



Dasharo Features

Dasharo User Group #1

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What is this presentation gonna be about?

Current status and feature plans for:

- Supermicro X11SSH (server)
- Dell OptiPlex 7010/9010 (desktop)
- Dell Precision T1650 (desktop/NAS)
- MSI Z690-A/Z790-P (desktop)

DASHARO COMMUNITY SUPPORT ROADMAP *(subject to change)*

2023

Q1

Q2

Q3

Q4

Server

Supermicro

X11SSH-TF v0.1.0

- Basic Dasharo System Features
- UEFI Secure Boot improvements
- IPMI Serial-over-LAN
- iKVM keyboard

X11SSH-TF v0.1.0

- Extend OSFV support over IPMI for BMC-based platforms
- Debian 11
- XCP-ng 8.2 LTS

X11SSH-TF v0.1.0

- coreboot 4.19
- iPXE 2022.01
- EDK II 202002

Discovery

Evaluation

Porting

Validation

Community Release

Supporters Release

Dasharo Community Support Roadmap | March 2023 (v0.1) | CC-BY-SA 4.0

v0.1.0 Community Release

Current status: **Porting**

- We have a working release candidate
- X11SSH-TF installed in the 3mdeb lab
- Basic Dasharo System Features and UEFI boot included
- iKVM keyboard does not want to work in the firmware, but does in OS (needs debugging)
- SOL works, Debian 11 checked and working
- **Sh*t tons** of ways of flashing with SUM, SMCIPMITool, flashrom, BMC GUI but **only BMC GUI** is working properly (and yet not always)...
- iKVM keyboard fix and some documentation is needed to switch to **Validation**

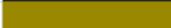
What's next? v0.2.0

Features ideas for next release:

- UEFI IPMI drivers for OOB management, SMBus ASF, BMC event logging?
- OpenBMC port? There are [Supermicro open-source packages](#) which resemble a BMC project (to be analyzed)



		2023			
		Q1	Q2	Q3	Q4
Desktops	Dell	OptiPlex 7010/9010 v0.1.0 - OSFV support for Dell desktop - XCP-ng 8.2 LTS	OptiPlex 7010/9010 v0.1.0 - coreboot 4.17 - iPXE 2022.01 - EDK II 202002		
		Precision T1650 v0.1.0 - Basic Dasharo System Features - UEFI Secure Boot improvements	Precision T1650 v0.1.0 - Add T1650 to Dasharo Lab Infrastructure - TrueNAS CORE 13.0 - ECC - SMBIOS UUID migration	Precision T1650 v0.1.0 - coreboot 4.19 - iPXE 2022.01 - EDK II 202002	

	Discovery
	Evaluation
	Porting
	Validation
	Community Release
	Supporters Release

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v0.1.0 Community Release

Current status: **Validation**



- We have a working release candidate for quite some time
- Basic Dasharo System Features and UEFI boot included
- SMBIOS UUID and serial number migration
- Need to perform testing to finally switch to **Release** phase
- [GitHub v0.1.0 milestone](#)
- [GitHub Project](#)

What's next? v0.2.0

Feature ideas for next release:



- We don't know yet :)
- Ideas welcome
- Most likely inclusion of features developed for other platforms

