How to Update EX100-EARC-T / EX100-EARC-R

Firmware update to MCU **V1.4** and FPGA **V1.9** for the eARC audio extender kit: Transmitter **EX100-EARC-T** and Receiver **EX100-EARC-R** (same hardware as EX0101-N807 / EX0101-N808). About 8-10 minutes per unit. Nothing needs to be installed on the PC.

What you need

- A **Windows 10 or 11 PC** (no admin rights or extra software needed).
- The **unit's normal power** (5 V Micro-USB power supply).
- A **USB-to-RS232 serial cable with an FTDI chip**. Windows installs its driver automatically. Recommended: DTECH USB to Serial Adapter, FTDI chip, DB9 male, 4 ft: https://www.amazon.com/dp/B00H8HDS2K (backup: DTECH 10 ft FTDI version, https://www.amazon.com/dp/B017D51ZRQ)
- A **DB9 female to screw-terminal adapter**, because the unit's RS232 port is a small 3-pin terminal block (3.5 mm Phoenix plug, included with the kit), not a 9-pin plug. Recommended: AAOTOKK DB9 Female Screw Terminal Adapter (2-pack): https://www.amazon.com/dp/B08153D2F1 (backup: EZSync900, https://www.amazon.com/dp/B071FZBCFD). You also need 3 short wires and a small screwdriver.

Make the cable (one time only)

Plug the DB9 adapter onto the USB serial cable. Connect 3 wires from the adapter to the 3-pin plug that came with the kit. The pins are marked G, RX and TX on the unit:

DB9 adapter terminal	goes to	3-pin plug on the unit
Pin 5 (GND)	→	G
Pin 2 (RX)	→	TX
Pin 3 (TX)	→	RX

TX and RX cross over, so pin 2 goes to TX and pin 3 goes to RX. If the updater says "NO ANSWER FROM THE UNIT", swap the two RX/TX wires and try again.

Update the units

1. **Download** the file EX100-EARC_Updater_V1.9.0.zip to the PC.
2. **Right-click** the zip and choose **Extract All**, then click **Extract**. Do not run anything from inside the zip.
3. Plug the **USB serial cable** into the PC. The first time, wait about 30 seconds for Windows to set it up.
4. Plug the 3-pin plug into the **RS232** port of the first unit and make sure the unit has **power**.
5. In the extracted folder, **double-click Update_EX100-EARC.bat**.
6. If Windows shows **"Windows protected your PC"**, click **More info**, then **Run anyway**.
7. **Follow the prompts on the screen.** The program reads the version, asks whether the unit is a Transmitter (T, EX100-EARC-T) or a Receiver (R, EX100-EARC-R) (check the label on the bottom), then asks you to **unplug the unit's power, wait 5 seconds and plug it back in**. Leave the serial cable connected.
8. Wait while it sends the firmware (shown in %). The unit gets **two updates**, first the MCU (about 1 minute), then the FPGA (about 7 minutes), and the program asks you to **power-cycle the unit before each one**. **Do not unplug anything** until you see a green **DONE** or a red **FAILED**.
9. Move the cable to the **next unit** and press ENTER. Repeat for all units. Type **Q** to finish.

Units that already have MCU V1.4 and FPGA V1.9 are reported as **ALREADY UPDATED** and skipped. Every unit is recorded in **update_log.csv** in the same folder. Please send this file back to us when you are done.

Troubleshooting

- **"NO SERIAL CABLE FOUND"**: unplug and replug the USB cable, wait 30 seconds. Open **Device Manager** and check **Ports (COM & LPT)**. If the cable has a yellow warning sign, install the FTDI "VCP" driver from ftdichip.com, or try another USB port.
- **"NO ANSWER FROM THE UNIT"**: check that the unit has power, that the 3-pin plug is firmly in the RS232 port and the screws are tight, then try again. If it still fails, swap the RX and TX wires.
- **FAILED**: **do not unplug the power.** Answer **Y** to retry the same unit and follow the power-cycle prompt again. If it fails 3 times, put the unit aside, write down the message on screen and contact support. If the MCU step finished but the FPGA step failed, just run the unit again: the program only redoes what is still needed.
- **"Could not open COMx"**: close any other program that uses the cable (PuTTY, Tera Term, etc.) and start the updater again.