FLEX-6300 MicroSD Card Installation Guide

May 4, 2022

The following guide will provide the necessary step-by-step procedure for installing a MicroSD card in a FLEX-6700 or FLEX-6500.

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Getting Started

Required Tools

- A number 1 (#1) Phillips Screwdriver
- A small flat blade screwdriver
- #8 TORX wrench

Materials needed for Service Procedure

- One (1) SmartSDR MicroSD Card
- One (1) piece of Kapton tape (attached to the antistatic bag)

Preparing to Install the MicroSD Card

Removing the Top Cover

Disconnect **all cables** connected to the FLEX-6300 and locate a flat secure work table to perform the procedure outlined below

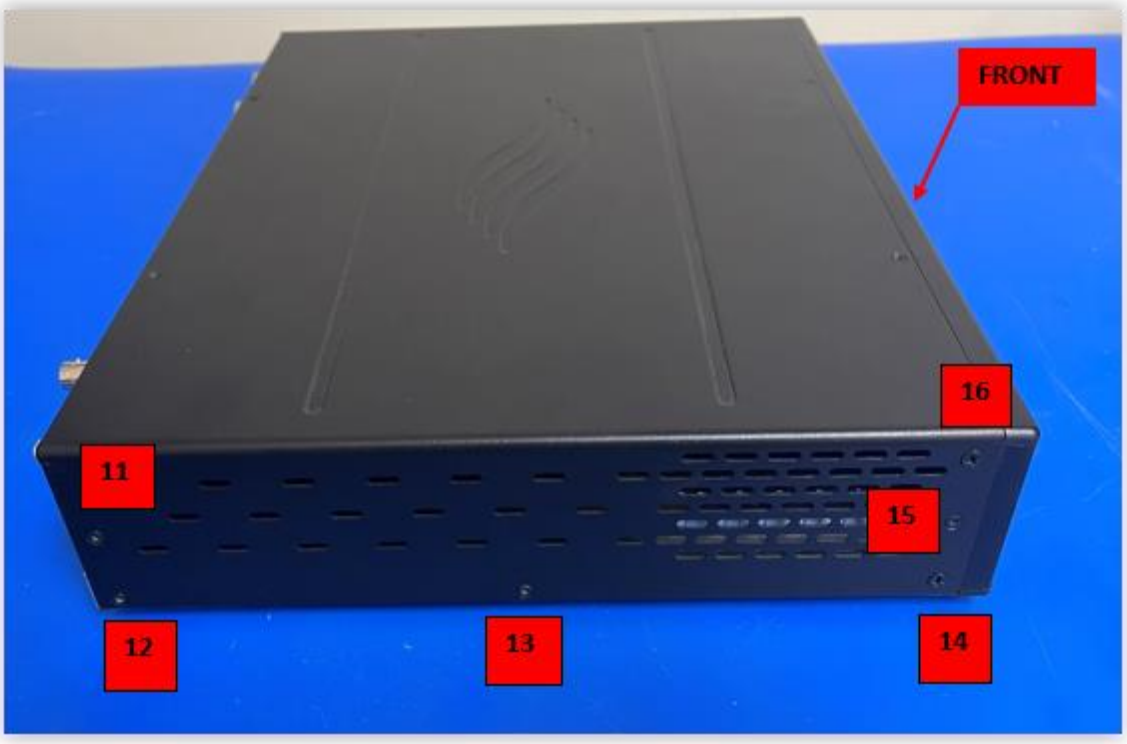
The top chassis cover for the FLEX-6300 must be removed before the MicroSD card can be installed.

Carefully remove the top cover by removing the four (4) screws on the top cover and the six (6) screws from each side

Note: Handle the cover with care to avoid accidental scratching or denting.

- Using a T8 Torx, remove screws 1,2,3,4,5,6,7,9,11,12,13,and 15 (Note: screws 1,2,9,15 are longer screws).
- Using Philips #1 screwdriver, remove screws 8,10,14, and 16.

Place the screws in a safe location for reassembly.



