

FIRMWARE UPDATE AND MANUAL RECOVERY INSTRUCTIONS FOR THE X12MP/X12DP/X12SP/B12/H12/ BH12 MOTHERBOARDS

USER'S GUIDE

Revision 1.0

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Preface

About This Manual

This user's guide is written for system integrators, IT technicians, and knowledgeable end users. It provides firmware update and manual recovery instructions for the Supermicro X12MP/X12DP/X12SP*/B12/H12/BH12 motherboards. (*See Note 1 below.)

About This User's Guide

This user's guide provides hands-on, practical instructions on how to update and perform manual recovery on the firmware used in the X12MP/X12DP/X12SP/B12/H12/BH12 motherboards that are built upon the 3rd Gen Intel® Xeon® Scalable series processors** and the AMD EPYC 7000 series processors**. (See Note 2 below.) This user's guide focuses on the BIOS/BMC/CPLD update and manual recovery using the Baseboard Management Controller (BMC) via WebGUI (Graphical User Interface), which is a flexible management system that allows an IT administrator to arrange the contents, page layouts, and features of a web page based on the user's skill set and needs in an effort to enhance user interface experience and maximize platform utility.

To best utilize our products, please bear in mind that all Supermicro products are intended to be installed, configured, and serviced by professional technicians only. For processor/memory updates, please refer to our website at http://www.supermicro.com/products/.

Note 1: The X12SP series motherboards support firmware update and recovery using the BMC via WebGUI except the X12SPA-TF motherboard.

Note 2: The X12MP/X12DP/X12SP/B12 series motherboards support the 3rd Gen Intel Xeon Scalable series processors, while the H12/BH12 series motherboards support the AMD EPYC 7003/7002 series processors.

Conventions Used in the Manual

Special attention should be given to the symbol below to properly configure your BIOS settings and to avoid causing damage to your system or injury to yourself:



Note: Important Information is given for proper system setup or for proper firmware configuration.



Warning! Indicates important information is given to avoid possible damages to the system or injuries to yourself.

Contacting Supermicro

Headquarters	
Address:	Super Micro Computer, Inc.
	980 Rock Ave.
	San Jose, CA 95131 U.S.A.
Tel:	+1 (408) 503-8000
Fax:	+1 (408) 503-8008
Email:	marketing@supermicro.com (General Information)
	support@supermicro.com (Technical Support)
Website:	www.supermicro.com
Europe	
Address:	Super Micro Computer B.V.
	Het Sterrenbeeld 28, 5215 ML
	's-Hertogenbosch, The Netherlands
Tel:	+31 (0) 73-6400390
Fax:	+31 (0) 73-6416525
Email:	sales@supermicro.nl (General Information)
	support@supermicro.nl (Technical Support)
	rma@supermicro.nl (Customer Support)
Website:	www.supermicro.nl
Asia-Pacific	
Address:	Super Micro Computer, Inc.
	3F, No. 150, Jian 1st Rd.
	Zhonghe Dist., New Taipei City 235
	Taiwan (R.O.C)
Tel:	+886-(2) 8226-3990
Fax:	+886-(2) 8226-3992
Email:	support@supermicro.com.tw
Website:	www.supermicro.com.tw

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Chapter 1

Firmware Updates for the X12MP/X12DP/X12SP/ B12/H12/BH12 Motherboards

This chapter provides hands-on, practical instructions on how to perform firmware updates for Supermicro X12MP/X12DP/X12SP/B12/H12/BH12 motherboards using the BMC (Baseboard Management Controller) firmware via WebGUI (Graphical User Interface). Section 1.1 provides the overview of firmware updates using the BMC. Section 1.2 provides instructions on how to update the BMC firmware used in a server. Section 1.3 provides instructions on how to update the BIOS firmware. Section 1.4 provides instructions on how to update the CPLD (Complex Programmable Logic device) firmware.

1.1 Using the BMC for Firmware Updates

There are different methods that can be used for firmware updates in a remote server. This user's guide focuses on how to update your firmware by using the remote BMC. Although considered "out-of-band", using BMC WebGUI to update the firmware may be the easiest way for manual firmware updates on certain remote servers.

1.1.1 How to Update Your Firmware Using the BMC

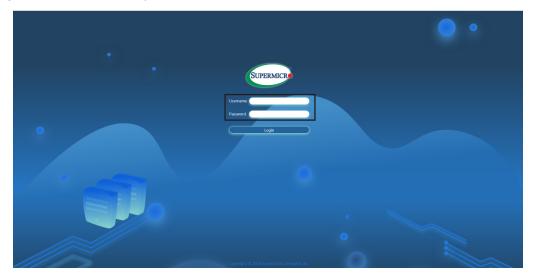
To update the firmware installed in a remote server, which is the host server, using the remote BMC, you will need to have a client browser that can be used to connect to the BMC WebGUI.

1.1.2 Accessing the Remote BMC via WebGUI

To access the remote BMC via WebGUI for firmware updates, follow the steps below.

- 1. Connect a client browser that supports the BMC WebGUI to the remote BMC. (See the note above).
- 2. Obtain the BMC IP address of the remote server whose firmware you want to update by using a Static IP address that you know of, or by obtaining an IP address using the Dynamic Host Configuration Protocol (DHCP).

3. Enter the IP address of the server that contains the remote BMC in the address bar of the (client) browser you are using to update the firmware, and press <Enter>. The BMC Login screen will display as shown below.



- 4. Enter your username and your unique password* (See the note below.) in the username and password fields.
- 5. Click *Login* to enter the BMC home page as shown below.

