox 3 (CN65) 🌣 X ASUS Chromebox 3 (CN65) (13505.73.0) Go back

1) Click ① USB Flash inserted, and click ② Continue. Click ③ Create now*. Click ④ Done to finish the creation.

*The process takes a while and please don't shutdown the system or all the data and partitions on this USB drive will be deleted.

	Chromebook Recovery Utility -> Step 2 of 3	ASUS Cherombox3 (CN65) 💠 🗙
AC.	Insert your USB flash drive or SD card Select the media you'd like to use.	
	Learn more	Go back Continue







Disable Hardware Write Protection

Hardware Write Protection needs to be disabled before installing the RMA shim on a Chromebox. Please ensure that the device is powered off and that the AC power cord is unplugged before proceeding with the following steps.

- <complex-block>
- 1) Remove the bottom cover and locate the **Write Protection Pin**.

2) Short the pin to disable hardware write protection. You can use **tweezers**, a **jumper** or a **paper clip**.







Enter Developer Mode (DEV Mode)

Connect to AC power, press and hold **Recovery Button** with a paper clip, and then press
 Power Button to power on the device.





2) Press Ctrl + D when the following message appears.



3) Press **Recovery Button** with a paper clip when the following message appears. The system will reboot automatically.





4) Press Ctrl + D when the following message appears. The system will reboot again.



5) Following messages will appear during the process.



6) Please press Ctrl + Alt + F2 to enter VT2 (Developer Console) when OOBE shows up.





Enable USB Boot & Install RMA Shim

1) Enter Username & Password: root / test0000



2) Enter command: **crossystem dev_boot_usb=1**, then plug in the USB drive, and then enter command: **reboot**



 During system reboot, continuously tap Ctrl + U (long press Ctrl, then tap U) to initiate the installation process.



4) Press **any key**, then select "**I**" and press **Enter** when the following screen appears. The RMA shim will be installed automatically.



5) Press Enter when "OK" shows up, the device will reboot to Factory Test Mode automatically.

CHROMEOS_HELENSE_VERSION-887-13440.74.8 DHROMEOS_RUSERVER+https://toels.google.	cen/service/Lodits2
CHRISCOL, RELEASE_DESCRIPTION-RE7-13443. Set boot target to /dev/mecblk8p3: Part	D4.8 (Official Build) dev-channel trappor test Ition 3, flot A
SetEnage EIENEL_CD#10: console= logievel=7 init sit=1 de="1 vroot none ro 1.0 4710400 v e42704/2010 20104 4010 7 area 0.0004.0004.0004	Vabinfinis oras,asoura dra. trazelo30 roota/deu/de-d rootault ra da verity,arror Johaniard) da verity anv.biose-i da verity ouv.u Wity paglood/MRTHETO-DU/WRTHEOFF:1 hanver-MRTHED-IW/WRTHEOFF:1 hanksart=02000 alg-mb200 root_westereto/becov/deod
n guid-EU Setting up verity. Finished after 27 seconds.	nen sen en e
Clearing network driver boot cache: /ve Syncing filesystems before changing boo finished after 0 seconds.	//11b/brs1ss8-network-drivers. 5. snoer
<pre>Updating Partition Table Attributes usi Updated karnel 2 with Successful = 1 an Onecking /ant/stateful_partition/unencr</pre>	ng CopyManager 8 NumTriseLeft = 6 gyRaf persilasian.
Permission is ok. EmovePechfiles failed OronwosDurostPostingt complete	
Clove isb-factory to stateful partition	
Factory Installer Complete. Press Enter to restart 7018	

- 6) Remove the USB drive and shutdown the system by long pressing power button or remove AC power adapter.
- 7) Remove the tweezers (or the jumper, or the paper clip) on Hardware Write Protection pin, then close the bottom cover.
- 8) When key part is replaced, the correct hardware ID (HWID) must be re-generated. Please Refer to **"RMA Shim Testing Procedure"** for final testing.



Recovery process for new WIFI module, RAM, Mainboard

1. Preparation

Replace the WIFI module, RAM and Mainboard.

1) Remove the bottom cover and locate the **Wireless Card.**



2) Remove the Wireless Card as shown.





3) Remove the **RAM**.





- 4) Remove the following other component(s):
 - M.2 SSD (if one is installed)
 - Fan module
 - Heatsink
- 5) Replace the **mainboard**. Align and place the motherboard in the chassis as shown.