v0.1.0 Community Release

Current status: **Porting**



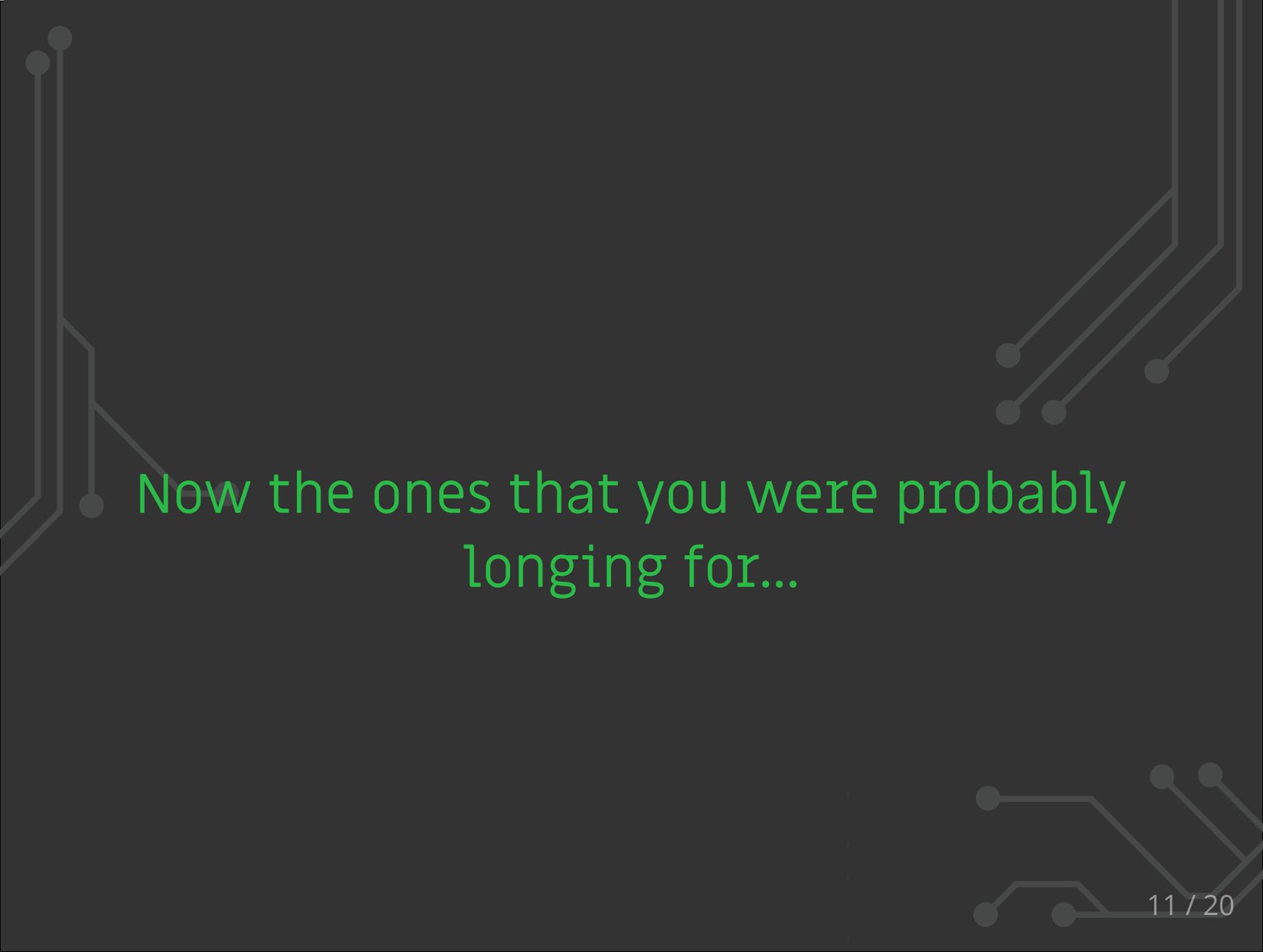
- Board support available in upstream coreboot
- Nothing started yet so we need to prepare everything:
 - Whole documentation
 - Dasharo System Features enabling
 - installation in 3mdeb lab
- [GitHub v0.1.0 milestone](#)
- [GitHub Project](#)

What's next? v0.2.0

Feature ideas for next release:



- Precision T1650 would be specifically intended for NAS use due to ECC RAM, so it needs a runtime option to configure platform behavior after power failure
- Most likely inclusion of features developed for other platforms

The background is a dark gray color. In the corners, there are decorative elements resembling circuit traces or lines. These lines are light gray and end in small circular nodes. The lines are arranged in a way that suggests a network or a path, with some lines branching out and others connecting different points.

Now the ones that you were probably
longing for...

DASHARO COMMUNITY SUPPORT ROADMAP *(subject to change)*



		2023				2024				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Desktop	MSI	PRO Z690-A v1.1.1 - Qubes OS 4.1.2 - Early DMA protection - GPU HCL fixes - SATA hot-plug and more	PRO Z690-A v1.1.2 - RPL-S CPU support - FlashBIOS button support - MSI Windows 11 SW and drivers support	PRO Z690-A v1.1.2 - coreboot 4.18 - iPXE 2022.01 - EDK II 202002						
				PRO Z690-A v1.2.0 - v1.1.2 feature parity	PRO Z690-A v1.2.0 - v1.1.2 feature parity					
		PRO Z790-P v1.0.0 - NLNet grant application		PRO Z790-P v1.0.0 - feature parity with PRO Z690-A	PRO Z790-P v1.0.0 - feature parity with PRO Z690-A	PRO Z790-P v1.0.0 - coreboot 4.21 - iPXE 2022.01 - EDK II 202002				

- Discovery
- Evaluation
- Porting
- Validation
- Community Release
- Supporters Release

