Battery Diagnostic / Control Program Update Procedure

This utility updates the Diagnostic / Control Program for battery of Toughbook series. Please read this document carefully before using the utility.

1. <u>Supported models, applicable OS and Installation instructions.</u>

Confirm your computer is one of the following models. The model name is located on the bottom of your computer. Embedded Controller (EC) for all models and BIOS for some models are updated after executing the utility.

Target models	Zip Download file size *1	New EC ver. *2	New BIOS ver.	
CF-SX2 series	Approximately 18 Mbytes	V1.50L18	V1.50L16	
CF-SX4 series	Approximately 3 Mbytes	V1.00L12	No update	
CF-AX2 series	Approximately 12 Mbytes	V1.50L18	V1.50L15	
CF-AX3 series	Approximately 3 Mbytes	V2.00L18	No update	
CF-C2 series	Approximately 6 Mbytes	V1.00L16 V2.00L16 V2.50L15	V1.00L17 No update No update	
All models included	Approximately 60 Mbytes			

[Table 1]

*1 When unzipping the downloaded file, the size will be doubled. *2 "EC" is "Embedded Controller".

2. OS supported

Windows 7 (32bit), Windows 7 (64bit), Windows 8.1 (64bit) and Windows 10 (64bit)

3. <u>CAUTION:</u>

- To run the program, the AC adapter needs to be plugged-in and the battery MUST be charged more than 20%. Therefore, do not remove the AC adapter until the Battery Diagnostic / Control Program update is completed. If computer is shut down during update, BIOS/EC (or only EC) may be damaged.
- The computer restarts multiple times before update procedure completed. If you see Windows desktop or Start screen before "finished the update" screen appears, you must not operate anything. When this situation continues for 3 minutes, please press Windows key + "L" and continue update procedure.
- If encryption software except BitLocker is installed, a recovery key might be required

at the first time you boot up the computer after update. Please prepare it in advance.

- Back up important data to other media or an external hard disk before executing the utility.
- Remove USB storage.
- Economy mode (ECO) setting (charge 80% limit setting) will be disabled by applying this program.
 As for CF-C2 series, the battery is controlled and functions regardless of the
 - 'Environment' setting.
- Your computer will restart after the program is completed. Since you need to input BIOS password and/or confirm a result dialog, please be not away from computer while it is running.
- If BIOS/EC version is "V *** L *** M ***", M *** means a customized BIOS/EC. Since we provide Battery Diagnostic / Control Program Update Utility for customized version of BIOS/EC, please contact with our sales person.

4. <u>Instructions</u>

(Step1) Download the software.

(1) Access to reserved URL by browser and download the software.

Battery Diagnostic / Control Software		
Please check the model number list to select and fill in the required items. Check the screen and press "Download" button.		
Please click here for installation instructions [English]		
[Note] After the update finishes, the computer's product number and serial number, and the product number and serial number of the battery, are sent to Panasonic's server. Personal information is not collected. This data is used to track the update implementation status and to facilitate the update process, and it will not be used for any other purpose.		
Check the model to download. (multiple choices allowed) *Required		
\Box CF-SX3/NX3		
CF-SX4/NX4		
CF-AX2		
CF-AX3		
□ CF-C2		
Country *Required		
Company name *Required		
100 characters or less		
Division name (Optional)		
100 characters or less		
Download		

Items	Req	Details
Models	Required	Check the model(s) you need to download the program.
		You can download it for updating all model(s) you
		choose. If you need the program for all models, please
		choose [All models included].
Country	Required	Choose your country from pull-down menu.
Company name	Required	Input your company name correctly.
Division name	Optional	If you need to manage computer individually at the
		multiple divisions in the same company, please input
		name of division.

(Step2) Unzip the downloaded file.

(1) Unzip the downloaded zip file (eg Panasonic_00000030.zip).



Reference: For "All models included" below.

(Step3) Execute the update program in the unzipped file.

- (1) Plug-in the AC adapter
 - 1. Battery MUST be more than 20%.
 - 2. Do not remove the AC adapter during the firmware update.
- (2) Execute "ECDandU.bat" in the destination folder.
- (3) Check the contents displayed on the confirmation screen and click [OK].

Battery Diagnostic / Contro	ol Program Update Utility	×
The firmware and the Batte updated.	ry Diagnostic / Control Program will t	be
[Important] - Before starting, ensure the sufficiently charged. - Do not touch the keyboar adapter and battery while of - The computer restarts mu "finished the update" screece is displayed, do not touch not displayed after 3 minut - If BitLocker drive encryption updating, but it will be re-off [Note] After update finishes, the up product number and batter	nat AC adapter is connected and batter rd, mouse, touch panel, power switch updating. Itiple times before update finishes, th en is displayed. When desktop or star anything. If "finished the update" scre tes, press Windows key + L. on is in use, it may be suspended whi enabled after update finishes. unit product number, serial number, b ry serial number will be sent to Panas	ery is n, AC nen t screen een is ile pattery onic
server. This data is used to to facilitate the update pro purpose.	track the update implementation stat ocess, and it will not be used for any c	us and other
Click [OK] to restart the con	nputer to start.	
	ОК	Cancel

After restarting, the update will start.