6) Install the rest of the component(s) including new WIFI module and new RAM



2. Disable Hardware Write Protection

Hardware Write Protection needs to be disabled before installing the RMA shim on a Chromebox. Please ensure that the device is powered off and that the AC power cord is unplugged before proceeding with the following steps.



1) Locate the Write Protection Pin.

2) Short the pin to disable hardware write protection. You can use tweezers, a jumper or a paper clip.





3. Enter Developer Mode (DEV Mode)

 Connect to AC power, press and hold **Recovery Button** with a paper clip, and then press **Power Button** to power on the device.





2) Press Ctrl + D when the following message appears.



3) Press **Recovery Button** with a paper clip when the following message appears. The system will reboot automatically.





4) Press **Ctrl + D** when the following message appears. The system will reboot again.



5) Following messages will appear during the process.



6) Please press Ctrl + Alt + F2 to enter VT2 (Developer Console) when OOBE shows up.

Welcome to your Chromebox
Fast. Secure. Effortless.
S Ingela (total laser)
* Accesseday



4. Enable USB Boot & Install RMA Shim

1) Enter Username & Password: root / test0000



2) Enter command: **crossystem dev_boot_usb=1**, then plug in the USB drive, and then enter command: **reboot**



3) During system reboot, continuously tap **Ctrl + U** (long press Ctrl, then tap U) to initiate the installation process.



4) Press **any key**, then select "**I**" and press **Enter** when the following screen appears. The RMA shim will be installed automatically.



5) Press **Enter** when "OK" shows up, the device will reboot to Factory Test Mode automatically.



- 6) Remove the USB drive and shutdown the system by long pressing power button or remove AC power adapter.
- 7) Remove the tweezers (or the jumper, or the paper clip) on Hardware Write Protection pin, then close the bottom cover.
- 8) When key part is replaced, the correct hardware ID (HWID) must be re-generated. Please Refer to **"RMA Shim Testing Procedure"** for final testing.



Recovery process for replacing new SSD only / new SSD and new mainboard

If you are replacing a **new SSD** on the original mainboard, please follow below steps to install recovery OS and enable USB boot-up for running RMA shim flow.

If you purchased both **new SSD** and **new mainboard**, please **replace the SSD first** and install recovery OS, then proceed to run RMA shim flow. After completion, if the defect still exists, replace mainboard and run RMA shim directly.

1. Preparation

- 1) Get another Chromebox / Chromebook, or a Windows / Mac computer with Chrome installed to create RMA shim USB drive.
- 2) A USB flash drive with a capacity of at least 8 GB and make sure it can be emptied. If your Chromebox has a SD card slot, you can also use a SD card instead.
- 3) Remove all external devices on the Chromebox which needs to be restored but you can keep the power connected.
- 4) Recovery will permanently erase everything on your Chromebox 's hard drive, including files you've downloaded. If possible, back up your files before restoring your Chromebook.

2. Download device Recovery image

1) Search device name and download the latest version of Recovery image from Google <u>Chromium Dash</u>.

	Serving Builds	ChromeOS	S •						C <mark>G</mark>
	Ne	wer than most versio	ons	Most commo	n version	Older m	inor version	Olde	er major version
				View by Codena	ame View by I	Brand Name			
	Last updated 21:26	PT, 2024-02-01							
	DOWNLOAD CS	V 🗌 Keep ent	erprise pin columns	expanded 🧿 Sh	now Automatic Upd	ate Eligible O S	Show Automatic Up	date Ineligible	
S	Sear an multiple de Q ASUS Ch	vices or board names, o romebox 5 (CN67	connoa separated 7)						
	Codename	Stable	Beta	Dev	Canary	Brand Names	First Release	Automatic Updates Until	Recovery Images
	brask								
	kuldax	120.0.6099.272 15662.88.0	121.0.6167.131 15699.45.0	122.0.6261.13 15753.10.0	123.0.6268.0 15763.0.0	View	M111	2032-06	$\begin{array}{cccc} 120 & 119 \\ \hline 118 & 117 \\ \hline 116 & 115 \\ \hline 114 & 113 \end{array}$



3. Create Recovery USB drive

 Please download Chromebook Recovery Utility <u>here</u> or open a web browser and search for recovery extension tool.



2) Click Add to Chrome or Get if you're using Edge.



3) Click Add extension.





4) Click extension icon or or on the browser, find and click Chromebook Recovery Utility.

Extensions No access needed These extensions don't need to see and change information on this site. Chromebook Recovery Utility

5) Insert the USB drive and then click **Get started**.

