

# SINAMICS V90 servo drive firmware update via SD card

## Precondition

This update is only applicable to update V90 firmware based on firmware version V1.04.00 (or higher version) for end users. If the current firmware version of V90 is lower than V1.04.00, please contact with local distributor for update issue.

## Materials Preparation

- (1) V90 firmware update package
- (2) SD card (memory  $\leq 32\text{GB}$ ) with brands of SIEMENS, Kingston or SanDisk. File system formatted as FAT32
- (3) 24 VDC power supply

## Update process

1. Extract the V90 firmware release package, afterwards open the folder for files as figure 1.

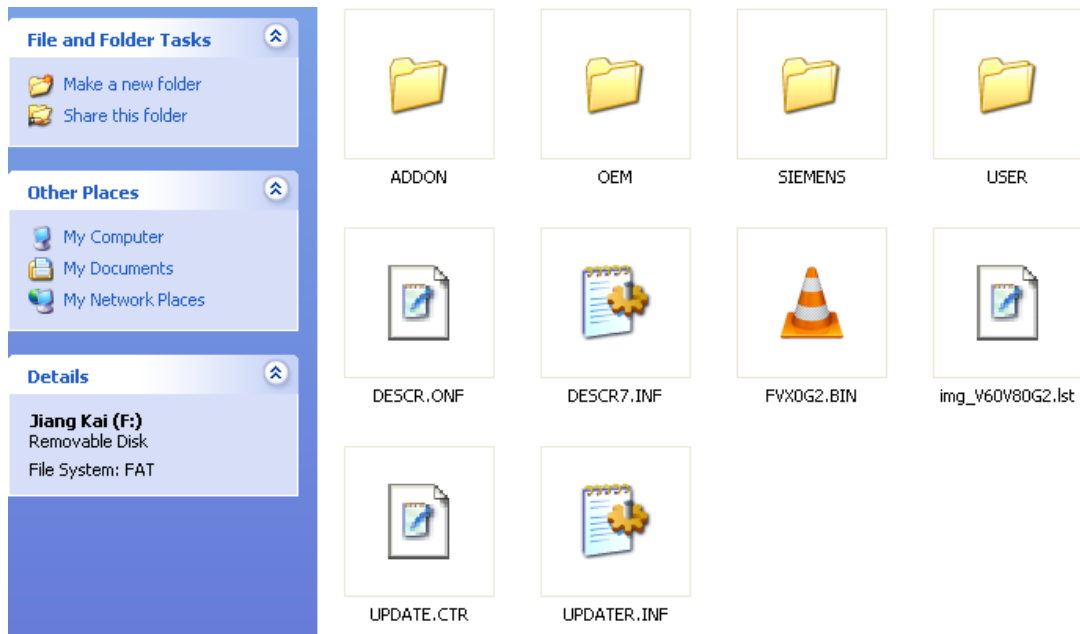


Figure 1 V90 firmware files after extraction

- Copy all the files to the root directory of the SD card as figure 2.

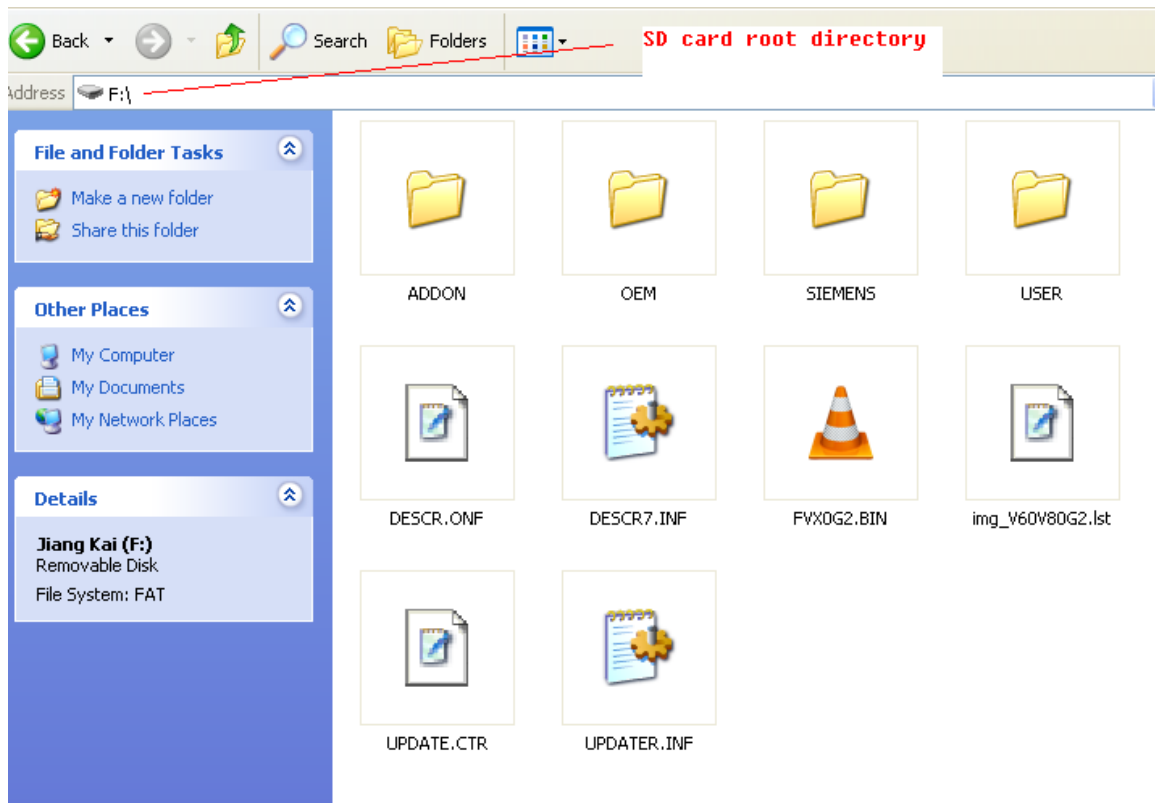


Figure 2 V90 firmware files in SD card root directory

- Plug SD card into the SD card slot on V90 drive and then power on 24 VDC power supply for V90 as figure 3.