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v1.1.2 - Supporters Release

Current status: **Validation**

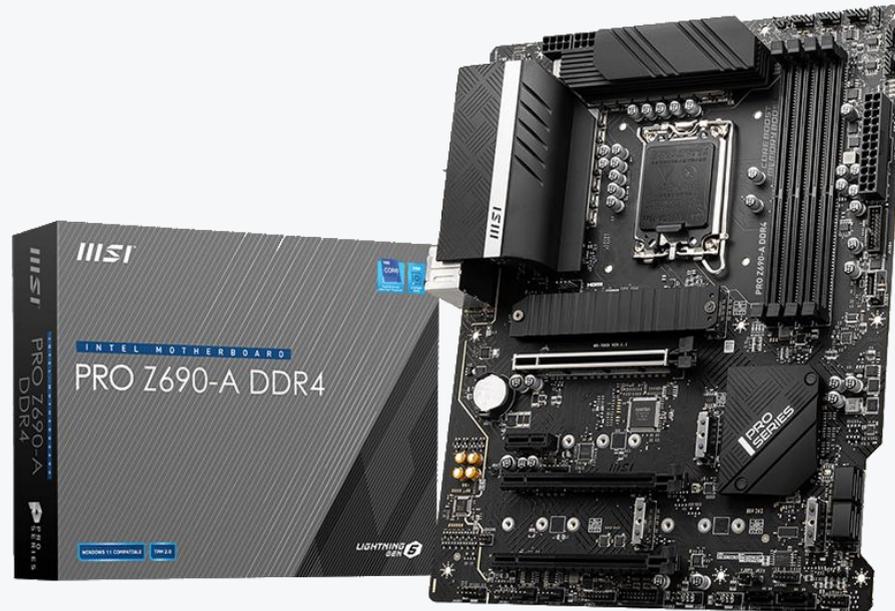
- RPL-S CPU support in review upstream (not tested yet)
- MSI ACPI identification in Windows 11 to install MSI software and drivers automatically (done)
- ACPI interrupt routing fix (done) - my dual dGPU setup pays off...
- Fan control (almost finished) - few weekends gone, just like that... 😊
- FlashBIOS button (in progress) - yesss...
- [GitHub v1.1.2 milestone](#)
- [GitHub Project](#)

Features also planned for this release:

- Add option to skip PS/2 keyboard detection to make all pS/2 keyboard work hopefully (legacy stuff always problematic)
- Runtime options for: PL1/PL2, VR loadline, memory XMP profile selection

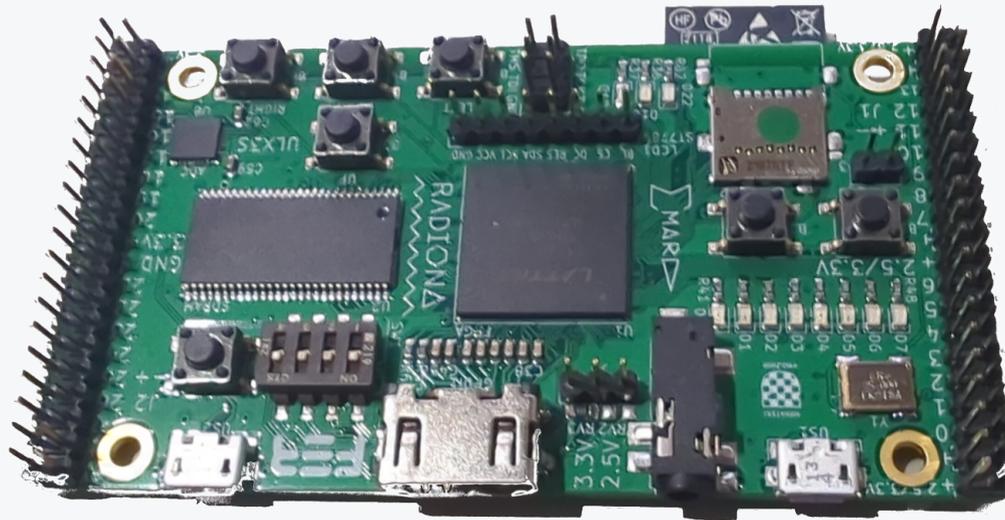
v1.2.0 - Community Release

- All features from v1.1.2 for everyone
- What else? We will see 😊





- Decided to go with SpiSpy
- Inspired by the famous open-source activist, programmer, photographer and frequent hacker: Trammel Hudson
- <https://trmm.net/Spispy/>