Once the top cover retaining screws have been removed, gently pull the top cover upwards to remove it from the FLEX-6000. The image below shows the removal of the top cover.

Replacing the Existing MicroSD Card

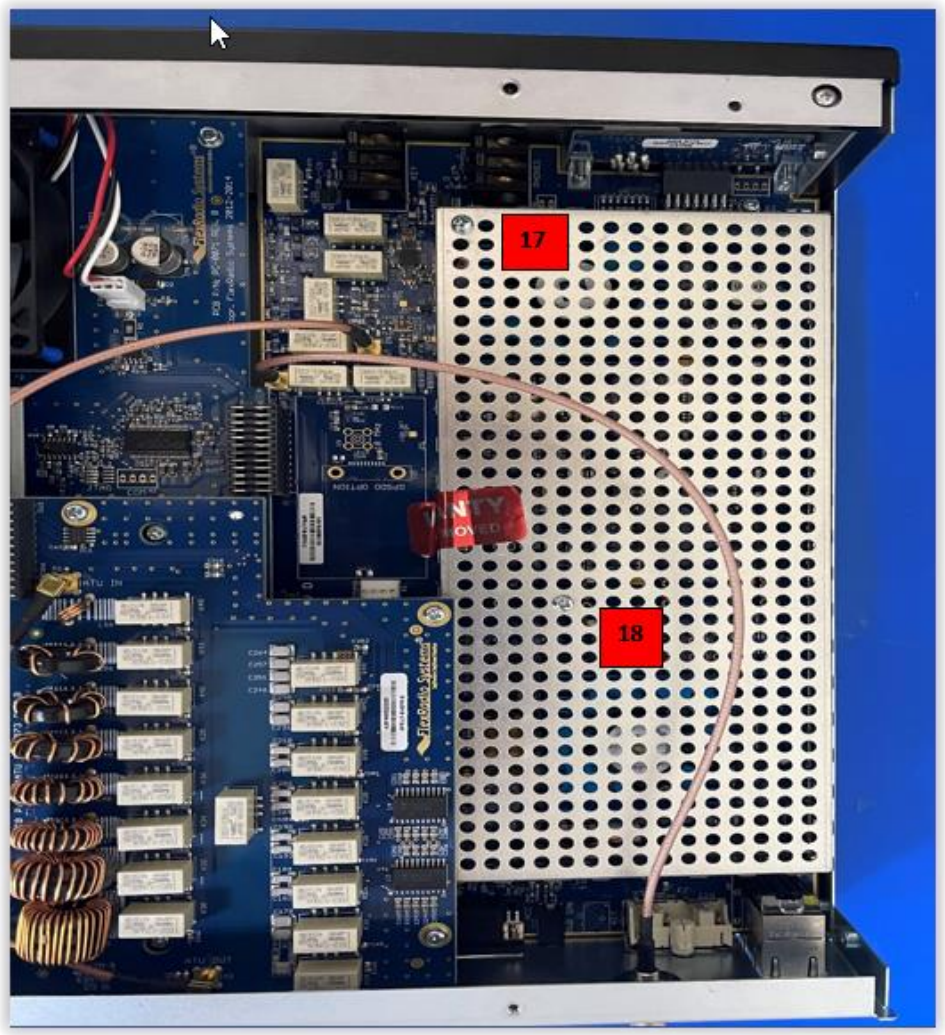
Once the top cover has been removed, the RF Isolation cover must be removed to access the MicroSD card slot.

Locating and Removing the RF Isolation Cover

The RF Isolation cover is located at the top of the radio. You will see a large silver "RF can" (with vent holes) that has a removable top. There may be a metalized plastic security label that indicates your warranty will be voided if the tag is broken. **This procedure will not void your warranty since FlexRadio is instructing you to do it.** Using a sharp-pointed knife or razor blade, cut through the label so that the removable top can be easily lifted and removed.

If an ATU board is installed, you will have to remove three (3) screws and move it slightly out of the way to remove the RF shield cover.