+	🧔 Sys	tem	UID Col	ntrol 🧷	Firmware Update	Sensor Readings
on +			11		10	
ntrol	System		Host		Power Consumption	
e +	Firmware Version	00.10.75	Server Host Name			Peak — Average Usage — Max Peak
	Firmware Build Time	11/25/2020	Server IP Address	172.31.35.42	163.2	~~~~~ <u>~</u> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	Redfish Version	1.8.0			162.8	
	BIOS Firmware Version	1.0A			162.4	
	BIOS Build Time	11/24/2020			162.0	
	CPLD Version	F1.01.F3			161.6	
	BMC MAC Address	3C:EC:EF:19:AD:04			21:57 m X:Time	22:12 m 22:27 m 22:42 m (min), Y:Power Consumption (Watt)
	LAN 1 MAC Address	00:00:00:00:00:00				
					Remote Console Preview	
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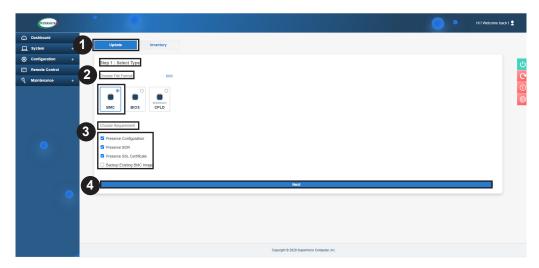
6. Click on the **System** section to check the system information and confirm the updated firmware version, making sure that it is the correct version you want to use.

Note: Every SMCI's standard product is shipped with a unique password for the BMC ADMIN user. This password can be found on a label on the motherboard. When logging in to the BMC for the first time, please use the unique password provided by Supermicro to log in. You can change the unique password to a password of your choice for subsequent logins. *For more information regarding BMC passwords, please visit our website at http://www.supermicro.com/bmcpassword.*

1.2 Updating the BMC Firmware

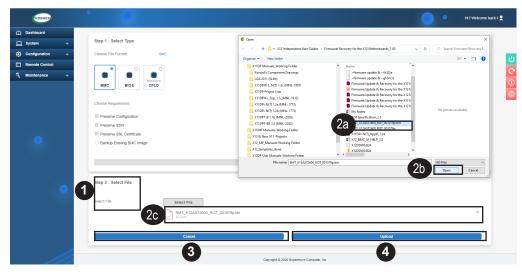
Follow the instructions given on Section 1.1.2 to access the BMC Login page. Click *Login* and enter the BMC home page as shown on the screen below.

1.2.1 Selecting the Type of Firmware (BMC) for Update



The screen above allows you to update or to recover the BMC, BIOS, or CPLD firmware used in your machine. Select *Update* to update your BMC, BIOS, or CPLD. To update your BMC, please follow the instructions below:

- 1. Select *Update* on top of the menu bar for firmware update as shown above.
- 2. Under Step 1: Select Type, choose **BMC** as your file format for update as shown above.
- 3. The screen above also allows you to choose your update requirements. Click on the box in front of a requirement item to choose it. The following items are available for you to choose from:
- Preserve Configuration
- Preserve SDR
- Preserve SSL Certificate
- Backup Existing BMC Image
- 4. Once you've made the selections, click *Next* and the following screen will display.



1.2.2 Selecting an Image File for Firmware (BMC) Update

The screen above allows you to choose an image file for your firmware (BMC) update. To update your BMC to a desired BMC version, follow the instructions below.

- 1. Click **Select File** 1 to browse the files that are available to you, including the files stored in your local hard drives.
- 2. Select the file that you want to use for the BMC update 2a and click **Open** 2b. The file you've selected will appear on the Select File field 2c as shown above.
- 3. To cancel your selection, click *Cancel* **3** to de-select the file and choose another image file for your BMC update.
- 4. Once you've finalized your selection, click **Upload** 4 to update your BMC using the selected image file.

STREAME				Hi I Welcome back	k1 👤
Dashboard	Choose Requirement				
💻 System +	Preserve Configuration				
Configuration +	Preserve SDR				ds
Remote Control	Preserve SSL Certificate				a
🔏 Maintenance +	Backup Existing BMC Image				0
					<mark>පි</mark> ලි ම
	Step 2 : Select File				
$\mathbf{\hat{\mathbf{v}}}$	Select File	Select File SMT_X12AST2600_ROT_001079p.bin 45.73 ND		×	
FW Update Mode	-			- 1	
Current system is in FW update mode, any configuration changes are not recommended.	Step 3 : File Version	2a	2b		
	Name	Existing Version	New Version		
	BMC	00.10.75	00.10.79		
		Cancel			
		Cancel	Update		
		3	4		

1.2.3 Updating the BMC to a Different Version of BMC

To update your BMC to a different version of BMC, follow the instructions below.

- 1. After you've uploaded the file you want to use for the BMC update as shown in the previous section, you are ready to update your BMC firmware to the version of your choice.
- 2. The existing version will display as shown in the box indicated by ^{2a}, and the desired version that you want to update to will appear in the box indicated by ^{2b}.
- 3. To de-select the file that you've just chosen for BMC update, click **Cancel** 3 which will allow you to select another file for your BMC update.
- 4. Once you've finalized your selection, click *Update* to update your BMC using your selected image file. Once BMC update is complete, the BMC will be reset accordingly.

STREAMEN					Hi I Welcome back I 🙎
Dashboard	Choose Requirement				
☐ System +	Preserve Configuration				
(i) Configuration +	Preserve SDR				da
Remote Control	E Preserve SSL Certificate				
Naintenance +	Backup Existing BMC Image				0
Pi Ipda Ibda	Step 2 : Select File Select File Step 3 : File Version	Select File Select File Selec	Cotting. Plasse well		×
are not recommended.	Name	Existing Version		New Version	
	BMC	00.10.75		00.10.79	
		Cancel		Update	
			Copyright © 2020 Supermicro Computer, Inc.		



