

Upgrading Wavebooks for IEEE-1284 ECP Compatibility

Upgrading your WaveBook/516 or WaveBook/512 for IEEE-1284 ECP compatibility involves replacing the existing ECP FPGA chip located on the main printed circuit board. Your new chip is part number 262-0301 B.

Note: WaveBook/512 series users refer to page 2 of this document before proceeding.

WARNING



Turn power off to the WaveBook and all connected devices before performing the upgrade.

CAUTION

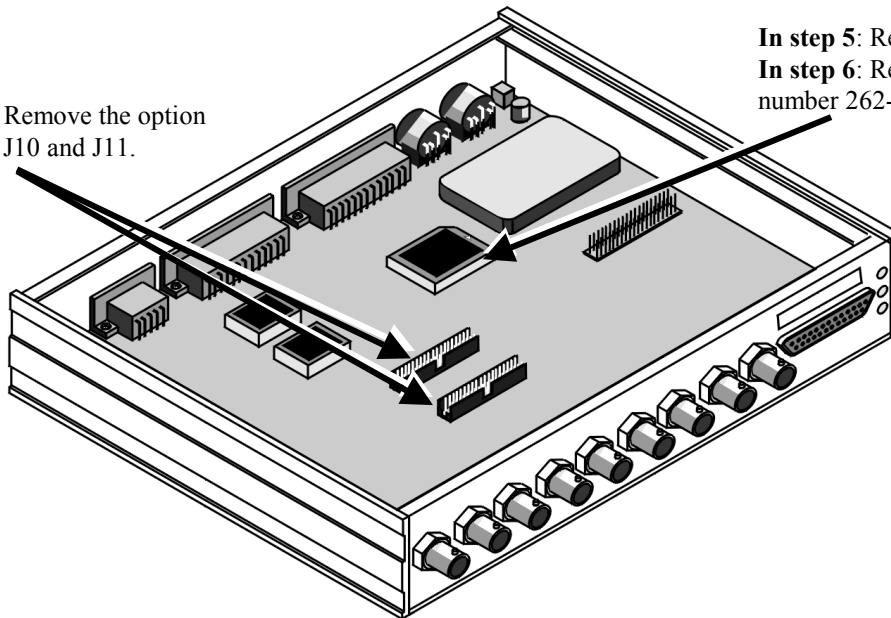


Components are sensitive to damage from electrostatic discharge. Perform the setup in a static-free work area using tools, wrist strap, containers, and procedures that are ESD-safe.

WaveBook/516 Users

1. After removing the WaveBook/516 from power, remove the top cover plate. To remove the plate you must first remove four screws (2 on each side) that secure the plate to the main chassis.
2. Verify that the unit's main board is either: 489-4000 REV D, or 489-4000 REV E. Revision information is located on the main PCB in the lower right component side of the board (when BNCs are towards the viewer). Note that the part number and revision are etched in copper and are not part of the white silkscreen. If you have a PCB that is rev C or earlier, please contact us by phone at (440) 439-4091 or by e-mail at productsupport@iotech.com.
3. Remove the option card by unscrewing 2 screws and gently lifting the card from connectors (J10 and J11.)

In step 3: Remove the option card from J10 and J11.



In step 5: Remove ECP FPGA at U52.
In step 6: Replace the chip with part number 262-0301 B.

WaveBook/516 – Location Reference for Replacing Chip at U52

4. Locate the Actel ECP FPGA (p/n 262-0301) at U52. Note the proper orientation of the device. Pin 1 should be in the middle of the rightmost row of pins. U52 should be a socket, if it is not please contact us by phone at (440) 439-4091 or by e-mail at productsupport@iotech.com.

- Using the PLCC extraction tool (included), carefully remove the ECP FPGA chip by placing the tool's hooks down into the access holes on opposite corners of the socket.

Place your index finger on the center of the chip (pushing slightly downward) as you squeeze the extraction tool. Use your finger to balance the chip while removing it from the socket, as the extraction tool may not properly balance the chip.