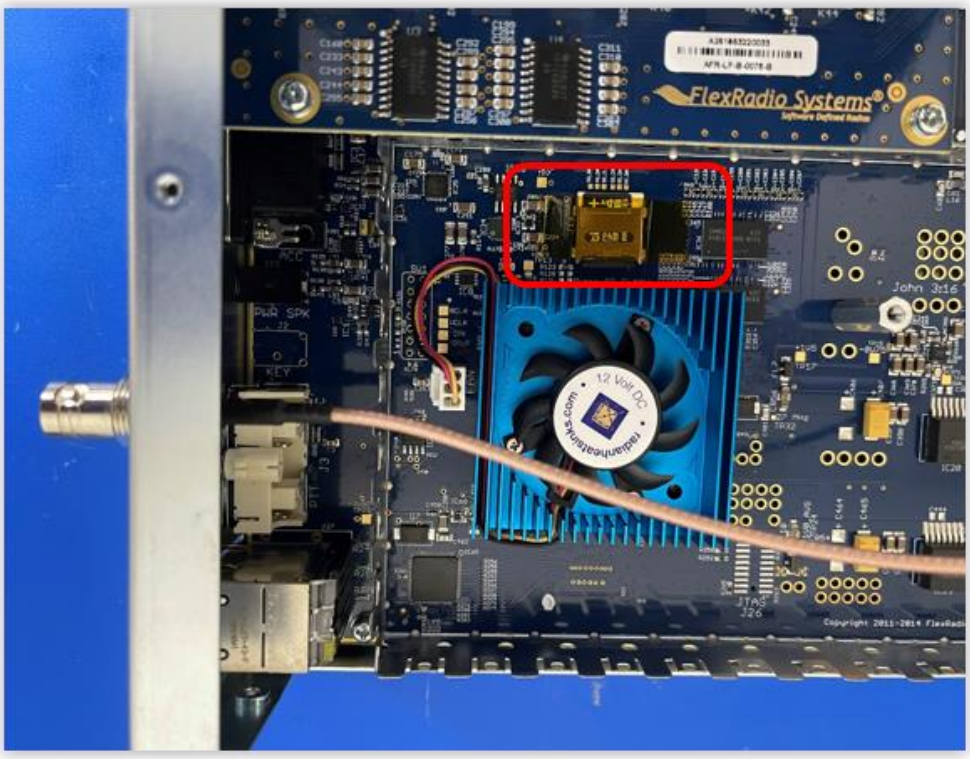
Using a Philips #1 screwdriver: remove screws 17and 18. Lift the RF can top off by gently prying up on it between the metal "fingers" that hold the top of the RF shield in place around the edges with a small flat blade screwdriver. It is best to do this at several locations so that the cover does not twist and separate the retaining tabs.



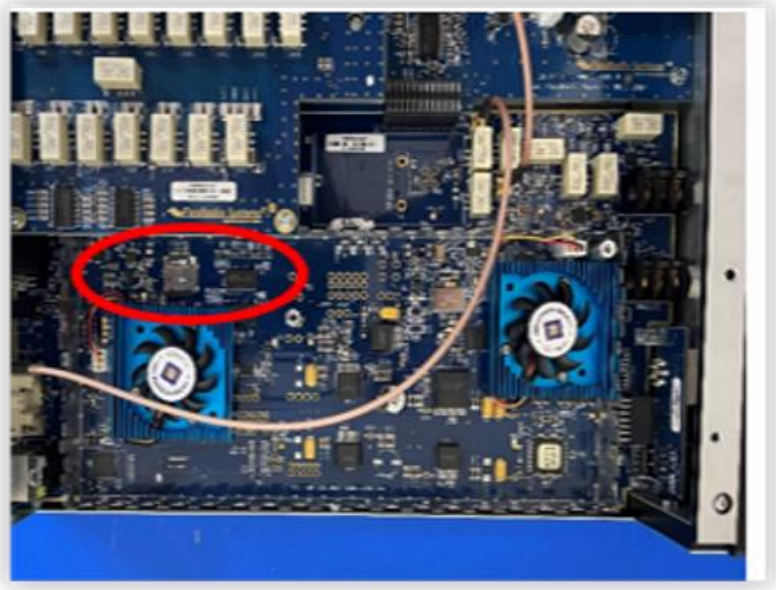
Remove the existing MicroSD Card

The next step is to remove the MicroSD card from the FLEX-6300. The MicroSD card is located adjacent to the FPGA processor/fan assembly.