Warning! After BMC upgrading is complete, the BMC firmware will reset itself.

5. The system will display the BMC Login page as shown below.



- 6. Enter your username and password in the appropriate boxes.
- 7. Click *Login* to enter the BMC home page as shown below.

Sy:	stem	UID Contro		Firmware Update	Sensor Readings
System		Host		Power Consumption	
		HOSE		Power Consumption	
Firmware Version	00.10.75	Server Host Name		- Min Pea	ak <u> </u>
Firmware Build Time	11/25/2020	Server IP Address	172.31.35.42	163.0	~~~~/
Redfish Version	1.8.0			162.6	
BIOS Firmware Version	1.0A			162.4 162.2	
BIOS Build Time	11/24/2020			162.0	· · · · · ·
CPLD Version	F1.01.F3			161.6	
BMC MAC Address	3C:EC:EF:19:AD:04				22:12 m 22:27 m 22: nin), Y Power Consumption (Watt)
LAN 1 MAC Address	00:00:00:00:00:00				
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				JAVA plug-in HTML5	
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				Net a los en respisar a se primes or entres, coment, sere ter en rus.	in prepare of

8. Click on the **System** section to check the system information and confirm the updated firmware version, making sure that it is the correct version you want to use.

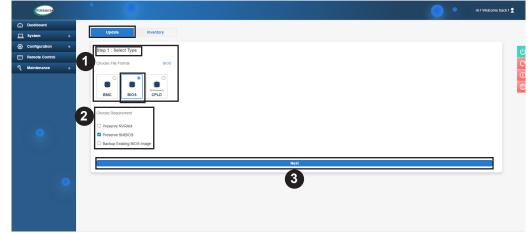
1.3 Updating the BIOS Firmware

Follow the instructions given on Section 1.1.2 to access the BMC Login page. Click **<Login>** and enter the BMC home page as shown on the screen below.

	System	UID Contr	a 🧭	Firmware Update	Sensor Readi
System		Host		Power Consumption	
Firmware Version	00.10.75	Server Host Name		— Min Peak — Average	Usage — Max Peak
Firmware Build Time	11/25/2020	Server IP Address	172.31.35.42	163.2	
Redfish Version	1.8.0			162.8	/
BIOS Firmware Ver	ion 1.0A			162.4 162.2	
BIOS Build Time	11/24/2020			162.0 O O	~
CPLD Version	F1.01.F3			161.6	
BMC MAC Address	3C:EC:EF:19:AD:04			21:57 m 22:12 m X:Time (min), Y:Pow	22:27 m er Consumption (Watt)
LAN 1 MAC Address	00:00:00:00:00:00				
				Remote Console Preview	
				JAVA plug-in HTML5	
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				W1 Medical No. 67	
				(b) 10 (1) (a) 1 (a) and (a	

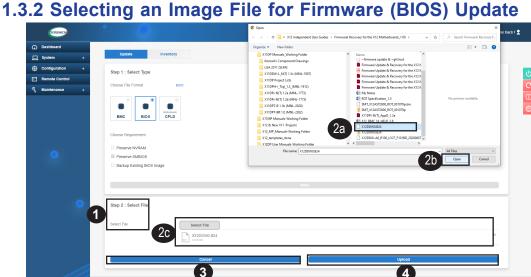
When the screen above displays, select Firmware Update and press <Enter>. The following screen will display.

1.3.1 Selecting the Type of Firmware (BIOS) for Update



To update your BIOS utility, please follow the instructions below:

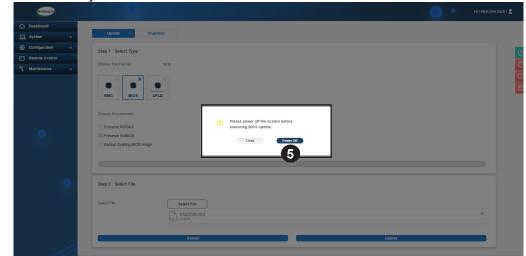
- 1. Select *Update* and choose *BIOS* as your file format for update as shown above.
- 2. To select your requirements for the BIOS update, click the box in front of an item to select it. The following items are available for your use.
- Preserve NVRAM
- Preserve SMBIOS
- Backup Existing BIOS Image
- 3. Once you've made the selections, click *Next*, and the following screen will display.



The screen above allows you to choose an image file for your firmware (BIOS) update. Follow the instructions below to update your BIOS to a desired BIOS version.

- 1. Click **Select File** To browse the files that are available to you, including the files stored in the hard drives of your machine used to update the BIOS for the host server.
- 2. Select the file that you want to use for the BIOS update 2a and click **Open** 2b. The file you've selected will appear on the Select File field 2c as shown above.
- 3. To de-select the file that you've just chosen for BIOS update, click Cancel 3 which will allow you to select another image file for your BIOS update.
- 4. Once you've finalized your selection, click **Upload** to update your BIOS using your selected image file.
- 5. A warning will display asking you to power off the system before you proceed with BIOS update as shown below. Click **Power Off** before updating your BIOS.

Warning! Be sure to power off your system before updating your BIOS! After BIOS upgrading is complete, the system will reboot, and the new BIOS utility will take effect after the system reboot.



- 6. When BIOS upgrading is complete, the system will reboot.
- 7. After the system reboots, the BMC Login page will display as shown below.



