Advantech AE Technical Sharing Documentation

Date	2017/11/15	SR#	1-3277293506
Category	■FAQ □ SOP	Related OS	BIOS
Abstract	How to enable AMT fund	ction and remote	e reboot into BIOS?
Keyword	Intel AMT, Intel core i5 a	nd i7 CPU	
Related			
Product	ASG products equips core	e 15 or 17 CPU. La	ater than Haswell platforms.

Problem Description:

Users can enable AMT function and remote access to target PCs for debugging purpose. *** For UNO-2483G/2484G, only works above BIOS version V115 up.

For other models, settings may be different, you can refer to Intel's website for more info.***

■ <u>Solution - Step by Step</u>:

Step1

In BIOS, go to Advanced – AMT Configuration, make sure both options in red are enabled as shown in Fig.1 .

Aptio Setup Utility - Advanced	Copyright (C) 2012 American
Intel AMT	[Enabled]
BIOS Hotkey Pressed	[Disabled]
MEBx Selection Screen	[Enabled]
Hide Un-Configure ME Confirmation	[Disabled]
MEB× Debug Message Output	[Disabled]
Un-Configure ME	[Disabled]
Amt Wait Timer	0
Disable ME	[Disabled]
ASF	[Enabled]
Activate Remote Assistance Process	[Disabled]
USB Configure	[Enabled]
PET Progress	[Enabled]
AMT CIRA Timeout	0
WatchDog	[Disabled]
OS Timer	0
BIOS Timer	0

Figure 1. Advanced options in BIOS



Go to "Save & Exit" and then select "Save Changes and Reset" as shown in Fig.2.



Figure 2. Indication of Save&Exit

The system will reboot and when you see the screen as shown in Fig.3, press "Ctrl + P" to enter to MEBX setup menu.



Figure 3. Press "Ctrl+P" to enter MEBX setup menu

Press "1" to enter "ME configuration screens" as shown in Fig.4.

Press 1 to enter ME configuration screens Press 2 to initiate a remote connection

Figure 4. entering "ME configuration screens"

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Step3

To login MEBx as shown in Fig.5 , you need to enter the default password "admin", and reset you own password.

Here, using "123\$%^qweRTY" to meet their password policy. (type in exactly the same)

Intel(R) Management Engine BIOS Extension v9.0.0.0025/Intel(R) ME v9.5.61.3012 Copyright(C) 2003–13 Intel Corporation. All Rights Reserved		
Essential and the second second second	MAIN MENU	
MEBx Login > Intel(R) ME General Settings > Intel(R) AMT Configuration MEBx Exit	Verify password	
Intel(R) ME Password		

Figure 5. Main menu of ME configuration

Step4

Verify Intel(R) ME General Settings,

		HITLN HEN
>	Intel(R) ME General Settings	
>	Intel(R) AMT Configuration	
	MERV Evit	

Figure 6. Intel(R) ME General Settings

Verify password change as Fig.7 shows.



Figure 7. Verify password change

Step5

Select Intel(R) AMT Configuration as shown in Fig.8,



Figure8. Intel(R) AMT Configuration

You should see the menu as Fig.9, entering the "SOL/IDER/KVM" selection.



Figure9. Intel(R) AMT Configuration

Step6

Enable SOL/IDER/KVM settings as below.

	SOL/IDER/KVM
Username and Password SOL IDER KVM Feature Selection Legacy Redirection Mode	<mark><enabled></enabled></mark> <enabled> <enabled> <enabled> <enabled> <enabled></enabled></enabled></enabled></enabled></enabled>

Figure10. SOL/IDER/KVM settings

Step7

Verify "User Consent" as shown in Fig.11.



Figure 11. User Consent settings



Verify "Network Setup" \rightarrow "Intel ME Network Name Settings" as shown in Fig.12.



Figure 12. Intel(R) ME Network Name Settings

"TCP/IP Settings" \rightarrow "Wired LAN IPV4 Configuration" as below.

and the rest for the rest of	WIRED LAN IP	V4 CONFIGURATION
DHCP Mode IPV4 Address Subnet Mask Address Default Gateway Address Preferred DNS Address Alternate DNS Address	Needs to correspond to the computer you are using to access UNO	<pre>kDisabled> 192.168.1.117 255.255.255.0 192.168.1.1 0.0.0.0 0.0.0.0</pre>

Figure13. Intel(R) ME Network Name Settings

Step9

Select "Activate Network Access" to activate your setting as shown in Fig.14.

