



280027-004 XTMCU02

PCBA Manufacturing Documentation

Cortex M7 based MCU card for use with X4 radar modules

By Novelda AS
2018-03-21



Document description

This document describes the assembly specifications for the current PCBA.

Contents of this document

- Notes to Manufacturer
- BOM-changes
- Release Notes
- Schematic prints
- Assembly Drawings
- PCB Dimensions
- Testpoints placement



Notes to Manufacturer

No notes.



BOM-changes since previous revision

Revision 4

- Changed PCB component A1 to XTMCU02-Rev4
- Added resistor R6 - 0R, 0603, 1%, 100mW
- Added resistor R205 - 2R2, 0402, 1%, 63mW
- Added inductor L200 - 10u, 0805, 20%, 60mA, 650mOhm, Manufacturer: TAIYO YUDEN, MPN: CK2125100M-T
- Added capacitor C225 - 4u7, 0603, 10%, 10V, X5R
- Added capacitors C226, C227, C228, C229, C230 and C231 - 100n, 0402, 10%, 10V, X5R
- Added capacitor C232 - 2u2, 0402, 20%, 6V3, X5R
- Added capacitors C233 and C234 - 1u, 0402, 10%, 10V, X5R
- Removed crystal Y201
- Removed capacitor C224
- Changed capacitor C223 to 100n, 0402, 10%, 10V, X5R
- Added oscillator U202 - 12MHZ CMOS MEMS OSCILLATOR, Manufacturer: Microchip Technology, MPN: DSC6003J12A-012.0000

Revision 3

- Changed MCU U200 to version with 2MB flash. MPN:ATSAMS70Q21A-CN
- Changed PCB component A1 to XTMCU02-Rev3
- Changed R304 designator to R204

Revision 2

- Added R304. 100k, 0402, 1%, 63mW
- Changed PCB component A1 to XTMCU02-Rev2

Revision 1

- Initial prototype



Release Notes

Revision 4 - 2017-06-07

- Add footprints for EMI filtering/USB-shielding components.
- Added more decoupling capacitors on all MCU power domains.
- Added filter on VDDPLLUSB.
- Added more decoupling close to SDRAM.
- Replace 12MHz crystal with 12MHz oscillator.
- Added MDA-testpoints.
- Increased thickness of inner copper layers.