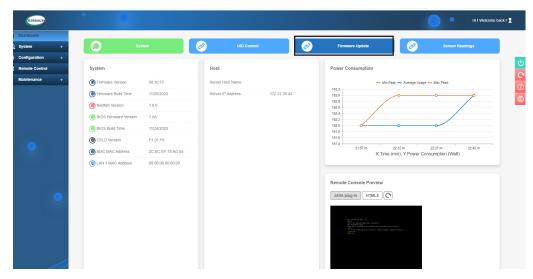
- 8. Enter your username and password in the appropriate boxes on the BMC Login page.
- 9. Click *Login* to enter the BMC home page as shown below.

stem +	Sys	stern	<i>⊘</i>			<i></i>	Firm	ware Update		<i>⊘</i>		lings	
nfiguration +			11			1							
mote Control	System		Host				Power	Consumption					
intenance +	Firmware Version	00.10.75	Server I	Host Name					— Min Peak —	Average Usage	— Max Peak		
	Firmware Build Time	11/25/2020	Server	IP Address	172.31.35.42		163.2 163.0		~		-0	~	
	Redfish Version	1.8.0					162.8 162.6		/		/		
	BIOS Firmware Version	1.0A					162.4 162.2						
	BIOS Build Time	11/24/2020					162.0 161.8	0	•		~		
<u> </u>	CPLD Version	F1.01.F3					161.6 161.4			,			
•	BMC MAC Address	3C:EC:EF:19:AD:04						21:57 m	22:12 r X:Time (min),		22:27 m nsumption (Watt)	22:42 m	
	LAN 1 MAC Address	00:00:00:00:00:00											
							_	e Console Prev					
•							JAVA	plug-in HTMI	L5 (C4)				

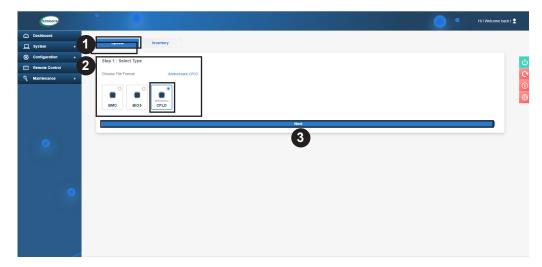
10. Click on the **System** section to check the system information and confirm the updated firmware version, making sure that it is the correct version you want to use.

1.4 Updating the CPLD Firmware

Follow the instructions given on Section 1.1.2 to access the BMC Login page. Click *Login* and enter the BMC home page as shown on the screen below.



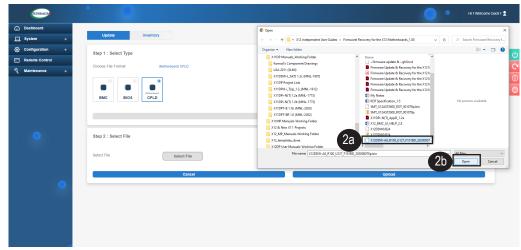
When the screen above displays, select Firmware Update and press <Enter>. The following screen will display.



1.4.1 Selecting the Type of Firmware (CPLD) for Update

To update the CPLD (Complex Programmable Logic Device), follow the steps below.

- 1. Select *Update* on top of the menu bar for firmware update as shown above.
- 2. Under *Step 1: Select Type*, choose *CPLD* as your file format for update as shown above.
- 3. Once you've selected CPLD for firmware update, click *Next* and the following screen will display.



1.4.2 Selecting an Image File for Firmware (CPLD) Update

Follow the steps below to select an image file to update your Complex Programmable Logic Device (CPLD) to a desired firmware version.

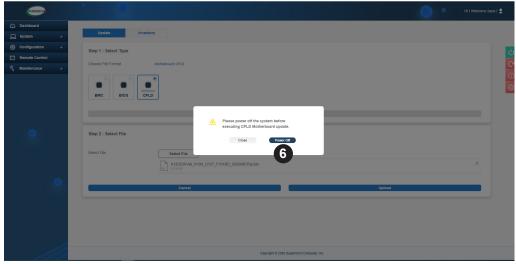
- 1. Click **Select File** 1 to browse the files that are available to you, including the files stored in the hard drives of the local machine which you use to update the CPLD firmware for the remote server.
- 2. From the screen as shown above, select the file that you want to use for your CPLD update ^{2a} and click **Open** ^{2b}.
- 3. The file you've selected will appear on the Select File field **3** as shown below.

STEREC	• •		•	Hi I Welcome back I 👤
Dashboard				
☐ System +	Update	Inventory		
Configuration +	Step 1 : Select Type			ن
Remote Control	Choose File Format	(Moherboard) CPLD		
Maintenance +	Groupe r ad Politia:	generation of the second se		
	BMC BIOS	CPLD		℃ ⊙ ⊕
	Step 2 : Select File			
	Select File	Select File 3		×
		Cancel Upload		
		5 4		
		• • •		

- 4. To de-select the file that you've just chosen for CPLD update, click **Cancel** which will allow you to select another file to update your CPLD firmware.
- 5. Once you've finalized your selection, click *Upload* **5** to update your CPLD using the selected image file.
- 6. A warning will display asking you to power off the system for CPLD update. Click *Power Off* as shown below.



Warning! Be sure to power off your system before you start to update your CPLD with the image file that you've just uploaded to the system!



7. When the CPLD update is complete, the system will reboot as indicated by a warning statement displayed on the screen.



Warning! After CPLD upgrading is complete, the system will reboot for the new CPLD firmware to take effect!

8. After the system reboot, the health status of the system will display as shown below.

Dashboard								
System +	HE Filter							-
Configuration +	× Running	× Completed × Fai	iled					
Remote Control								
Maintenance +	Task List							
		lealth Status Job	State	Create Time	Progress	Total Duration	Completed Time	٩)
		CPLD				1secs	2020-12-22 01:15:58	
$\mathbf{\hat{c}}$				H 4 1 /1	• н			1-1/1
Update Mode ent system is in FW update e, any configuration changes								
ot recommended.								