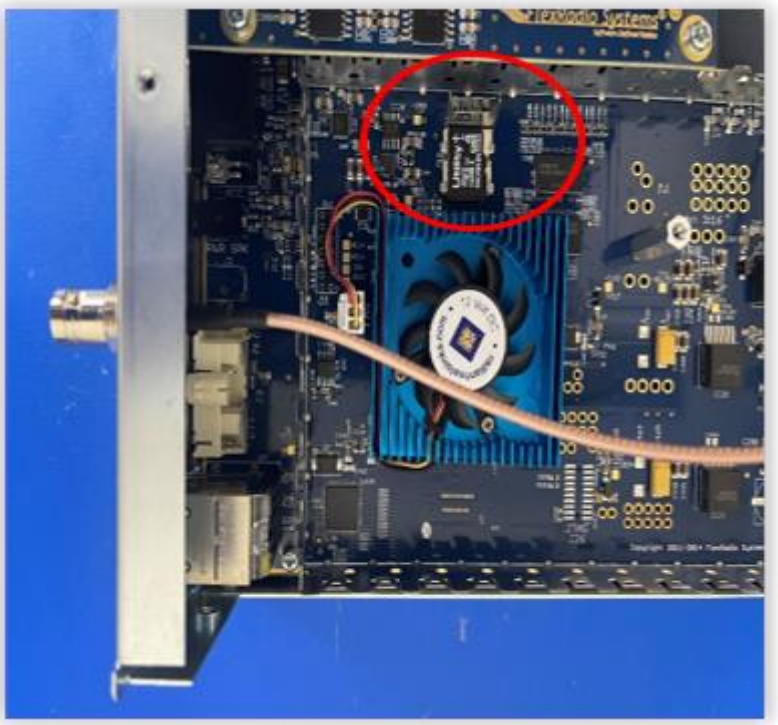
Locate the MicroSD card in the red box shown in the image below.



There may be a piece of translucent yellow Kapton tape covering the top of the card retaining clip. If so, carefully remove the Kapton tape as shown in the image below



Gently slide the silver MicroSD card retaining clip **away** from the FPGA processor/fan assembly so that it releases and lifts as shown below.



Remove the existing MicroSD Card

The next step is to remove the MicroSD card from the FLEX-6300.

Using a non-metallic object to lift the end of the card nearest to the FPGA processor/fan assembly, the MicroSD card should easily lift out of the card socket so it can be removed.

Also, you may want to take the opportunity to blow out the dust from the CPU and FPGA fans while you have the RF can cover removed. Just make sure you do not over spin the small CPU and FPGA fans when cleaning them by placing a small non-metallic object like a toothpick into the fan blades to prevent them from spinning freely.

Installing the new MicroSD Card

Once the existing MicroSD card has been removed, install the new MicroSD card that has been formatted and has the SmartSDR firmware installed. Installing an unformatted MicroSD card without the SmartSDR firmware installed will result in the radio not booting.

