ROHM Sensor Platform Base and Breakout Boards

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Rev	Contents
1.00	Initial release 2014-07-17
1.01	REM Control Switches, Fixed Headers, 2014-07-21
1.02	Duplicate sensor breakout boards for all PN

Title	Sensor Platform Schematic	
Size: B	Document Number: Table of Contents/Revision History	Rev: 1.0
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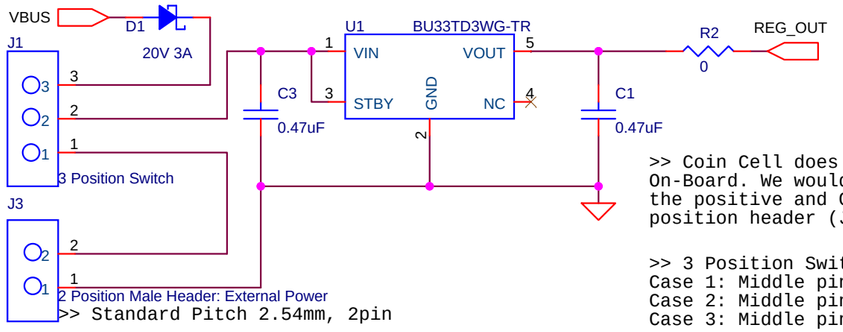
INPUT POWER

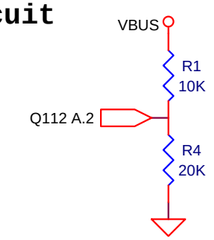


>> Coin Cell does not need to be On-Board. We would like to have the positive and GND leads on a 2 position header (J1)

>> 3 Position Switch (J15)
Case 1: Middle pin OPEN
Case 2: Middle pin con to VBUS
Case 3: Middle pin con to Ext. Power

>> Standard Pitch 2.54mm, 2pin

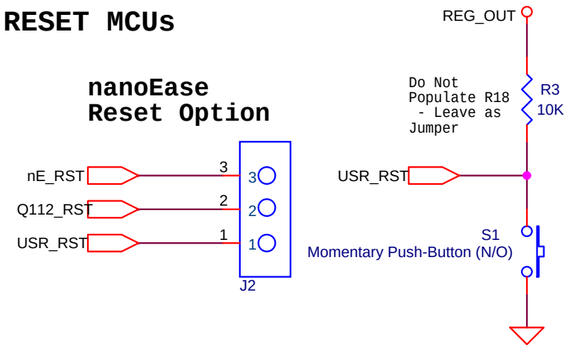
VBUS DET Circuit



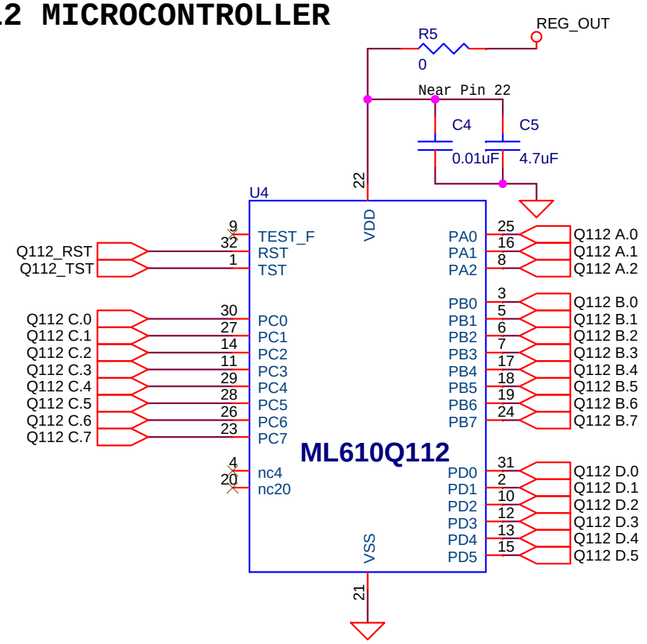
>> 5V @ Vbus when USB is connected. If this is connected, 5V is divided down to 3V and connected MCU. MCU pin should be a high impedance input

RESET MCUs

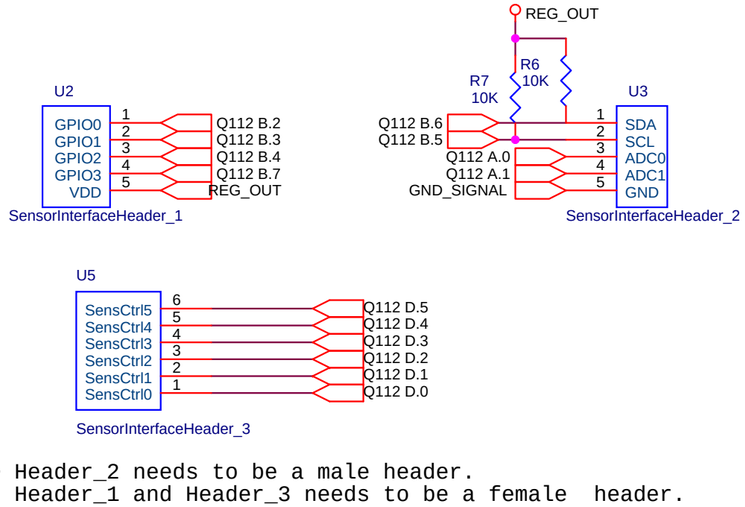
nanoEase Reset Option



Q112 MICROCONTROLLER

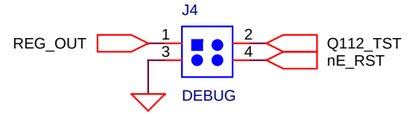


Sensor Breakout Board Interface



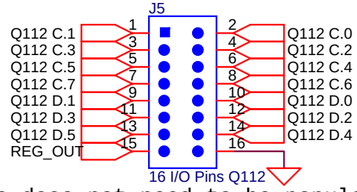
>> Header_2 needs to be a male header.
Header_1 and Header_3 needs to be a female header.

