oneAPI HW SIG (March 2023)

Level Zero Spec Update

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Topics

- Level Zero Spec Roadmap
- Release Details
- Closing Thoughts
- Q & A

Level Zero Spec Roadmap
Q4’23 (December 2023)
Next Release
Q2’23 (June 2023)
Version 1.7
v1.x.y
Q1’23 (March 2023)
Version 1.6
Q3’23 (September 2023)
Version 1.8

Level Zero Spec v1.6 (March 2023)

Core

Interface

- Shared Contexts
- Get error code description
- Import/export allocations composed of multiple sub-allocations ?

Documentation

- Clarify expected handling of large register file module build option

Extensions

- Wait and write memory ?
- Query temporary memory requirements for group sort algorithms
- Query raw timestamps as normalized time units
- Host memory registration ?

Tools

Interface

- Promote `zetMetricGroupCalculate-MultipleMetricValuesExp` to standard

Sysman

Interface

- Add a media domain to the frequency domain list

Level Zero Spec v1.7 (June 2023)

Core

Interface

- Callback allocator ?

Extensions

- Construct ray tracing acceleration structures

Sysman

Extensions

- FLR device reset

Possible landing target for any at-risk 1.6 features

Level Zero Spec v1.8 (September 2023)

Core, Tool & Sysman

Interface

- Extension promotions under discussion
- Deprecation targets under discussion

Possible landing target for at-risk v1.7 features

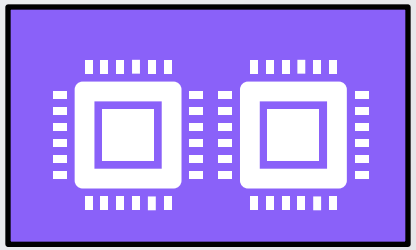
Open to accept additional enhancements

Level Zero Spec Next (December 2023)

Core

Interface

- #1 Expose every sub-device specified by ZE_AFFINITY_MASK as a separate device



Tool

No proposed changes

Sysman

No proposed changes

The feature set for the Next release is an open topic
Schedule may be adjusted, depending on need

Closing Thoughts

- Everything is tracked on GitHub at: https://github.com/oneapi-src/level-zero-spec

- General release cadence is quarterly
- One year removal target for deprecated experimental extension APIs
- Continuously looking for customer feedback to enrich the API
- File issues, PRs

- See the Latest Release https://spec.oneapi.io/level-zero/latest/core/INTRO.html

Q & A