Revision 3 - 2017-02-21

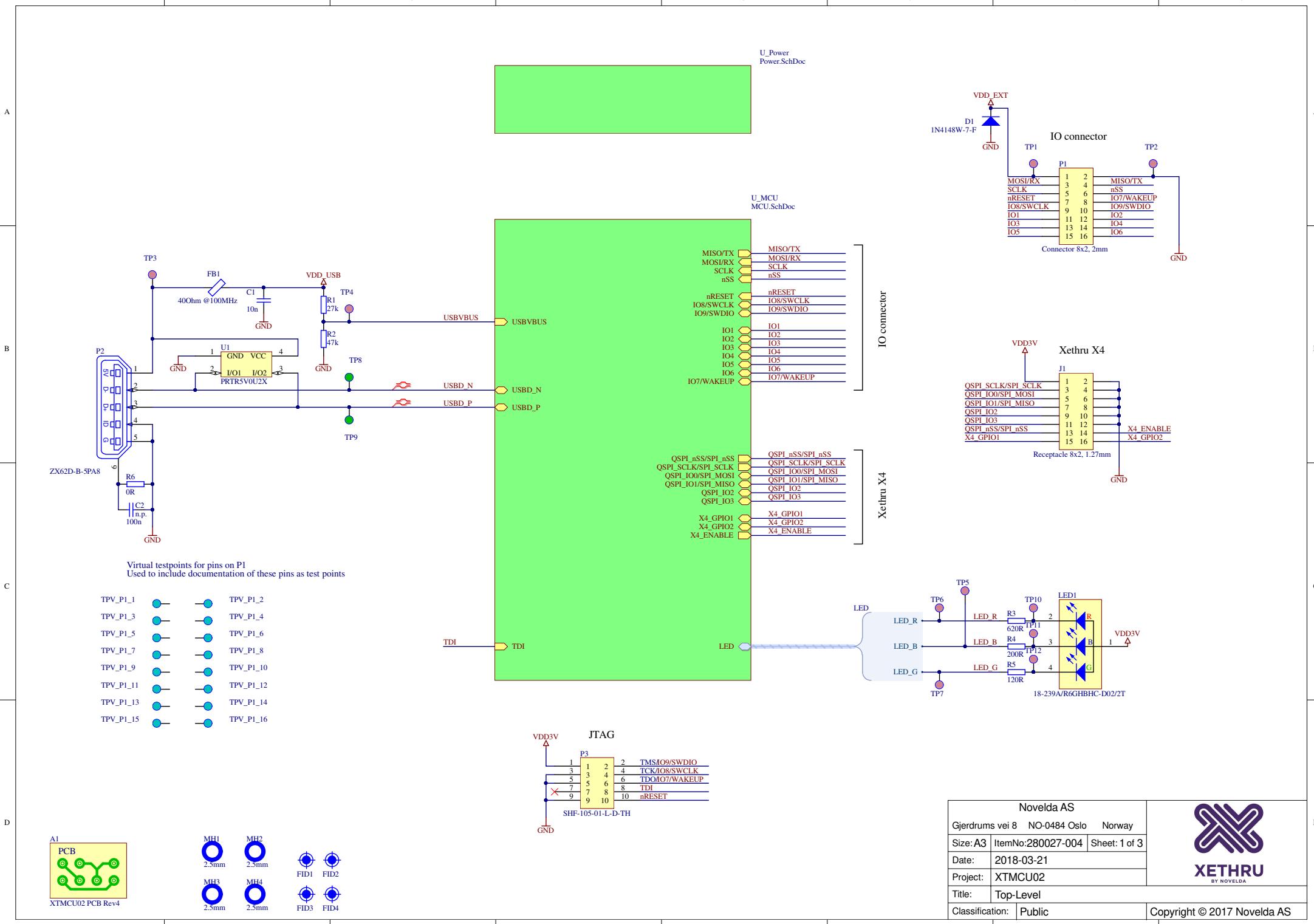
- Replace micro controller with Atmel SAMS70, 2MB flash memory.
- Bug fix on USB TVS-diode. Fixed wrong connection on Vcc pin.
- Added test points.

Revision 2 - 2016-08-17

- Bug fix on SDRAM, SWDBG and serial port pins.

Revision 1 - 2016-06-24

- Initial prototype.



