

MCU Driver HAL and CI working group

17th June 2021

Note: Meeting recorded as usual

Advanced draft



Agenda

- MCU-Driver-HAL, update
- MCU-Driver-HAL, walk through
- MCU-Driver-HAL, next tasks
- CI and Tests, update
- CI Environment Management, walk-through
- Plans for upcoming weeks

Status of MCU-Driver-HAL, update

- HAL API (.h) as starting point (v0.1)
- HAL API Doxygen documentation
- Porting guide
- Examples
 - Serial, SPI, GPIO, Timer, Flash, TRNG
- Greentea tests
 - Echo (Serial) test complete (now compiles/runs successfully)
- Driver implementation based on ST Disco L475 board

Status of MCU-Driver-HAL, update

Peripheral	API, docs	Examples	Tests
AnalogIn/Out	Y	-	-
CAN	Y	-	-
CRC	Y	-	-
GPIO / Port	Y	Y	-
I2C	Y	-	-
ITM	Y	-	-
Internal Flash	Y	Y	-
MPU	Y	-	-
QSPI	Y	-	-

Peripheral	API, docs	Examples	Tests
OSPI	Y	-	-
Reset	Y	-	-
RTC	Y	-	-
Serial	Y	Y	Y (Echo)
SPI	Y	Y	-
Ticker	Y	Y	-
LPTicker	Y	-	-
TRNG	Y	Y	-
Watchdog	Y	-	-

MCU-Driver-HAL, walk-through

- Repository structure
- Documentation
 - Porting guides
 - Doxygen docs
- Demo
 - Example applications
 - Greentea tests

MCU-Driver-HAL, next tasks

- Transfer MCU-Driver-HAL repository to the <https://github.com/MCU-Driver-HAL> org
 - Expected this week
- Make a release as version v0.1
 - Include release notes and known issues
- Greentea tests
 - Continue to validate and enable more Greentea tests, including usage of FPGA CI test shield

CI and Tests, update

- ADR Merged: Use GitHub Actions replace Jenkins for CI Scheduler
 - <https://github.com/ARMmbed/shadowfax-architecture/pull/221>

Design Documents for Review:

- Test Environment Management (Docker)
 - <https://github.com/ARMmbed/shadowfax-architecture/pull/208>
- CI architecture overview and CI MVP design
 - <https://github.com/ARMmbed/shadowfax-architecture/pull/222>

CI Environment Management, walk-through

The screenshot shows the GitHub repository page for 'jamesbeyond/MCU-Driver-HAL-CI-ENV'. The repository is private and has one pull request. The file browser shows a commit from 12 hours ago by 'jamesbeyond' with the message 'fix a bug of path'. The commit includes files: `.github/workflows`, `ci-build-env`, `ci-test-env`, `.gitignore`, and `README.md`. The repository name 'MCU Driver HAL CI Environment' is displayed at the bottom.

The screenshot shows a pull request page for 'EXAMPLE: add vim to Dockerfile #1' from the 'example' branch to the 'master' branch. The pull request is ready to merge. A green box highlights the status: 'All checks have passed' (4 successful checks) and 'This branch has no conflicts with the base branch'. A 'Merge pull request' button is visible. Below the merge button, there is a text input field with 'Write' and 'Preview' options.

Plans for upcoming weeks

Week	Topics / Tasks
21wk24 (today)	MCU-Driver-HAL update/walk-through, Arm
	First release of MCU-Driver-HAL v0.1
	CI Test Environment (docker) – walk-through
21wk25	Enable Greentea tests in MCU-Driver HAL
	CI Test Environment (docker) repositories deployment
	Start enabling Github Actions
21wk26	Start MCU-Driver-HAL implementation of Corstone-300
	Continue enabling Github Actions
21wk27	Continue MCU-Driver-HAL implementation of Corstone-300

Next call: Thursday 24th June

Thank you

