The purpose for this trip is to develop Minimal Smoke Tests for M1-3200 first build.

The Minimal Smoke Tests scope is:

1. All onboard voltage regulators shall produce voltage within respective tolerances

1. CPU Core A7 shall boot from SD-Card stm32 image

2. stm32 image shall:

a. initialize serial console on UART8 and output boot log

b. Leds: Run, CPU, Dbg1-4 shall blink

c. DDR ram shall be initialized and pmic shall be initialized

d. DDR tests: address bus, data bus and memory tests shall be executed

The Minimal Smoke Test is not a replacement for the Full Smoke Tests, but initial test to make sure M1-3200 A7 CPU works and can load operating system into DDR memory.

Agenda:

1. Introduction to Gdańsk Research & Development Center

2. Meeting HW team, I also want to see some people I work with on Elements automation testing and Elements Video Recorder.

3. Requirements and overview for the development PC.

4. Introduction to STM32MP1 bare metal git repository.

5. Introduction to STM32MP1 bare metal MP1-Boot FW

6. Review changes to STM32MP1 bare metal git repository to enable Ubuntu 20 development (original works on MAC only)

7. Review add-on to the FW I did for the LEDs and DDR tests

8. Critical DDR timing review and PMIC voltages, and I2C control for

9. Compare DK2 to M1-3200 CPU

10. Compiling MP1-Boot

12. MP1 boot ROM requirements overview

13. SD-Card formatting and images copy

14 Demo with EK2 board

15. Demo st-link and gdb usage

16. Develop a “Absolute Minimal M1-3200 Smoke Test” document

17. Discuss required test equipment for a Smoke Test and send this info to Saline (Kelli)

17 . M1-3200 first build test strategy