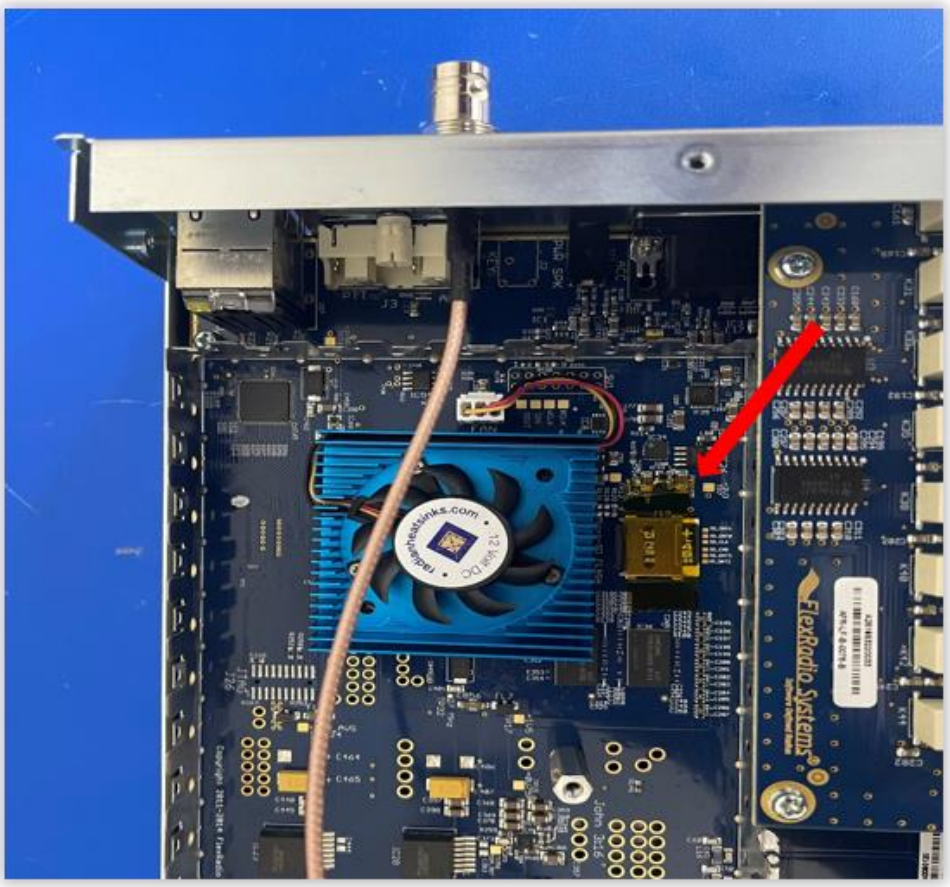
Installing the New MicroSD Card in the Card Socket

Make sure the silver retaining clip is in the unlocked and upright position. Carefully place the new MicroSD card in the card socket. There is a plastic "key" on the right-hand side of the MicroSD card that aligns up with a key slot on the card socket. Make certain that the card is properly seated in the card socket.

Carefully fold down the silver retaining clip so that it is flat against the MicroSD card. Slide the silver retaining clip **towards** the FPGA processor/fan assembly making sure that the MicroSD card does not slip or move in the socket. This will lock the MicroSD card in the card socket as shown below. Failure to seat the card properly will result in the card not making proper contact with the card socket's electrical contacts causing the radio to fail to boot up.

Note: It is possible to get the latch closed without seating the MicroSD card properly. Ensure the MicroSD card is seated completely flush against the connector and that the latch closes without being forced.

To prevent the retaining clip from coming unlatched when the radio is shipped, place a strip of Kapton tape over the top of the MicroSD card socket as shown below.



Verify the FLEX-6300 will boot properly with the new MicroSD Card

Before installing the top cover on the FLEX-6300, verify the radio boots properly.

