RISC-V and Antmicro’s Visual System Designer: Everything Everywhere all at Once

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RISC-V - options, options everywhere
RISC-V and Antmicro’s Visual System Designer: Everything Everywhere all at Once

Fragmentation?
More like augmentation
Helping customers adopt RISC-V since 2015
Crossing all levels of the tech stack, enabling vertical integration
Always improving the open source landscape, connecting, documenting, filling the blanks
common denominator, making all hardware virtual
Using SW data and structure to test software at scale
Take this to the next level: Renodepedia
But software needs hardware...
... and hardware is all about structure
From the structure, the Open Hardware Portal was born
Open source components database with KiCad footprints and Blender models
Interactive schematics viewer
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Growing open HW portfolio with photorealistic 3D renders
... but our flow can be used to visualize any board
It’s all part of the same landscape
Introducing the Hardware Designer
Unleash the freedom provided by RISC-V
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Build SoCs from IP blocks
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Expand to entire boards
Look up components in Renodepedia and our Open Hardware Portal
Generate Renode simulation files
Co-simulate in Verilator
Co-development of ML, vector, custom instructions
Gather metrics from your implementation
Verify your implementation with RISC-V DV

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```
0x8000bfa8: 01010113 addi sp, sp, 16
0x8000bfac: 00008067 ret
0x8000c0b8: fff00793 li a5, -1
0x8000c0bc: 00f50e63 beq a0, a5, 28
0x8000c0c0: 00a4dc63 bge s1, a0, 24
0x8000c0d8: 00847413 andi s0, s0, 8
0x8000c0dc: 30042473 csrrs s0, mstatus, s0
0x8000c0e0: 01c12083 lw ra, 28(sp)
0x8000c0e4: 01812403 lw s0, 24(sp)
0x8000c0e8: 01412483 lw s1, 20(sp)
0x8000c0ec: 02010113 addi sp, sp, 32
0x8000c0f0: 00008067 ret
0x8000cac4: de1f50ef jal -41504
0x800028a4: 00800793 li a5, 8
0x800028a8: 3007a7f3 csrrs a5, mstatus, a5
0x800028ac: 10500073 wfi
0x80000010: fb010113 addi sp, sp, -80
```
Generate Zephyr firmware, U-Boot, Linux kernels
Calling CPU, SoC, SoM, board, SBC vendors, sensor and component manufacturers, IP providers
Calling end users, product development companies

- add simulation models
- build boards
- port software
- build/integrate core and un-core IP
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Meet us at Booth 1