- 9. To go back to the BMC Login page, please re-load the web-page by following the instructions given in Section 1.1.2 to access the remote BMC via WebGUI on page 6.
- 10. Click on the **System** section (on the left side of the screen) to check the system information and confirm the updated firmware version, making sure that it is the correct version you want to use.

Chapter 2

Firmware Recovery for the X12MP/X12DP/X12SP/ B12/H12/BH12 Motherboards

This chapter provides practical instructions on how to manually recover the firmware installed on the Supermicro X12MP/X12DP/X12SP/B12/H12/BH12 series motherboard using the BMC (Baseboard Management Controller) firmware via WebGUI (Web Graphical User Interface). Section 2.1 provides the overview on how to perform manual firmware recovery using the BMC. Section 2.2 provides instructions on how to manually recover the BMC firmware. Section 2.3 provides instructions on how to manually recover the BIOS firmware.



Note 1: Manual firmware recovery is only available only on the motherboards that support ROT (Root of Trust).

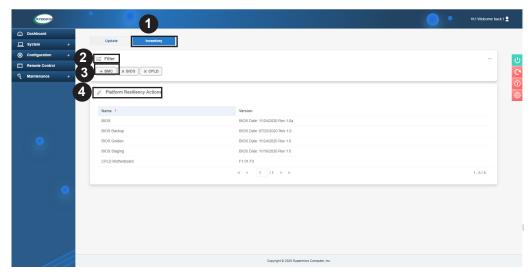
Note 2: To use the manual firmware recovery feature, a SFT-DCMS-Single license is required.

Note 3: Currently, ROT support is available on all X12 MP/DP/UP series motherboards and the following H12 motherboards:

- H12DSG-O-CPU
- H12SSW-iNR/NTR
- H12SSL-i/C/CT/NT
- H12DSG-Q-CPU6
- H12SSFR-AN6
- H12SSFF-AN6
- M12SWA-TF
- H12DGO-6
- H12SSW-AN6
- H12DSi-6/NT6
- H12SSG-6
- BH12SSi-M25
- H12DSU-iN
- H12SSW-iN/NT
- H12DST-B
- H12SST-PS

2.1 Recovering the BMC Firmware

Follow the instructions given on Section 2.1.2 to access the BMC Login page. Click on <*Login*> and enter the BMC home page as shown on the screen below.



The screen above allows you to update or to recover the firmware used in a remote server. Select *Inventory* to manually recover your BMC or your BIOS.

To recover the BMC firmware manually, follow the instructions below.

- 1. Click *Inventory* as shown above.
- 2. Click *Filter* to display the type of firmware that are available for manual recovery: BMC and BIOS.
- 3. Click **+BMC** to display a short list of the BMC action items. If needed, click **XBMC** for a complete list of BMC action items as shown below.

Dashboard	Update Inventory		
System + Configuration + Remote Control	E Filter		-
Maintenance +	Attform Resiliency Actions		
	Name †	Version	
	BIOS	BIOS Date: 11/24/2020 Rev 1.0a	
	BIOS Backup	BIOS Date: 07/22/2020 Rev 1.0	
•	BIOS Golden	BIOS Date: 11/24/2020 Rev 1.0	
	BIOS Staging	BIOS Date: 11/24/2020 Rev 1.0	
	BMC	00.10.79	
	BMC Backup	00.10.39	
	BMC Golden	00.10.75	
_	BMC Staging	00.10.79	
	CPLD Motherboard	F1.01.BD	
		н н 1 /1 н н	1 - 9 / 9

Note: The information shown in the table above is for illustration only. It may differ from what is displayed on your screen, which reflects the firmware used in your system.

Platform Resiliency Actions	
Name	Version
BIOS	BIOS Date: 11/24/2020 Rev 1.0a
BIOS Backup	BIOS Date: 11/24/2020 Rev 1.0
BIOS Golden (*used to restore the BIOS to its	BIOS Date: 11/24/2020 Rev 1.0
original manufacturer default)	
BIOS Staging	BIOS Date: 11/24/2020 Rev 1.0
BMC	00.10.79
BMC Backup	00.10.39
BMC Golden (*used to restore the BMC to its	00.10.75
original manufacturer default)	
BMC Staging	00.10.79
CPLD Motherboard	F1.01.BD

Note: The information shown in the table above is for illustration only. It may differ from what is displayed on your screen, which reflects the firmware used in your system.

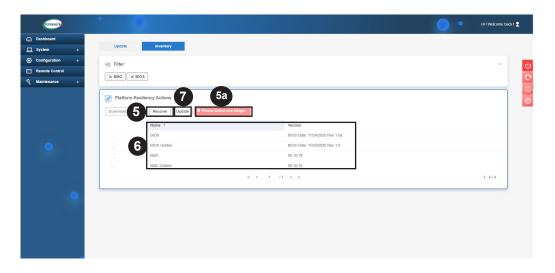
4. Click on the *pencil icon* in front of "*Platform Resiliency Actions*" to display your firmware items as listed in the table below.