If desktop or start screen is displayed for 3 or more minutes, press Windows key + L.

- (4) [Only for CF-SX4] Special message window will appear. Check notes carefully, and click [OK] to continue.
- (5) After updating BIOS/EC (or only EC), your computer will restart.
- (6) The following "finished the update" screen will be appeared when the update is successful.
 Confirm the value of "Embedded Controller version after update" is the same as that on Page1.
 If "finished the update" screen is not displayed for 3 or more minutes, press Windows key + L.



(7) Click [OK] to restart computer.

If a different type of message from the above screenshot is shown, please check "6.Error messages" below.

5. <u>Verification</u>

How to confirm BIOS/EC (or only EC) are installed successfully

When the BIOS/EC (or only EC) is installed successfully, the following file is output. If the file exists, the installation is finished successfully. Folder: %ProgramData%\Panasonic\ECDandU\ File name: success_[Model number]_[Serial number].mrk

How to confirm the version of BIOS/EC (or only EC) after executing the Battery Diagnostic / Control Program Update Utility

(1) Execute PC Information Viewer

Click (A) , then Click (B) "Panasonic" - (C)"PC Information Viewer".



(2) Click the "Setup" tab, and check "BIOS" and "Embedded Controller" versions to make sure updated.

9 PC Informa	ation Viewer				2
PC Status	Battery Stat	tus Pov	ver Options	SMBIOS	Data
Drivers P	rograms1	Programs2	Setup	Hard Disk S	Status
Item		V	alue		^
Model No.		x	xxxxxxx		
Serial No.		х	XXXXX		
OS Version		х	xxxxxx		
Pen and To	uch	х	XXXX		
BIOS		١	/xx.Lxx		
BIOS Config	uration	Х	xxx-xxxx	(-XXXX	
Embedded C	Controller	\ \	/xx.Lxx		J
Intel(R) ME	Firmware	Х	.x.x.xxx	(
Preinstall Ve	rsion	Х	XXXXXXXX	XXXXX	~
<				2	•
	<u>S</u> av	e	<u>A</u> bout		
			OK	(Ca	ncel

Please confirm that it is the version described on page 1/9 [Table 1].

6. Error messages

Battery Diagnostic/Control Program Update Utility	
The latest Battery Diagnostic/ Control Program has already been installed. Thank you for checking.	Update is not needed because the latest Battery Diagnostic / Control Program has already been installed.
Controller version: Vx.xx Lxx	Click [OK] and close the update utility.
Battery Diagnostic/Control Program Update Utility	
Failed to access System Interface Device - 0021 (or Panasonic Misc Driver). Confirm that System Interface Device - 0021 (or Panasonic Misc Driver) is enabled.	Mandatory drivers for Panasonic computer may not be installed. Install the System Interface Device Drivers (or
	Panasonic Misc Driver).
ОК	
Battery Diagnostic/Control Program Update Utility	
This computer is compatible with the Battery Diagnostic / Control Program update, but, due to the custom firmware installed on the unit, the utility cannot be updated. BIOS version: Vx.xx Lxx Mxx Embedded Controller version: Vx.xx Lxx Mxx	Please contact your information system department or our sales office.
ОК	
Battery Diagnostic/Control Program Update Utility	
This application program does not work properly under the current version of Windows.	Supported OS are Windows7, Windows8.1 and Windows10. Please contact your information system department or our sales office.
ОК	our sales office.
Battery Diagnostic/Control Program Update Utility	To assume d Didle alson Dails - E
Failed to suspend the BitLocker drive encryption on the unit.	operating system drive
<action needed=""> Manually suspend BitLocker drive encryption and re- run the Update Utility.</action>	 Click Start, click Control Panel, click System and Security, and then click BitLocker Drive Encryption.

	 Click Suspend Protection for the operating system drive. A message is displayed, informing you that your data will not be protected while BitLocker is suspended and asking if you want to suspend BitLocker Drive Encryption. Click Yes to continue and suspend BitLocker on the drive. If BitLocker Drive Encryption is still suspended after the update is completed, resume encryption by clicking "Resume Protection" in the same procedure as suspending it.
Battery Diagnostic/Control Program Update Utility X The firmware was not updated. Check again that the AC adapter and battery are correctly connected. Click [Retry] to retry the update. Retry Cancel Cancel	Please follow the message and retry.

7. Additional Information:

- **ECO Mode:** this mode will be disabled while running this utility, however, if the mode is fixed in advance, it will NOT be disabled by this program.
- After update finishes, the unit product number, serial number, battery product number and battery serial number will be sent to Panasonic server. This data is used to track the update implementation status and to facilitate the update process, and it will not be used for any other purpose.