A

A

B

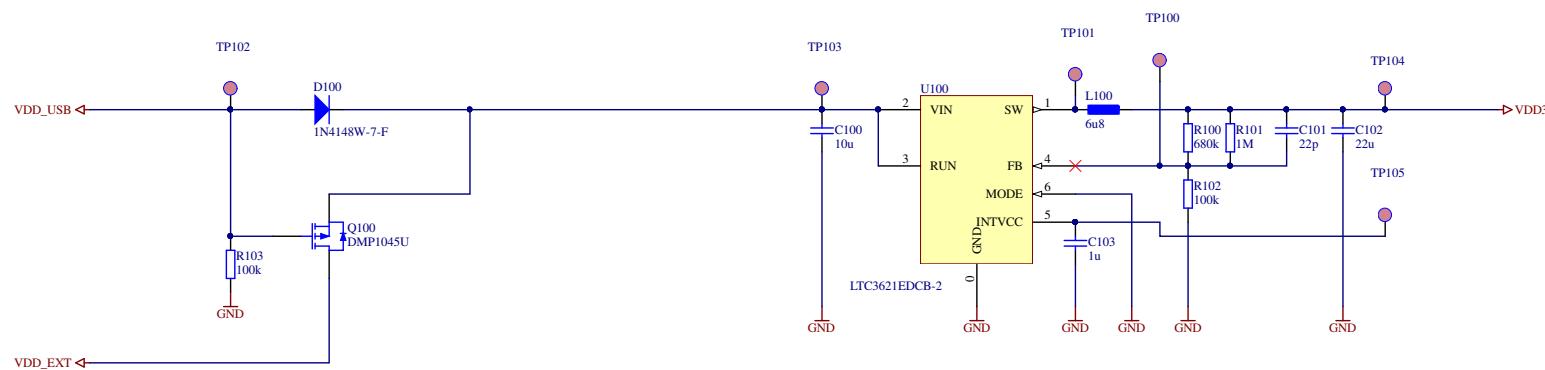
B

C

C

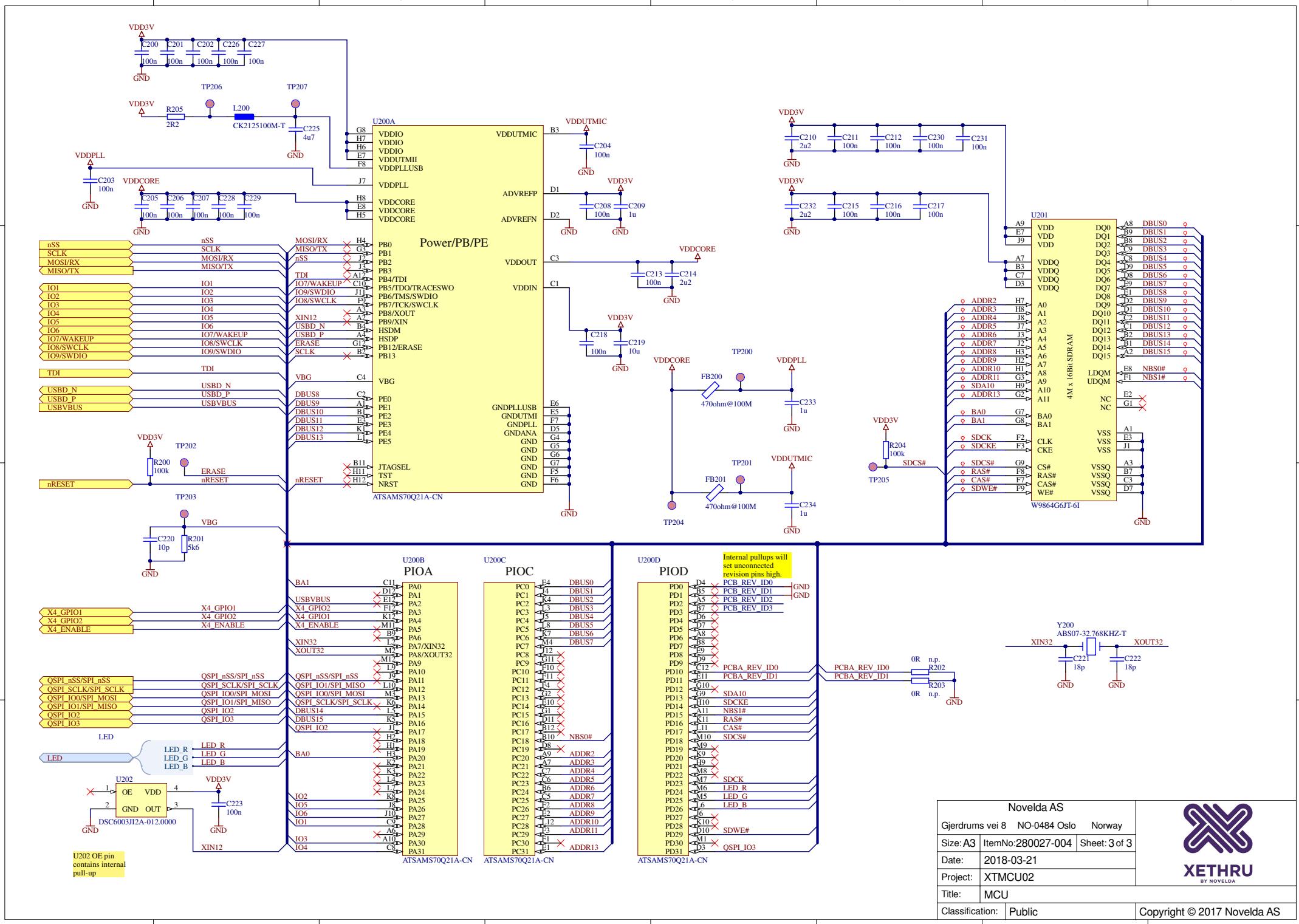
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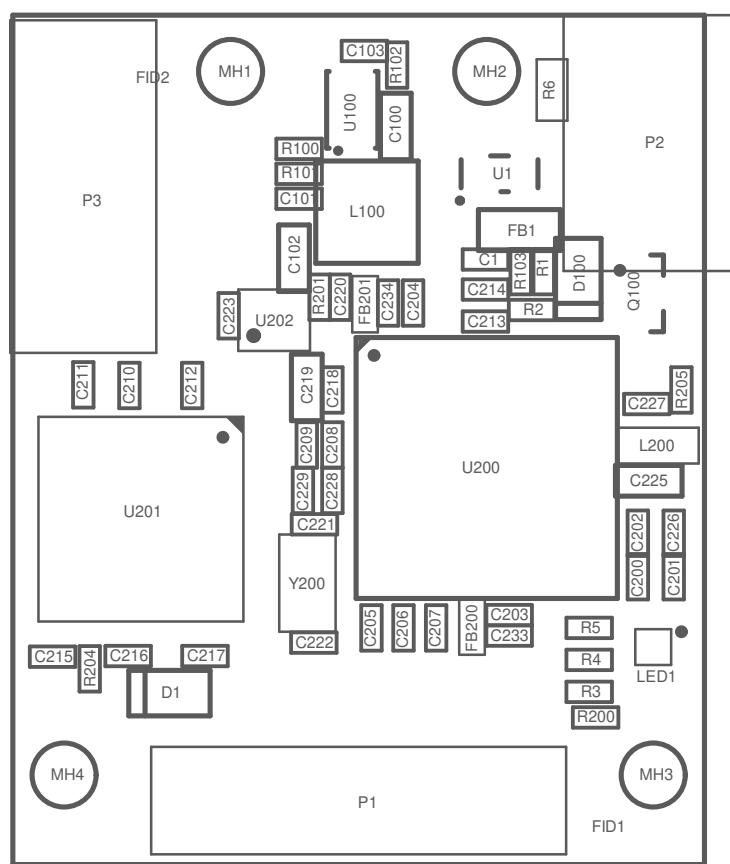
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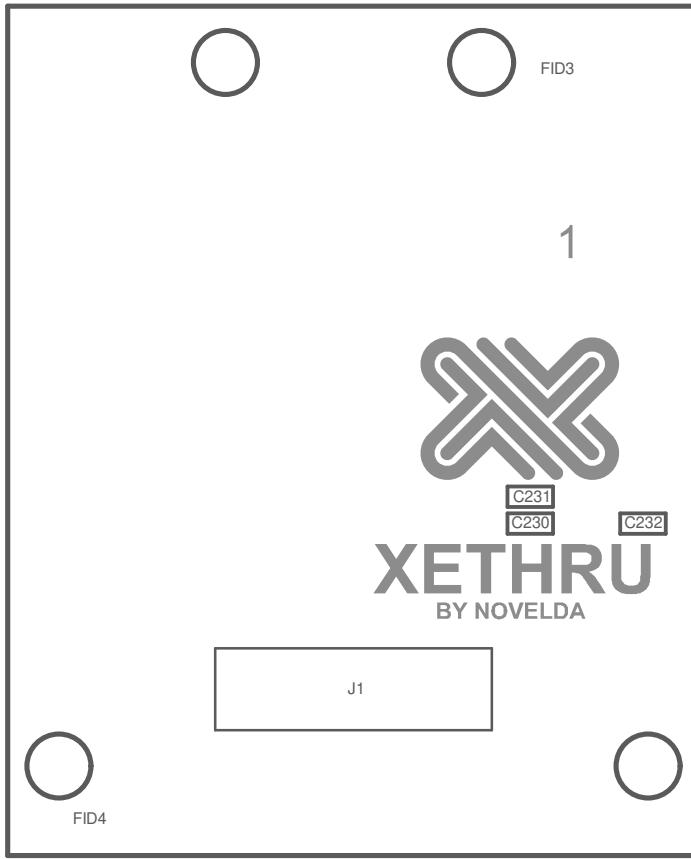
