Building a REX from scratch, using the files and info released by Stephen Adolph.

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Pics: <https://goo.gl/photos/7wRjuTUDv6cojpjU9>

PCB: <https://oshpark.com/shared_projects/vFF7oXfw>

Parts (excl flash): <http://www.digikey.com/short/3r1w75>

(This is all the parts to build 3 boards, excluding the flash chips.)

Flash: <https://www.verical.com/s/am29f800bb/>

Order 1 per REX board.

Pick any that match this pattern:

AM29F800BB-##E\*

## = Speed: 90 or lower (90 or faster)

E = Package: Only E, TSOP

\* = Temperature range: Any

Example (what I got):

AM29F800BB-70EK

FILL IN MORE DETAIL HERE:

\* Directions for what parts to solder where, gleaned from looking at the EagleCAD drawings.

If you load the eaglecad project, the drawing has text that says what parts to install and what parts to disregard. Which means installing eaglecad, add directions for that...

\* Locate pin1 on the TSOP flash chip. There actually is a dot next to one corner, but it's almost invisible on the finished pcb, because it's copper under solder mask, not silk screen. It's more visible in the eaglecad drawing.

\* How to flash the firmware:

There's two things to flash, the cpld and the flash ram.

o For the CPLD:

Install LabTools 14.7 from Xilinx

<https://drive.google.com/folderview?id=0Bys6eLbSbYyhVFBQSW1pclpjaWM>

Supply +5vdc to pin 1 of the board edge, and gnd to pin 14. (same as the M100 would do when installed) Simplest is use an empty Molex socket on a breadboard.

Hook up a platform usb-ii to the jtag pins with a short section of single row pin header.

Temporarily pull PORT\_EN high on the cpld by jumping the vcc pin from the jtag to the side of R3 closest to the chip. Just use a test clip on the vcc pin between the programmer vcc wire and the board, and just hold the other end touching the side of R3 manually for the few seconds it takes to flash.

Use iMPACT to program the .jed file.

o For the flash:

Follow the directions for the 4.9 update, which also serves as a way to do a first-time flash of the firmware and rexmgr software.

References:

User manual:

<http://bitchin100.com/wiki/index.php?title=REX>

Sources and support files:

<http://www.club100.org/memfiles/index.php?PHPSESSID=0iltg2un40287et7flm4m54387&direction=0&order=&directory=Steve%20Adolph>

PCB:

<https://oshpark.com/shared_projects/vFF7oXfw>