System + Update Inventory	STREMES		Hi ! Welcome back ! 👤
State Configuration Configuration	Dashboard		
Remote Control Image: Developed Environment of the Envisionment of the Environment of the Environment of t	🔲 System +	Update Inventory	
Rende Control K BBC K BB	😳 Configuration +	un Filter	- 4
Marrierance Image: Control of the control	Remote Control		
Berneric Evidence Recovery Update Name 1 Version 005 BIOS Date: 11/2/2020 Rev 1.0a 00 BIOS Goden 00 BIOS Date: 11/2/2020 Rev 1.0a 00 BIOS Date: 11/2/2020 Rev 1.0a 00 BIOS Coden 00 BIOS Coden 00 0.10 75	🖁 Maintenance +	× BMC × BIOS	
Image: BioS bill: 11/24/2020 Rev 1.0a Image: BioS bill: 11/24/2		Download Evidence Recover Update	
Image: Biol Solider Biol S			
Image:			
BMC Gablern 00, 10, 75			
			1-4/4

Platform Resiliency Actions	
Name	Version
BIOS	BIOS Date: 11/24/2020 Rev 1.0a
BIOS Golden (*used to restore the BIOS	BIOS Date: 11/24/2020 Rev 1.0
to its original manufacturer default)	
BMC	00.10.79
BMC Golden (*used to restore the BMC	00.10.75
to its original manufacturer default)	

Note: The information shown in the table above is for illustration only. It may differ from what is displayed on your screen, which reflects the firmware used in your system.

- 5. To recover your BMC firmware, click on *Recover*.
- 6. From the available image files, select the image file you want to use for BMC recovery as instructed in the red text box ^{5a} displayed below.



Note 1: Select **BMC** to use the latest BMC image file for BMC Recovery.

Note 2: Select *BMC Golden* to use the original manufacturer default BMC image file for BMC Recovery.

7. After recovering your BMC firmware, please click on the **System** Information section on the left side of the screen to confirm that the BMC version you wanted to recover has been properly recovered.

2.2 Recovering the BIOS Firmware

Follow the instructions given on Section 1.1.2 to access the BMC Login page. Click on <*Login*> and enter the BMC home page as shown on the screen below.

SUPERACE			HI Welcome back	
Dashboard System +	System	UID Control	Firmware Update 🔗 Sensor Readings	
Configuration +				
mote Control	System	Host	Power Consumption	
intenance +	Firmware Version 00.10.75	Server Host Name	- Min Peak - Average Usage - Max Peak	
	Firmware Build Time 11/25/2020	Server IP Address 172.31.35.42	163.2	
	Redfish Version 1.8.0		162.8	
	BIOS Firmware Version 1.0A		1624	
	BIOS Build Time 11/24/2020		162.0	
	CPLD Version F1.01.F3		161.6	
•	BMC MAC Address 3C:EC:EF:19:AD:04		21:57 m 22:12 m 22:27 m 22:42 m X:Time (min), Y:Power Consumption (Watt)	
	LAN 1 MAC Address 00:00:00:00:00:00			
•			Remote Console Preview:	

When the screen above displays, click *Firmware Update*. The following screen will display.

SUPERMICE	1		Hi I Welcome back I 👷
) Dashboard			
_ System	+ 2 ^{iste} Inventory		
Configuration	Filter		_
Remote Control			
Maintenance	+ BIOS × CPLD		
	Platform Resiliency Actions		
	Name †	Version	
	BMC	00.10.79	
	BMC Backup	00.10.39	
	BMC Golden	00.10.75	
	BMC Staging	00.10.79	
	CPLD Motherboard	F1.01.BD	
		н. н. 1. /1. н. н	1 - 5 / 5

To manually recover your BIOS, follow the instructions below.

- 1. Click *Inventory* as shown above.
- 2. Click *Filter* to display the type of firmware that are available for recovery: BMC and BIOS.
- 3. Click **+***BIOS* to display a short list of the BIOS action items. If needed, click on *XBIOS* for a complete list of BIOS action items as shown below.

Dashboard			
System +	Update Inventory		
Configuration +	HE Filter		-
Remote Control	× BMC × BIOS × CPLD		
Maintenance +	A BRO A BIOS A CFLD		
	Platform Resiliency Actions		
	Name † BIOS	Version BIOS Date: 11/24/2020 Rev 1.0a	
	BIOS Backup	BIOS Date: 07/22/2020 Rev 1.0	
•	BIOS Golden	BIOS Date: 11/24/2020 Rev 1.0	
	BIOS Staging	BIOS Date: 11/24/2020 Rev 1.0	
	BMC	00.10.79	
	BMC Backup	00.10.39	
	BMC Golden	00.10.75	
	BMC Staging	00.10.79	
	CPLD Motherboard	F1.01.8D	
		н. н. 1. /1. н. н.	1 - 9 / 9

Platform Resiliency Actions				
Name	Version			
BIOS	BIOS Date: 11/24/2020 Rev 1.0a			
BIOS Backup	BIOS Date: 11/24/2020 Rev 1.0			
BIOS Golden (*used to restore the BIOS to its	BIOS Date: 11/24/2020 Rev 1.0			
original manufacturer default)				
BIOS Staging	BIOS Date: 11/24/2020 Rev 1.0			
BMC	00.10.79			
BMC Backup	00.10.39			
BMC Golden (*used to restore the BMC to its	00.10.75			
original manufacturer default)				
BMC Staging	00.10.79			
CPLD Motherboard	F1.01.BD			

Note: The information shown in the table above is for illustration only. It may differ from what is displayed on your screen, which reflects the firmware used in your system.

4. Click on the *pencil icon* in front of "*Platform Resiliency Actions*" to display your firmware items as listed in the table below.

	Update	Inventory			
System +					
Configuration +	SE Filter				-
Remote Control	× BMC ×	BIOS			
Maintenance +					
		esiliency Actions			
	Download Evide	Recover Update			
		Name 1		Version	
at the second	D.	BIOS		BIOS Date: 11/24/2020 Rev 1.0a	
•		BIOS Golden		BIOS Date: 11/24/2020 Rev 1.0	
		BMC		00.10.79	
		BMC Golden		00.10.75	
			н. н. 1. /	1 ж. н	1-4/4
(

Platform Resiliency Actions				
Download Evidence	Recover	Update		
	Name	Version		
	BIOS	BIOS Date: 11/24/2020 Rev 1.0a		
	BIOS Golden (*used to	BIOS Date: 11/24/2020 Rev 1.0		
	restore the BIOS to its			
	original manufacturer			
	default)			
	BMC	00.10.79		
	BMC Golden (*used to	00.10.75		
	restore the BMC to its			
	original manufacturer			
	default)			

Note: The information shown in the table above is for illustration only. It may differ from what is displayed on your screen, which reflects the firmware used in your system.