Novelda AS		
Gjerdrums vei 8	NO-0484 Oslo	Norway
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Date:	2018-03-21	
Project:	XTCMU02	
Title:	Power	
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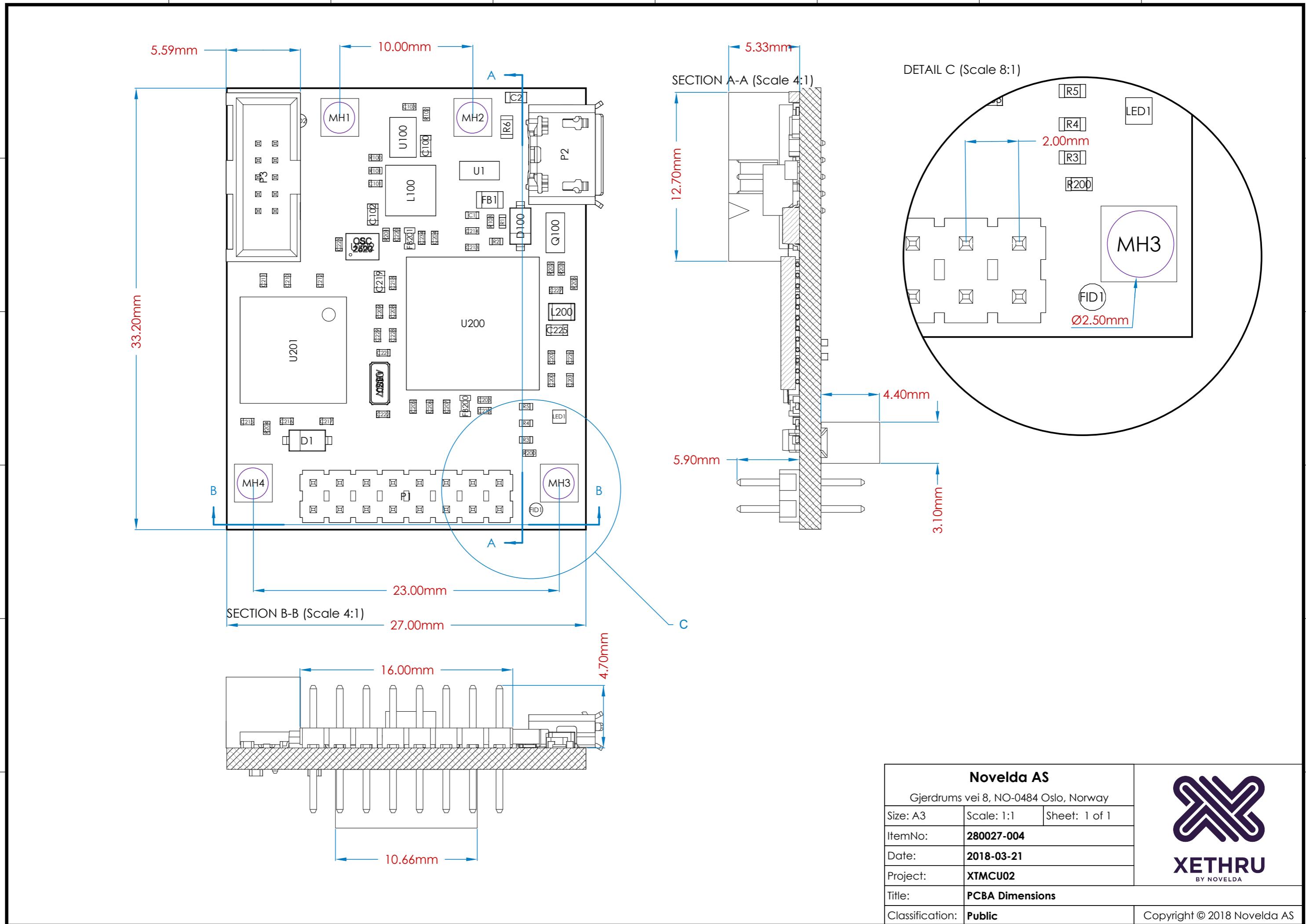