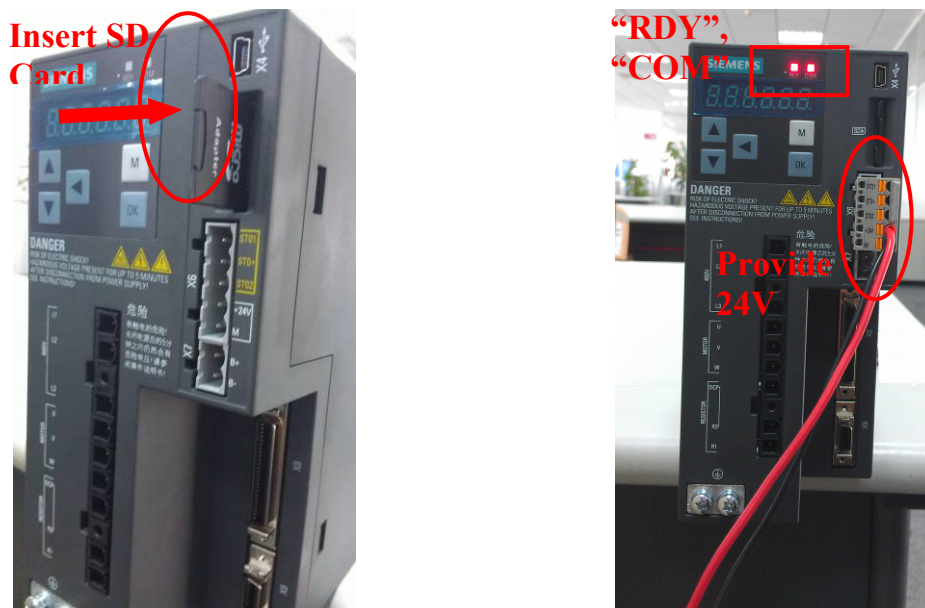


Figure 3 Insert the SD card and provide the 24V

4. After step 3, the RDY and COM LEDs can indicate you the update process as figure 4.  
Normally, firmware update process is that RDY LED is in red and COM LED flashes at 2 Hz in orange.

If the RDY and COM LEDs come to abnormal display, please check the files in the SD card and the SD card itself. Maybe the following circumstances occur.

- (1) The SD card is not supported by V90.
- (2) The firmware version on the SD card is the same as current version in the drive.
- (3) Files in SD card are missing, corrupt or not in the root directory.

states	step	RDY	COM
update states	FW update check	red	off
	FW update process (from Memory Card)	red	orange 2Hz
	FW update error (from Memory Card)	red 2Hz	red
	FW update completed wait for PowerOn	red 0.5Hz	red 0.5Hz
	Firmware CRC error	red 2Hz	red

Figure 4 COM and RDY LED display during update process

5. When both RDY and COM LEDs are flashing at 0.5 Hz, firmware update is finished. Please power off V90 drive and un-plug the SD card from V90.
6. Power on V90 and check the version with parameter r29018 to see whether the version is right.

- Implement the “Default” and “Save” operations for the drive to complete the update process.

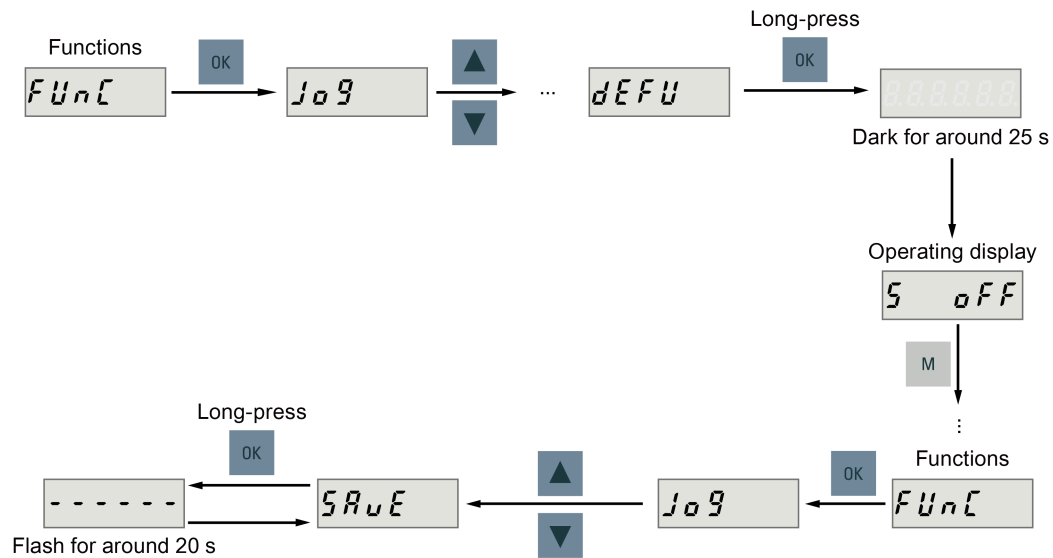


Figure 5 Setting parameters to default and save

**Note:** Please make commission again because the drive is set to factory default, and all the parameters except for the field bus (USS/Modbus) related parameters are recovered to their factory default values.