		INTEL(R) AMT CONFIGURATION
ľ		
	Manageability Feature Selection	<enabled></enabled>
>	SOL/IDER/KVM	
>	User Consent	
	Password Policy	<anytime></anytime>
>	Network Setup	
	Activate Network Access	
	Unconfigure Network Access	<full unprovision=""></full>
>	Remote Setup And Configuration	
>	Power Control	

Figure 14. Activate Network Access



Exit, the UNO will reboot.



Figure15. MEBx exiting

Step11

Your computer should be able to ping UNO-2483G-474AE with AMT function enabled as shown in Fig.16.

-
Connection-specific DNS Suffix .: Link-local IPv6 Address : fe80::1d73:8d6d:3da0 :be40%19 IPv4 Address : 192.168.1.100 Subnet Mask : 255.255.255.0 Default Gateway : 192.168.1.1
Ethernet adapter LAN4:
Connection-specific DNS Suffix . : ADUA Link-local IPv6 Address : fege
Subnet Mask
Ethernet adapter LAN1:
Media State Media disconnected Connection-specific DNS Suffix . :
C:\Users\Administrator>ping 192.168.1.117
Pinging 192.168.1.117 with 32 bytes of data: Reply from 192.168.1.117: bytes=32 time=6ms TTL=255 Reply from 192.168.1.117: bytes=32 time=1ms TTL=255 Reply from 192.168.1.117: bytes=32 time=1ms TTL=255 Reply from 192.168.1.117: bytes=32 time=1ms TTL=255
Ping statistics for 192.168.1.117: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 6ms, Average = 2ms
C:\Users\Administrator>_

Figure 16. Success to ping UNO-2483G with AMT

Step12

Verify the correct set up with 3rd party software as shown below.

http://www.meshcommander.com/open-manageability.

Downloads	
@	<u>Open MDTK installer v1.34</u> MSI Installer, BSD 2.0 License

Figure 17. Downloading the commander software

Once installed, run the utility.

The first window you will see as shown in Fig.18, press the button to add " Known Computer".

Network Network 192.168.1.117 / admin Mesh Discovery	Network In this window, you car computers on a specifi appear in the Discover AMT Computer to the I selecting a discovered computer button or b computers IP address i	Discove perform a scan to find I de range on IP addresse ed Computers field. You nown computers list on 1 computer and selecting y selecting Add Known O s already known.	rty ntel AMT s. The results will can add an intel the left, but the Add Computer ff a		-
	Intel AMT Discovery				<u> </u>
	Start IP address 11 End IP address 11	92.168.1.1 92.168.1.254	Start	Add Known Computer	
	Discovered Compu	iters	Add	Known Com	puter

Figure18. Main screen of Managebility Commander Tool

Set IP of UNO and the password you set in step3 and click "ok".

Authentication		
Usemame	admin	
Password	•••••	V Hid
	Remember Password	

Figure 19. IP setting to access to UNO

Step14

You should see a computer created on the left and click Connect.



Figure20. UNO connected window



Once connected, click" Take Control", a window will pop up as below.

onnect & Control	<u>.</u>
window, you can connect to an Intel AMT computer. connected, you can control the computer remotely. If turn on or off the Intel AMT computer you are sted to, control network policies and filters, boot the tert o a remote drive, view the hardware asset inventory, ad the computer's event log. ection Remote Control Management Engine Security Networking mote Control	
	ol
Serial Agent Help	
Full power (S0)	
	Serial Agent Help Full power (SO)



Step16

Connect SOL, and select "Remote Reboot to BIOS Setup" as shown in Fig.22.



Figure 22. Remote Reboot to BIOS Setup

UNO will now reboot and boot into BIOS set up page as shown in Fig.23.



Figure23. Remote Reboot to BIOS Setup

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You should able to control UNO-2483G/2484G by server as shown in Fig.24.



Figure 24. UNO-2483G/24844G is being Control by server with AMT