- There is one interesting feature in SpiSpy - TOCTOU mode!
- It can hijack SPI cycles from the chipset and respond with data present on the SpiSpy SDRAM (programmed with our custom firmware binary)
- Nobody said it will not hijack SPI cycles coming from 3rdparty chip responsible for FlashBIOS functionality!
- Plan: gather a trace of the FlashBIOS recovery process and determine vendor firmware structures responsible for binary validation
- Goal: Make FlashBIOS feature work with Dasharo builds (v1.1.2 or v1.2.0?)

v1.0.0 - Community Release

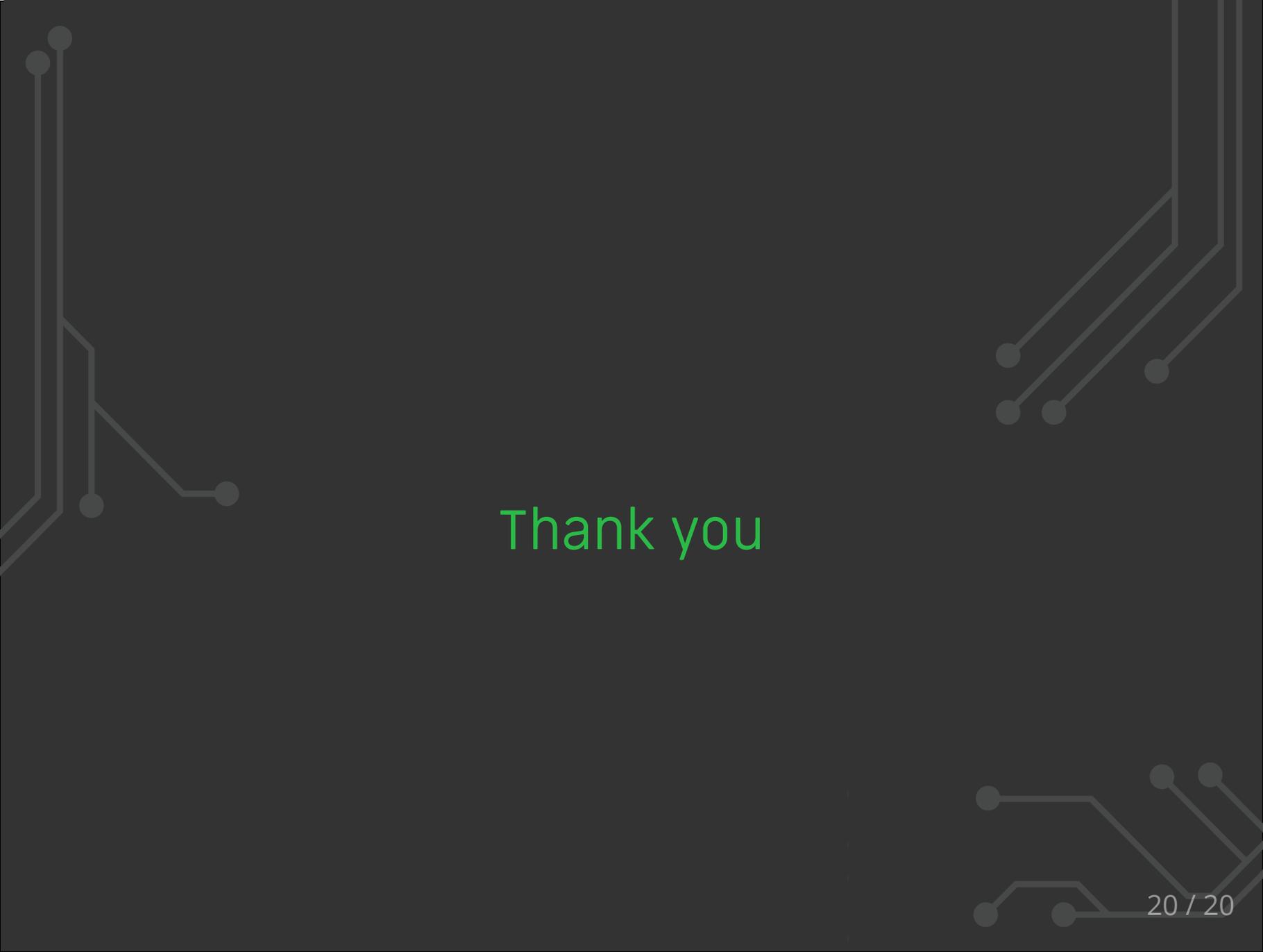
Current status: **Discovery (Waiting for funds to start Evaluation)**

- Around 23'Q4 or 24'Q1!? I know.. I know... So frickin' late... 🙄
- The more supporters we have the quicker we may satisfy the community needs!



- Is MSI EZ LED debug support of any importance?
- What options do you see as most important to be implemented in near future?

Q&A

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Thank you