- 5. To recover your BIOS firmware, click on *Recover*.
- 6. From the available image files, select the image file you want to use for BIOS recovery as instructed in the red text box ^{5a} displayed below.

Streamer	• •		HI I Welcome back I 🙎
Dashboard			
System +	Update Inventory		
Configuration +	HE Filter		<u>ں</u> –
Remote Control	× BMC × BIOS		
🔏 Maintenance +	X DINC X BIOS		
	Platform Realliency Actions Download & Recover	€5a) 107 ● Plase select one mage. Version	
	BIOS	BIOS Date: 11/24/2020 Rev 1.0a	
•	6 BIOS Golden	BIOS Date: 11/24/2020 Rev 1.0	
	BMC	00.10.79	
	BMC Golden	00.10.75	
		H 4 1 /1 H H	1 - 4 / 4
•			

Note 1: Select **BIOS** to use the latest BIOS image file for BIOS Recovery.

Note 2: Select *BIOS Golden* to use the original manufacturer default BIOS image file for BIOS Recovery.

7. After recovering your BIOS firmware, please click on the **System** Information section on the left side of the screen to confirm that the BIOS version you wanted to recover has been properly recovered.

Chapter 3

Updating the Golden Image for the X12MP/ X12DP/X12SP/B12/H12/BH12 Motherboards

This chapter provides instructions on how to update the BIOS golden image and the BMC golden image for the Supermicro X12MP/X12DP/X12SP/B12/H12/BH12 motherboard using the BMC via WebGUI (Web Graphical User Interface). Section 3.1 provides an overview on how to update the golden image using the BMC. Section 3.2 provides instructions on how to update the BIOS golden image. Section 3.3 provides information on how to update the BMC golden image.

3.1 Updating the Firmware Golden Image

Every SMCI motherboard or server is shipped with a manufacturer golden image built in. A golden image is used for automatic recovery by ROT when the active (current) image or the backup image are corrupted. While the user is allowed to update the golden image, the administrator has the privilege to set the current active image as a golden image as well.

When recommended by Supermicro or if preferred by the administrator, a current image can be used as a golden image. The following sections provide instructions on how to update the golden image with a current active image for the BIOS or BMC firmware.

3.2 Updating the BIOS Golden Image

Follow the instructions given on Section 1.1.2 to access the BMC Login page. Click on <*Login*> and enter the BMC home page as shown on the screen below.

BUPEMER	•				Hi I Welcome back I 👤
Dashboard					
]System +	System	UID Control		Firmware Update 🤣	Sensor Readings
Configuration +		11			(1)
Remote Control	System	Host		Power Consumption	
Maintenance +	Firmware Version 00.10.7	Server Host Name		— Min Peak — Average U	sage — Max Peak
	Firmware Build Time 11/25/2	20 Server IP Address	172.31.35.42	163.2	tage - Max Peak
	Redfish Version 1.8.0			162.8	
	BIOS Firmware Version 1.0A			162.4	
	BIOS Build Time 11/24/2	20		162.0	
	CPLD Version F1.01.F			161.6	
•	BMC MAC Address 3C:EC:	F:19:AD:04		21:57 m 22:12 m X:Time (min), Y:Power	22:27 m 22:42 m Consumption (Watt)
	LAN 1 MAC Address 00:00:0	.00:00:00			
				Remote Console Preview	
				JAVA plug-in HTML5	
				$ \begin{array}{c} d(x) \mathrm{protection} \mathrm{protection} $	
				$N_{\rm c}$) is all reception in a primer, in where, present, see the argument in the $N_{\rm c}$, in the $N_{\rm c}$	

When the screen above displays, click *Inventory*. The following screen will display.

Control Contro	Version
S gran → Configuration → Remote Control Maintersace → Configuration → Remote Control Maintersace → Configuration → Remote Control Configuration → Remote Control Configuration → Remote Control Configuration → Remote Control BioS Backing BioS Backing BioS Catclen BioS Backing BioS Catclen BioS Stappe - BioS Stappe	x OPLD [x SAS]
Remote Control Maintenance 2 2 2 2 2 2 2 2 2	x cPLD (x sAs) y Actions
Rende Coated K BMC × BIOS K BMC × BIOS C Platform Resulte C Platform Resulte ROS BIOS BIOS BIOS BIOS BIOS BIOS BIOS BI	y Actions
Asintenance • 2 2 2 2 2 2 2 2 2 2 2 2 2	y Actions
Name 1 BioS BioS Bachap BioS Gaden BioS Staging BioC BioC Gaden BioC Cashap BioC Gaden BioC Gaden	Version
BIOS BIOS Backap BIOS Backap BIOS Backap BIOS Backap BMC BMC Cackap BMC Cackap BMC Cackap BMC Cackap	
BIOS Backup BIOS Gaden BIOS Staging BMC BMC Cadden BMC Gaden BMC Staging	
BIOS Gaden BIOS Staging BMC BMC Backup BMC Cadetin BMC Staging	BIOS Date: 10/05/2020 Ver 1.0
BIOS Staging BMC BMC Backup BMC Golden BMC Staging	BIOS Date: 07/31/2020 Ver 1.0
BMC BMC Backup BMC Golden BMC Staging	BIOS Date: 05/14/2020 Ver 1.0
BMC Backup BMC Golden BMC Staging	BIOS Date: 10/06/2020 Ver 1.0
BMC Golden BMC Staging	00.10.83
BMC Staging	00.10.41
	00.10.37
ODI D Mathematic	00.10.83
CPLD Mollielboard	F1.00.87
SAS3408 Device 1	5,130.01-3211
SAS3808 Device 0	14.00.00.00

To update the BIOS golden image, follow the instructions below.