Chromebook Recovery Utility				
Chromebook Recovery Utility				
Create a recovery media for your Chromebook				
You'll need an 8 GB or larger USB flash drive or SD card that you don't mind erasing.				
Learn more	-	Gets	started	Ĩ



6) Click ① Select a model from a list, find ② The name of the Chromebook model you want to restore, and click ③ Continue.





7) Click ① USB Flash inserted, and click ② Continue. Click ③ Create now*. Click ④ Done to finish the creation.

*The process takes a while and please don't shutdown the system or all the data and partitions on this USB drive will be deleted.





Chromebook Recovery Utility	ASUS Chromebox3 (CN65) 💠 🗙	
Success! Your recovery media is ready		
 You can remove your recovery media now. To recover your Chromebook, plug the recovery media in to your Chromebook. After recovery, you can erase your recovery media using this utility. 		0
Learn more	Create another Done	

4. Enter recovery mode

Turn off Chromebox. Using a paper clip or similar object, press and hold the recovery button. Press the Power button to turn the Chromebox back on. When you see a message on screen, release the recovery button.

Chrome		• English •
Please insert a rec	covery USB stick or SD card.	
-		
	+	
-	a lum	
For help visit https://go	oogle.com/chromeos/recovery	



5. Flash image

- 1) Insert the USB Flash into the ASUS Chromebox.
- 2) After the USB Flash is inserted, the restoration process will start automatically. Please wait patiently.

Sys	tem recovery is in progress					
This	s will take a few minutes. Please do not tu	irn off the computer or disc	onnect the power.			
Chro	ome OS verification is turned off.					
If thi	s is unintentional, you should cancel reco	overy and disable develope	er mode in order to enable v	erification. For more	e information, refer to	

3) Restore is complete. Please unplug the USB Flash, and ASUS Chromebox will restart automatically.

System recovery is complete.
Please remove the recovery media and your computer will restart automatically.
Chrome OS verification is turned off.
If this is unintentional, you should cancel recovery and disable developer mode in order to enable verification. For more information, refe this URL:
https://www.google.com/chromeos/recovery



4) The system has been restored.

	Welcome!	
		6
	Enable debugging Itentares	
	English (United States)	
(j) Shut down		us + 🛔 1026

start tr 5) Power-off the device, then start to run <u>RMA shim flow</u>

controlement



RMA Shim Testing Procedure

RELON

1) RMA FFT test:

Press power button to Start the Factory test mode:



- 2) Start the Factory test
 - 1. After press "ALT + CTRL + 0"



2. Password Enter: cros



3. Switch test list "Main Test LIST for Kuldax RMA FFT".



Restart 32 tests in "Main Test List" And	1 t passed
Stop all tests Abort 1 active tests in "Main Test List for Kuldak RMA" Update factory software	and continue testing
Switch test list	history and the second s
Save note on device 2 View notes Clear notes	Existing With Test-Uset Flash Ive Boot BIOS Geheric Chromebook
Save factory logs to USB drive Upload factory logs DUT Shutdown Reload Test List Toggle engineering mode	Generic Replacement MLB SMT Generic RF Station Generic RF Station Generic Rolling Reliability Kinox Man Test-List Kuldax Main Test-List
View /var/log/messages View /var/log/messages before last reboot View dmesg Device manager	Main Test List for Kuldax RMA Main Test List for Kuldax RMA FFT Moli Main Test-List Moli Main Test-List Provision Chromebook with \$\$1.11

4. Select "Yes, clear state and restart" to switch to diagnostic tool. System changes test mode (Main Test LIST for Kuldax RMA FFT).



5. Main Test LIST for Kuldax RMA FFT:





 Audio jack test: plug Headphone test, press "S" to start. Use Headphone to test.



4) Plug Headphone to device and grip mic and speaker together before testing

>





5) Ethernet test: use 100M/ADSL Ethernet.

to





*Select True to test, plug Ethernet LAN cable (100M ADSL) to test.



*Select False: cancel Test.



6) SD Card Performance test. Use SD card to test.

Performance Test:

2

7) External Display Port (DP) to monitor.Press the number(monitor) to pass the test item.

Use DP change HDMI cable.

Press the number to pass the test item (monitor number).

8) Hardware Test:
 Press power button to test.

Press Recover button to test.

9) LED Test:

Check Power button LED Color.

10) Buzzer test:

Press the K/B Space to test (press the number).