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Date	2018-03-21
Project	XTCMU02
Layer	Top Designator and Assembly
Classification	Public
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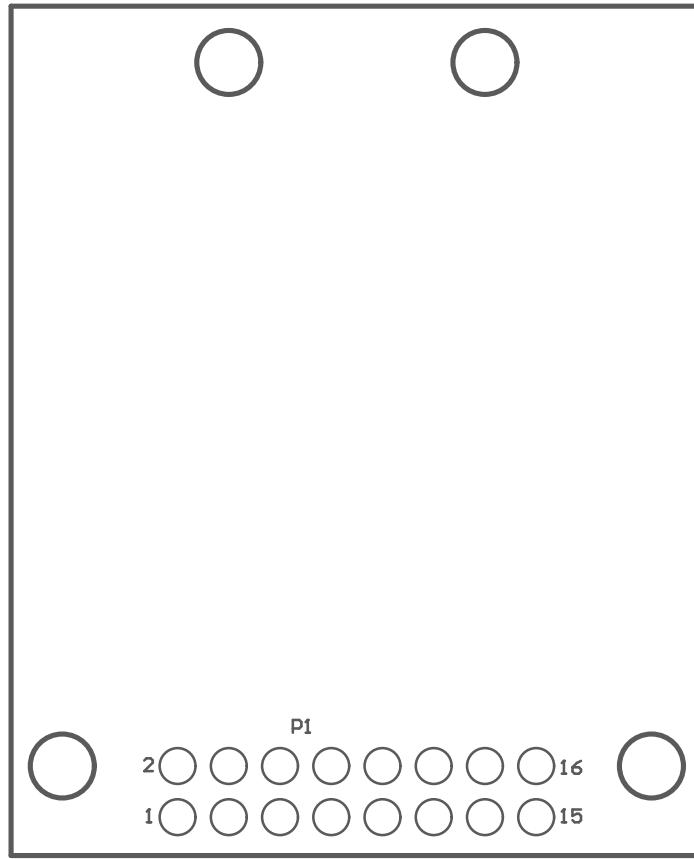


