A fully open computer:
Open CPU source.
Open toolchain.

Build your own, from source, deploy to an FPGA, very quickly!

For all the details, check out my blog post on this topic:
https://pingu98.wordpress.com/2019/04/08/how-to-build-your-own-cpu-from-scratch-inside-an-fpga/

Minute 1: What are we talking about?
We need two toolchains, one for the processor and one for the code to be executed on the processor. (actually we’ll cheat a little and use one I synthesized earlier since the bitstream generation takes 6-7 minutes on my laptop!)

Minute 2: The toolchains
RISC-V in 5 minutes
J. Devine
10/5/19

Minute 3: While we wait.
Minute 4: Advantages of this architecture
RISC-V in 5 minutes
J. Devine
10/5/19

SiFive Unleashed – RISC-V in silicon.
$999

A RISC-V desktop, as built by Andrew Back $4000
https://hackaday.com/2019/02/11/building-a-risc-v-desktop/

Minute 5: Limits to RISC-V at the moment & demo!

Maix BiT
Kendryte K210
$12.90 from Seeed