- 1. Click *Inventory* as shown above.
- 2. Click *Platform Resiliency Actions* and the following screen will display.

Screamer.	• •		Hill Welcome back I 👤
Dashboard			
🛄 System +	Update Inventory		
Configuration +	#2 Filter		
Remote Control			0
🖏 Maintenance +	× BMC × BIOS		C
	Platform Resiliency Actions Generate Evidence Download Evidence Update Name T		
	3 BIOS Golden	Version BIOS Date: 05/14/2020 Ver 1.0	
•	BMC Golden	00.10.37	
		н ∢ 1 /1 ► н	1-2/2
•			

- 3. When the screen above displays, click **BIOS Golden** for BIOS golden image update.
- 4. Click *Update* to update the BIOS golden image.

Note: For your BIOS golden image update to work properly, be sure to power off the system before starting BIOS golden image update.

The process of updating the BIOS golden image may take a few minutes to complete.

SUPERACE			Hi I Welcome back I 🙎
 Dashboard System + 	Update Inventory		
Configuration + Remote Control Maintenance +	ing Filter x BMC x BIOS		
	Platform Resiliency Actions Generate Evidence Download Evidence Update Name 1	(Vesco	
•	EICS Golden BMC Golden Warning	p) Performing golden update may bak login the may be known to the operation is complete.	
•			
		Copyright © 2021 Supermicro Computer, Inc.	

5. Once BIOS golden image update is complete, you can navigate to the Inventory page under Firmware Management to confirm the golden image version that has just being updated.

3.3 Updating the BMC Golden Image

Follow the instructions given on Section 1.1.2 to access the BMC Login page. Click on <*Login*> and enter the BMC home page as shown on the screen below.

+		stem	<i>(2</i>)			Firm	ware Update		Sensor Readings
+									
Syste	m		Hos	t		Power 0	Consumption		
* (§ FI	rmware Version	00.10.75	Serv	er Host Name			- Min Pe	ak 🗕 Average Usage	- Max Peak
() FI	rmware Build Time	11/25/2020	Serv	er IP Address	172.31.35.42	163.2 163.0		~~~~	~o
(® R	edfish Version	1.8.0				162.6			
(B) BI	OS Firmware Version	1.0A				102 4 102 2 103 0 101 8 101 4 2157 m 22.12 m 22.27 m 22.42 m X.Time (min), Y.Power Consumption (Watt)			
(B) BI	OS Build Time	11/24/2020							
(C) (C)	PLD Version	F1.01.F3							
(B) B1	VIC MAC Address	3C:EC:EF:19:AD:04							
() v	N 1 MAC Address	00:00:00:00:00:00							
						Remote	Console Preview		
						JAVA p	lug-in HTML5		
								artina. Na rojna, r	

When the screen above displays, click *Inventory*. The following screen will display.

Dashboard			
System +	Update Inventory		
Configuration +	HE Filter		
Remote Control			
Maintenance +	X BMC X BIOS X CPLD X SAS		
e	Platform Resiliency Actions	Version	
	BIOS	BIOS Date: 10/06/2020 Ver 1.0	
	BIOS Backup	BIOS Date: 07/31/2020 Ver 1.0	
•	BIOS Golden	BIOS Date: 05/14/2020 Ver 1.0	
	BIOS Staging	BIOS Date: 10/06/2020 Ver 1.0	
	BMC	00.10.83	
	BMC Backup	00.10.41	
	BMC Golden	00.10.37	
	BMC Staging	00.10.83	
	CPLD Motherboard	F1.00.B7	
	SAS3408 Device 1	5.130.01-3211	
	SAS3808 Device 0	14.00.00.00	
		н н 1 /1 н н	1 - 11 / 11

To update the BMC golden image, follow the instructions below.

- 1. Click *Inventory* as shown above.
- 2. Click *Platform Resiliency Actions* and the following screen will display.

S. TEMACO		Hi I Welcome back I 😫
Dashboard		
🛄 System +	Update Inventory	
Ontiguration +	and Filter	- 7
Remote Control	× BMC × BIOS	
🖏 Maintenance +	A BINC A BIOS	
	Platform Resiliency Actions 4 Generate Evidence Update	
	Name 1	Version
	BIOS Golden	BIOS Date: 05/14/2020 Ver 1.0
	3 BMC Golden	00.10.37
	м 4 1	/1 → N 1-2/2
•		

- 3. When the screen above displays, click **BMC Golden** to update the BMC golden image.
- 4. Click *Update* to update the golden image as shown in the screen below. This process will take a few minutes to complete.

STHEMOTO		Hi I Welcome back I 🙎
Dashboard		
☐ System +	Update Inventory	
Onfiguration +	az Filter	- U
Remote Control		
S Maintenance +	× BMC × BIOS	
•	Petrom Resiliency Actions Update Overactis Evidence Dots Codent Dots Codent Dots Date: 1000/0000 Ver 1.5 BMC Codent Dots Date: 1000/0000 Ver 1.5 Warning! Performing golden update may take page take. Yease wait bit operation is	1-2/2
	Copyright © 2021 Supermices Computer, Inc.	

5. Once BMC golden image update is complete, you can navigate to the Inventory page under Firmware Management to confirm the golden image version that has just being updated.