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Cobbling			

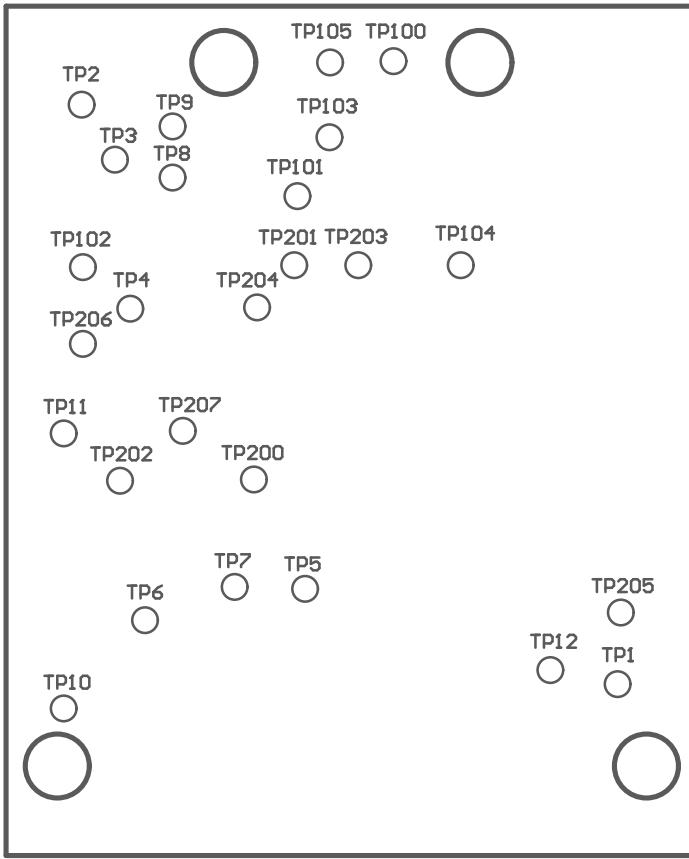


Novelda AS		
Gjerdums vei 8, NO-0484 Oslo, Norway		
Size: A3	Scale: 1:1	Sheet: 1 of 1
ItemNo:	280027-004	
Date:	2018-03-21	
Project:	XTMCU02	
Title:	PCBA Dimensions	
Classification:	Public	





ItemNo	290052-004
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Layer	Testpoints Top
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