- After removing the old chip, replace it with part number 262-0301 B. This is done as follows:
 - Verify correct orientation, i.e., pin 1 to the right and the chip's chamfer in alignment with the chamfer on the board's socket.
 - Squarely center the rev B chip over the socket.
 - Gently push the chip into the socket. The chip should snap into position.
- Place the option card back into the unit. To avoid pin damage, use care when aligning the option card with the two connectors (J10 and J11).
- Place the top cover back on the unit and fasten it with the four screws.

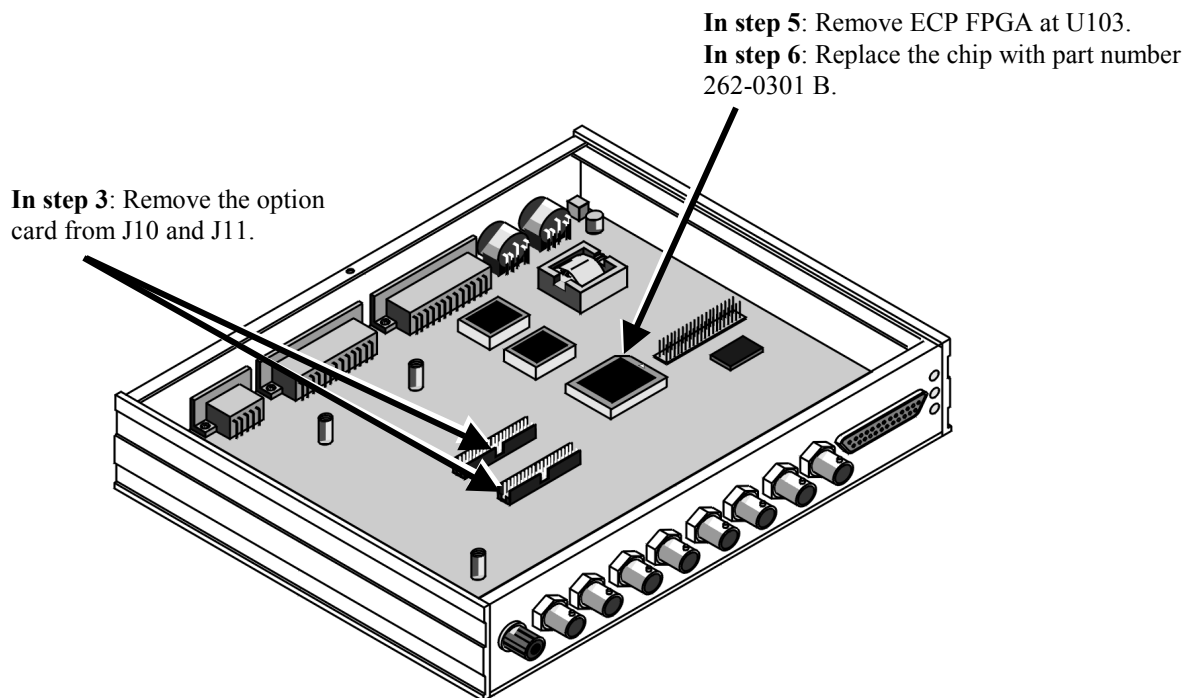
This completes the upgrade procedure.

WaveBook/512 and WaveBook/512H Users

For upgrading WaveBook/512 series units, the procedure is identical as that presented for the WaveBook/516 except:

- the top cover plate is held in place by a single top screw
- the ECP FPGA chip is located at U103 (see following figure)
- you will not need to check the printed circuit board part number/revision level (step 2) since the upgrade can be made to any WaveBook/512 or WaveBook/512H

WaveBook/512 series users should refer to the illustration below for chip location reference, then follow the same steps as provided for WaveBook/516, with exceptions as noted in the above bulleted list.



WaveBook/512 Series – Location Reference for Replacing Chip at U103