11) External Display test 1_HDMI:Press the number to pass the test

allun

12) Manual Test Back Type C Performance Test:

13) Manual Test Back Type C:

Use Type C device to test. (Type C USB Device, Type C to HDMI Cable, Type C to USB cable)

Insert Type C USB 3.0 device to Type C test.

Insert USB 3.0 Type C disk to the machine device test. (Change Type C direction)

Insert USB 2.0 Type C disk device test.

External HDMI Type C disk to the machine device test. Press the number to pass the test

The single function test item can be bypassed if no test fixture. The install process also can be finished

by switching back to FFT to finish "Finalize".

Abandon testing: If device is missing (Type C to HDMI device output monitor)

Type C to HDMI device

JULIU

•

1.Press "ALT + CTRL + 0"

THE R	+	÷	C				0	l °	*			
	2	T	#	\$ 4	% 5	^ 6	& 7	* 8	(9) 0	- +	backspace
10	q	w	e	T	T	Ту	u.	1	•	р	- E	
a	1	5	d	T	ſ	9	h	j k				ertter
shift	T	z	×	c	v	ь	n	m	×		7	sinit
ctrl		alt							alt	ent	<	* >

2.Enter password "cros" then click ok.

		X
ок	Cancel	
	ОК	OK Cancel

3. use mouse select test item "USB3 Exeternal Display "

4. Press mouse "Right "click Select "Clear status of test "usb3 external display test "

- 5. Abandon Type C to monitor testing
- 14) QI TEST: Wireless charging Test:
- * Select **True**: use special tools Test.
- * Select False: cancel test. (Machine is placed on the front to calibration QI data)

15) Select "True":

The machine is placed on the front to calibration QI data.

Put fixture to test Wireless charging 15W output. Wait for the tool to be Voltage (V) x Current (A) ready.

placed test equipment as follows:

QI Test pass:

QI Test
 Grep QI Module
 Wireless Charger(QI)
 Q value Calibration
 Barrier
 Select_Test_Wireless_Charging
 Put Fixture
 15W Load Test
 Barrier

16) Bluetooth test: Scan BT signal

Turn on the Bluetooth device (cellphone BT, BT device) and Place it near the machine.

17) WIFI test: Scan WIFI signal station

Turn on Wifi Router (cellphone AP, Wifi router) and Place it near the machine.

18) HDMI External Display 1: use HDMI monitor to test.Press 0 ~ 9 number to pass the test.

Main Test List for Kuldax • 🗙 🚫 🎦	HDMI E	cternal D	play 1		- 1010 B										
 OW, MAA, FF, 20230420 Audio Java Audio Java Baugio Java Bopainyo Kanana Bogaya Bopainyo Kanana Bogaya Bozare Bozare				-	•				Do you s	ee video ; Press 1 ;	on HDMi	External Petest	I Display?	*	
	ESC	0	1	2	3	4	5	6	7	8	1.0				
Engineering mode ×	[INFO] Cal [INFO] Cal [INFO] Cal [INFO] Cal [INFO] Cal [INFO] Cal [INFO] Cal [INFO] Cal	egory "ec, egory "err egory "etr egory "fla: egory "fla: egory "ma egory "tpr egory "ust egory "wir	flash_chi bedded_ ternet" 1 sh_chip" 1 inboard" n" 1 2_0_(b_host" 2 eless" 1 w	p* 1 NPCX controller* ethernet_4 W25Q256 1 rev2 fou 0_0 found. usb_hosts.	993F found 1 NPCX99 13df26f4 fo 5JV_M foun nd. count (count (1) = _1 found. <t< td=""><td>count (1) F found, i und, count (1) == 1, pa = 1, passes r>2 usb_h</td><td>== 1, pass count (1) = (1) == 1, pas) == 1, pas assed. L costs_3 fou</td><td>sed. = 1, passe passed. ised.</td><td>d. (4) == 4, pi</td><td>assed.</td><td></td><td></td><td></td><td></td><td></td></t<>	count (1) F found, i und, count (1) == 1, pa = 1, passes r>2 usb_h	== 1, pass count (1) = (1) == 1, pas) == 1, pas assed. L costs_3 fou	sed. = 1, passe passed. ised.	d. (4) == 4, pi	assed.					

19) Manual Test Back1 USB Type A: Insert USB 3.0 device to Back1 port test.

Insert USB 2.0 disk to Back1 port test.

