

Update on Ara

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Summary

- **WIP: T-Head board**
 - T-Head 906: a new hope
- **WIP: benchmarks**
 - T-Head NN library
 - FFT
- **WIP: new instructions**
 - Segment-memory operations

T-Head C906

- **Low-effort approach**
 - Ask in the communities
- Two answers pointed to the same direction
 - **Run the board in bare-metal** (no OS)
 - Enable the V accelerator
 - Source: <https://mp.weixin.qq.com/s/TCG8-zrxdMaWVurAzN7GhA>
- Reference to the following repository:
 - <https://github.com/bigmagic123/d1-nezha-baremeta>

T-Head C906



mp-17 commented 9 days ago • edited ▾

Author



Thanks a lot, @PhilippvK. I have the Nezha board, and the V extension seems disabled by default. I cannot modify the machine/supervisor CSRs to enable it either since the board runs Linux and my applications are kept in U mode.



PhilippvK commented 9 days ago



@mp-17 I also had similar issues running Linux. I had to build baremetal programs to make use of the vector extension. I am not sure if this would somehow be possible from an OS.

Reference: https://github.com/bigmagic123/d1-nezha-baremeta/tree/main/src/2.vector_example

Need for some patchwork, the tutorial is not straightforward

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 - Opportunity for an ISA extension?
- **Segmented memory operations**