Advantech AE Technical Share Document

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Category	■FAQ □SOP	Related OS	N/A
Abstract	What to do when following error message occurs after FW upgrade (Error Code 500)		
Keyword	WISE, firmware upgrade, error code 500.		
Related Product	WISE-4012, WISE-4012E, WISE-4050, WISE-4051, WISE-4060, WISE-4220-S231		

■ **Problem Description:**

This document shows that why does WISE show up the error code 500 when upgrade firmware? This document is suitable for you to check if the WISE module has the radio frequency (RF) communication related problem.

After upgrading firmware and it shows failure and error code 500 on utility. Why does a user open the web utility or ADAM utility to check the firmware version, and he/she can find out FW has been upgraded after manually power cycle. But if a user tried to upgrade again, the utility still shows up error code 500, as shown in figure 1.
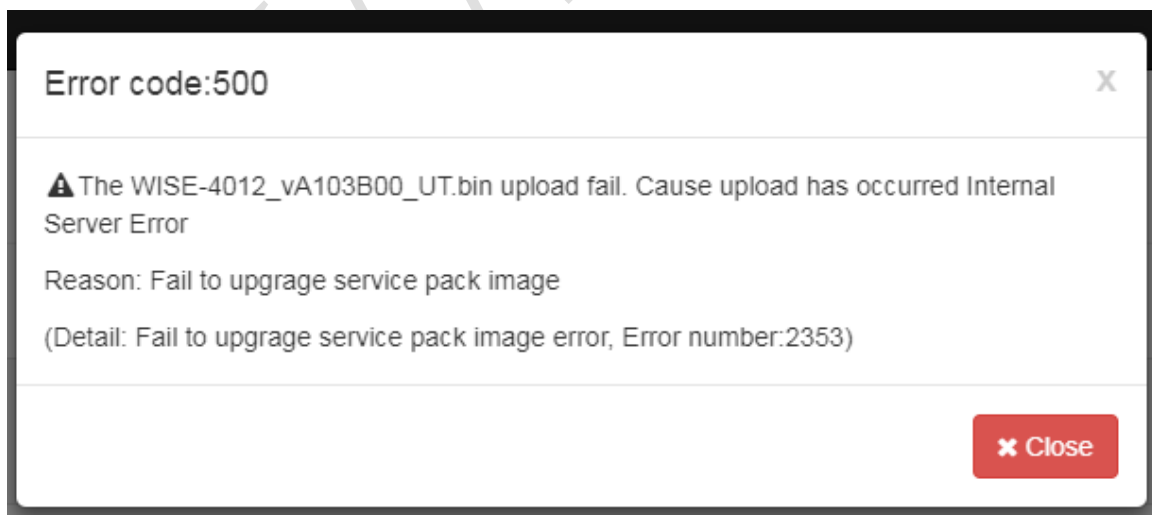

Figure 1. The pop-up message during upgrading firmware.

■ **Brief Solution - Step by Step:**

1. **What is error code 500?**

In standard procedure, each WISE module needs to be burned-in the TI service package and newest firmware during the manufacture from factory. This error message occurred on the server when processed the firmware file uploaded by client.

2. What is TI service package?

WISE module uses TI chip as the main chip handling RF behavior. TI service package is the firmware of the TI chip. Advantech utilize the library of the service package for developing the firmware of WISE module.

In another word, newer firmware version of WISE module works along with newer version of TI service package.

3. What will happen if my WISE is lack of TI service package?

Lack of this package doesn't affect the basic behavior of RF behavior. But cannot guarantee about it will not have any trouble.

Suggest that if you face any issue about RF behavior recently. Please request the customer to upgrade the FW. If the error code 500 appears, then you would know it lacks the service package.

4. Why a user can only detect if there is a TI service pack image during firmware upgrading procedure?

If a user has never tried to upgrade firmware, he/ she can never know the WISE does not have TI service package. Since the package should be pre-burned-in to the module. Not to detect the service package image during standard use is a reasonable behavior.
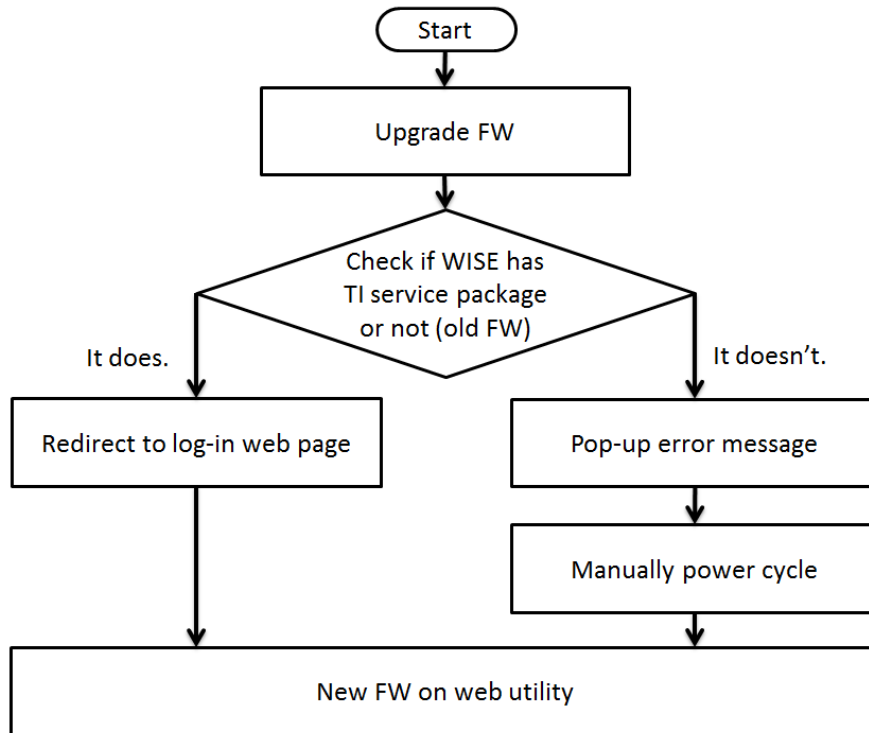
Figure 2. The behavior of firmware upgrade procedure.