20) Manual Test Back2 USB Type A: Insert USB 3.0 device to Back2 port test.

Insert USB 2.0 disk to Back2 port test.

21) Manual Test front1 USB Type A: Insert USB 3.0 device to Back3 port test.

Insert USB 2.0 disk to Back3 port test.

22) Manual Test front2 USB Type A: Insert USB 3.0 device to Back4 port test.

Insert USB 2.0 disk to front2 port test.

Finished test:

ALL Test PASS.

23) Change to Duffy RMA mode. After press "ALT + CTRL + 0"

0

Password Enter: cros

Switch test list to "Main Test List Kuldax RMA "

Select "Yes, clear state and restart".

24) Update Device Data: Please enter Serial Number, and then press ENTER key to next step.

25) ShopFloor-VPD: Please select region, and then press ENTER key to next step.

26) System auto Reboot

Main Test List for Kuldax RMA 🔻 🗙 🤇	Rebot
MAK (WW, FMA, 2023A20) Charak-FruineBute Read Device Data From WPD Update Device Data Torm WPD Update CR60 Firmware Dupdate CR60 Firmware Reboot Reboot Monte Out Device Data To VPD Write NewD Write NewD Write Device Data To VPD Stratton Table Datarite Scharger Type Detection Barrite Samrie	Shutdown Test (reboot)
Mamory Size Barrier Bado Bocks Barrier Barrier Barrier Barrier Barrier Barrier CRT (Google Required Tests)	Rebooting in 2 seconds (once). To cancel, press the Escape key.
	Connection to Googl general (IMFO) Operand consols. (IMFO) CFSO firmware revision: You, version: '0.0.11', 'wy version: '0.0.151') (IMFO) CFSO firmware is up-to-date.

27)Auto update the firmwary

Main Test List for Kuldax RMA 🔻 🔀	Update Firmware
Analysian and a second se	Machine Model: Kuldex Write Protect: Mine Sweb Last Goot Version: Rockopie Kuldex, 14605, 411.0 Actine Model: Kuldex Write Protect: Mine Sweb Last Goot Version: Rockopie Kuldex, 14605, 411.0 Starting (frameru update: mockopie Kuldex, 14605, 411.0 Starting (frameru update: mockopie Kuldex, 14605, 411.0 Machine Model: Kuldex Starting (frameru update: mockopie Kuldex, 14605, 411.0 Machine Model: Kuldex Starting (frameru update: mockopie Kuldex, 14605, 411.0 Machine: Jabb Robel Machine: Jabb Robel Maring: Setting SIGS Control at Dade (fram Scale to 8000 Falled. Maring: Setting SIGS Control at Dade (fram Scale to 8000 Falled. Maring: Setting SIGS Control at Dade (fram Scale to 8000 Falled. Maring: Setting SIGS Control at Dade (fram Scale to 8000 Falled. Maring: Setting SIGS Control at Dade (fram Scale to 8000 Falled. Maring: Setting SIGS Control at Dade (fram Scale to 8000 Falled. Could not mar Flabe: Charge Starbel (framerus) Maring: Setting SIGS Control at Dade (fram Scale to 8000 Falled. Could not mar Flabe: Charge Starbel (framerus) Could not mar Flabe: Charge (framerus) Could not mar Flabe: Charge (framerus) Could not mar Flabe: Charge (framerus)<

28)HWID Check: RAM ID, SSD ID/Size, Wifi card, FW and Vendor checking.

Main Test List for Kuldax RMA 🛪 🕱	Write HWID	
 Charlow RMA 202302(1) ClarActivatoria <	Setting HWD (v3): XULDAX.DDSC C58 GEC C4C-Q34.A3M	
		Scre (Pr Ctrl
	INFO] Opened costole. INFO] C50 firmware writer: (%, version: (%, 11). /%, version: %, 5.151) INFO] C50 firmware is up data. ISFO] C50 firmware is up data. ISFO[T50 minute] cost. Sactory goody goody, cpc. GoodyRPCException: Keyboardinterruption). INFO] Opened costole. INFO] Opened costole. INFO] Opened costole. INFO] Opened costole. INFO] Opened costole.	'goofy_rpc.py", li
TO TOS TOS 1700 MERSON DESCRIPTINGCORDA SN RA	ACCONCIDENCE Stop FYT D'Aldem Dasses Text Rep 100-000,000 Married Party	

29) System auto Reboot:

Main Test List for Kuldax RMA • XA	Full Reboot
BRA (WWY PMA 2023-02) GAT (Boogle Acquired Texts) Wyr Thre ThY Care Owner ThY Care Owner ThY Care Owner Gat Part (Boogle Acquired Texts) Thy Care Owner Thy Care Owner	Shutdown Test (full reboot) Shutting down in 2 seconds (once). yot in 5 seconds. To cancel, press the Escape key.
	INFO] Generated HWID: KULDAX-DGSC CSB G6C-C4C-Q3A-A3M INFO] Generated HWID: KULDAX-DGSC CSB G6C-C4C-Q3A-A3M INFO] Dented Complex Comp

30) GRT (Google Required Test): TPM Check.