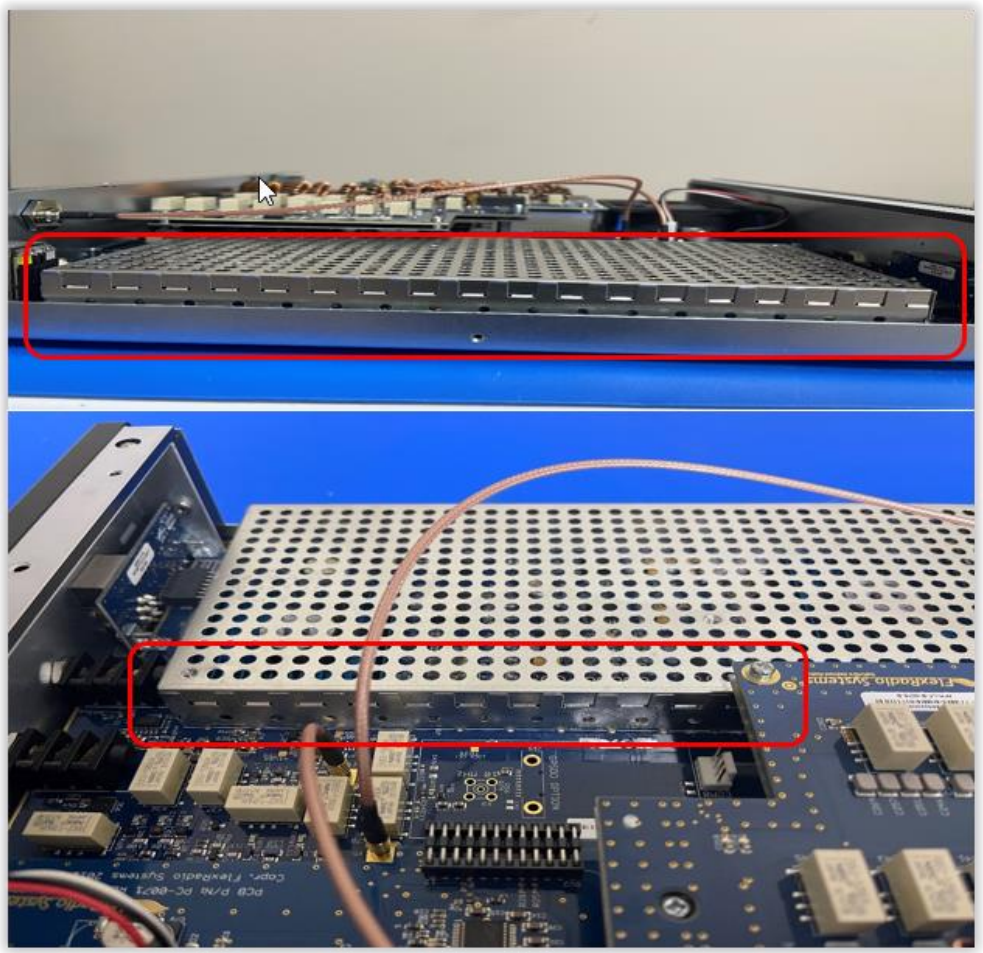
- Connect a 13.8v power supply to the DC input.
- Connect an Ethernet cable to the radio and connect it to your LAN

Turn the FLEX-6300 on and verify the radio boots without an error and the Power LED is solid green.

Note: If the FLEX-6300 does not boot, then power down the radio, remove the DC power cable, reseat the MicroSD card, power up the FLEX-6300 and reseat the MicroSD card.

Reinstall the RF Isolation cover

Reinstall the RF Isolation cover. Make sure that the RF Isolation cover is inserted properly in the RF shield housing's retaining tabs. Starting at one corner ensure that the cover is between the alternating rows of "teeth" to ensure the cover is aligned properly. Once installed it should like the image below.



Replace the RF top cover and the 2 screws 17,18 with a Philips #1 screwdriver (Note: make sure the cage top cover is seated properly on all the 4 corners)

Using a Phillips #1 screwdriver, secure the RF Isolation cover in place by re-installing screws 17 and 18 (see image above for screw locations)

If an ATU board was moved out of the way when you removed the RF Isolation cover, carefully move the ATU back into place and reinstall the three (3) retaining screws.

Reinstalling the Top Cover

Place the top cover on the FLEX-6300.

In reverse order, re-install the top cover screws.

- Using a T8 Torx, remove screws 1,2,3,4,5,6,7,9,11,12,13,and 15 (Note: screws 1,2,9,15 are longer screws).
- Using Philips #1 screwdriver, remove screws 8,10,14, and 16.