As shown in figure 2, the firmware will be upgraded and then check if the WISE module has corresponding TI service package SDK or not.

5.   New firmware release in the end of January 2018 can solve this issue.

Currently, firmware of any of WISE model type check if there is lack the TI service package or not, but it does not help to burn-in the package.

FW team will modify the FW for all model type, which will help to burn-in the package if which does not exist. The procedure of new firmware is shown as in figure 3. For the new firmware of each module, please closely check the update on our official website.

After upgrading FW and service package successfully, an AE can eliminate the TI chip behavior abnormal as part of the RF communication issue between WISE and AP.
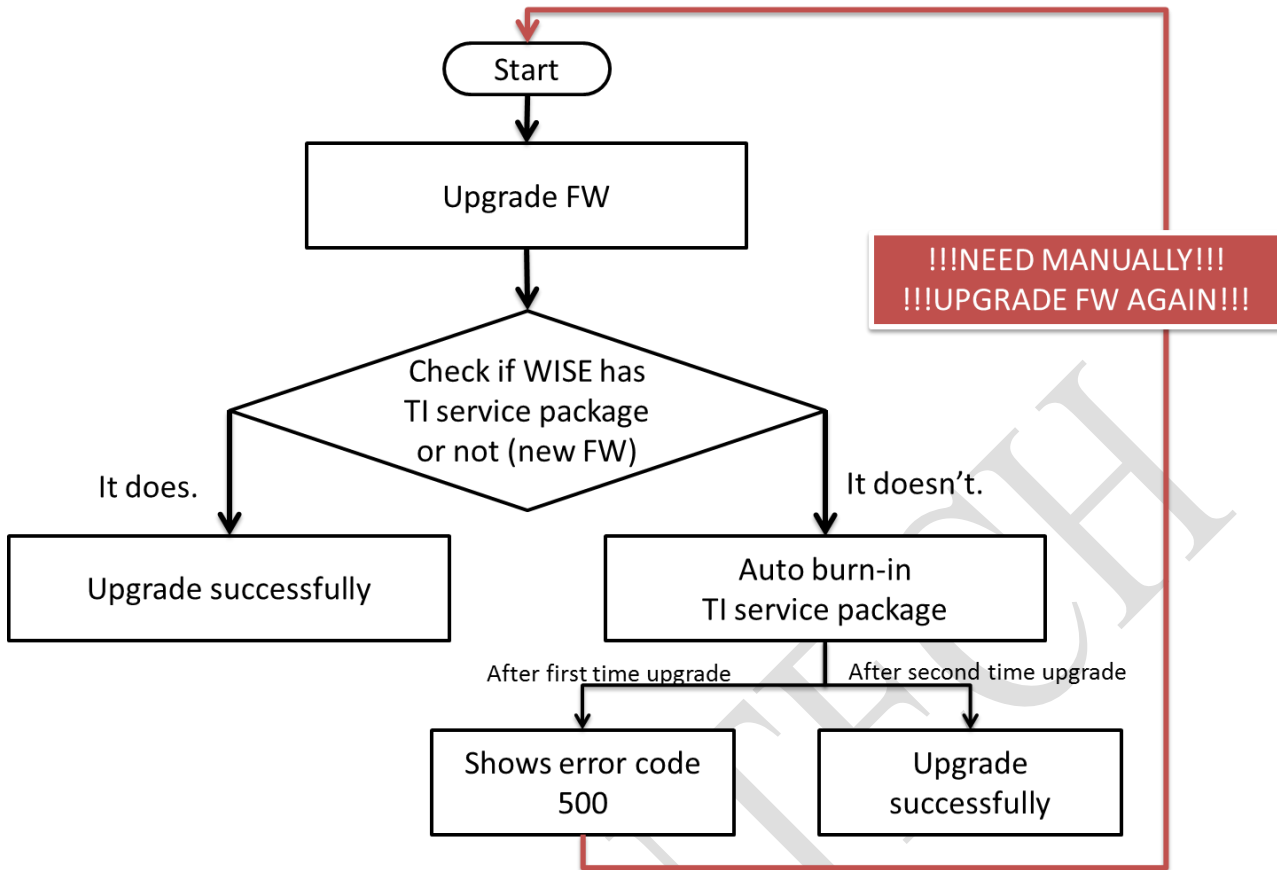
Figure 3. Firmware version with auto burn-in TI service package image.

Table 1. The FW version with auto burn-in TI service package of WISE series

Model	FW with auto burn-in TI service package	Firmware veresion
WISE-4012	◯	A1.03 B04 and above
WISE-4012E	◯	A1.12 B05 and above
WISE-4050	◯	A1.12 B05 and above
WISE-4051	◯	A1.11 B00 and above
WISE-4060	◯	A1.12 B05 and above
WISE-4220-S231	◯	A1.02 B04 and above