Main Test List for Kuldax RMA • 文	TPM Verify EK		
B RMA (0WV_RMA_20230420) ClearActivateDate Read Device Data From VPD		Test Path	main_rma:GRT.TPMVerifyEK
 Update Device Data Write Device Data To VPD 		Test Label	TPM Verify EK
B Update Cr50 Firmware B Update Firmware		Invocation ID	2ac48c3b-2de2-4812-bf07-a79129060e91
Write HWID Write Device Data To VPD		Elapsed Time	5 seconds
Partition Table Barrier		Test Name	tpm_verify_ek
Charger Type Detection Barrier Thermal Sensors		Test Arguments Show Original	0
Barrier Memory Memory Barrier Bad Blocks Barrier Barrier Barrier Graf (Google Required Tests) Sync Time TRM Clear Owner Full Reboot Barrier Graf Geoder Tests Full Reboot Barrier Check Print for All Tests Finalize			
	[ERROR] Test main_rma: _InRunQueue cros.fact [INFO] Opened console. [INFO] Generated HWID [ERROR] Test main_rma: cros.factory.goofy.goofy [INFO] Opened console. [INFO] DUT time was: St	Runin UpdateFirmware.RebootStep kory.goofy.goofy.rpc.GoofyRPCExcep KULDAX-DGSC C5B-G6C-C4C-Q3A-J Runin.RebootStep (pre-shutdown) F .rpc.GoofyRPCException: Keyboardli an Apr 23 01:14:45 AM UTC 2023	(pre-shutdown) FAILED: ProtocolError(I-32603, Server error: File Yusr/local/factory/py_pkg/cros/factor toor: Keyboardinterrupt(Y1)) SM (ILE): ProtocolError(I-32603, Server error: File Yusr/local/factory/py_pkg/cros/factory/goofy/goofy.rp iterrupt(Y1))

31) GRT (Google Required Test): system reboot for Data to write.

710----

32) System Finalize.

🖲 Main Test List for Kuldax 🔻 🗙 🚫 🎦	Finalize
Man resk List for Kullaka * * PanA (aver Man Az 2020420) ElevarAtivateDate Read Device Data form VPD Update Cerce Data Write Device Data for VPD Update CRS0 Firmware Rebote Data Vinter VPD Update CRS0 Firmware Update frimware Update frimware Update CRS0 Firmware Rebote Vinte PVD Particin Table Write Device Data To VPD Particin Table Write PVD Ref Device Data To VPD Particin Table Tamef Ramef	Vinite Protection: Enabled Build Phase: PVT, Factory Server: Disabled
a TPM Verys EX B Rebool B TPM Clar Owner G TPM Clar Owner G TPM Clar Owner C TPM Clar Owne	DEBUG 01 22.35 running "Bahrom ip host flash-name", stdout: 'Bahrom 3bth49ae on Linux 510.99-14984 g6126/08542/9 (x86, 54) inflashrom is firee softwo https://lashrom.org/infolding.cdok_getime for allow loops (ak, at); resolution: Trail viscentebot table found at 0x78911000.ViFound rulps://meta/babra Configuration is looked dawn u/oREQ0 Flam Descriptor region (0x000000-0x00000) in ead only ViFEG2. Management Engine region (0x000000-0x0000) in ead only ViFEG2. Management Engine region (0x00000 0x00000) in ead only ViFEG2. Management Engine region (0x00000 0x000000) in ead only ViFEG2. Management Engine region (0x00000 0x000000) in ead only ViFEG2. Management Engine region (0x00000 0x000000000000000000000000000

33) After restart, system will auto start to wiping image from factory test to shipping image. Wait for 2 minutes.

When done, system will auto restart.

chrome

Cutting Off Battery Please wait... 切断电池电源中 请稍候...

34) Press power button, system turn on Chrome OS.