MICROCONTROLLER DEBUGGER



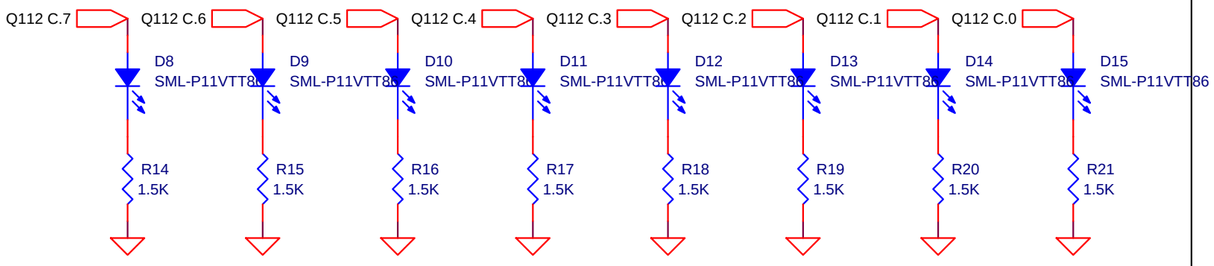
>> This should be a standard pitch 2x2 pin male header. This is a depreceated version of the debugger/programmer port. Need to build an interface cable to use our original cable

Extra Header Rows



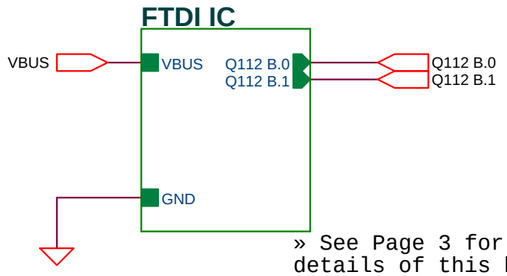
» This does not need to be populated on a 8x2 header. These can really just be VIAS at a standard pitch. Single or Double row is OK depending on the base board module size.

Standalone Mode LED Feedback Section



>> Using ROHM Red PicoLEDs

FTDI IC



» See Page 3 for full details of this block

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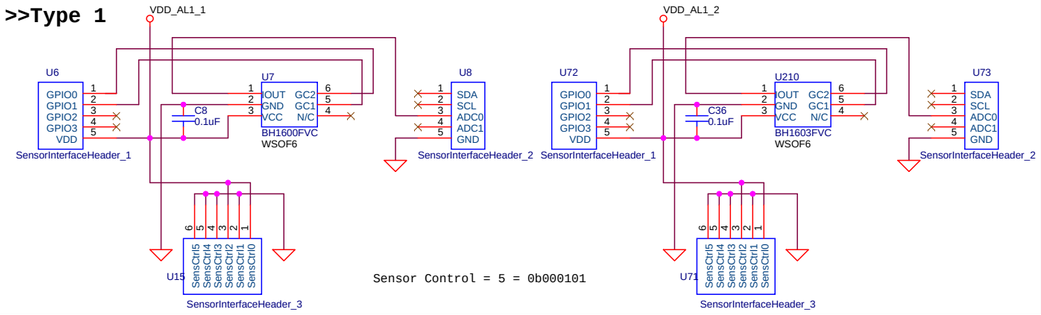
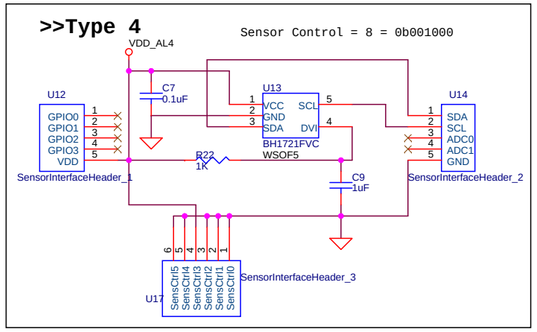
Ambient Light Sensors

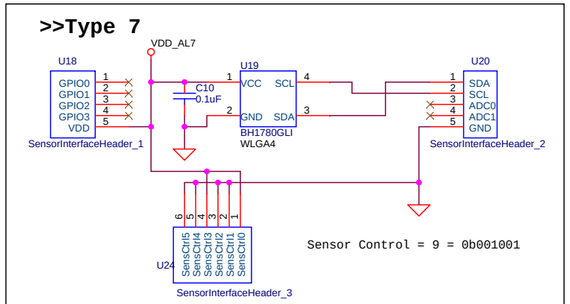
>>Type 1



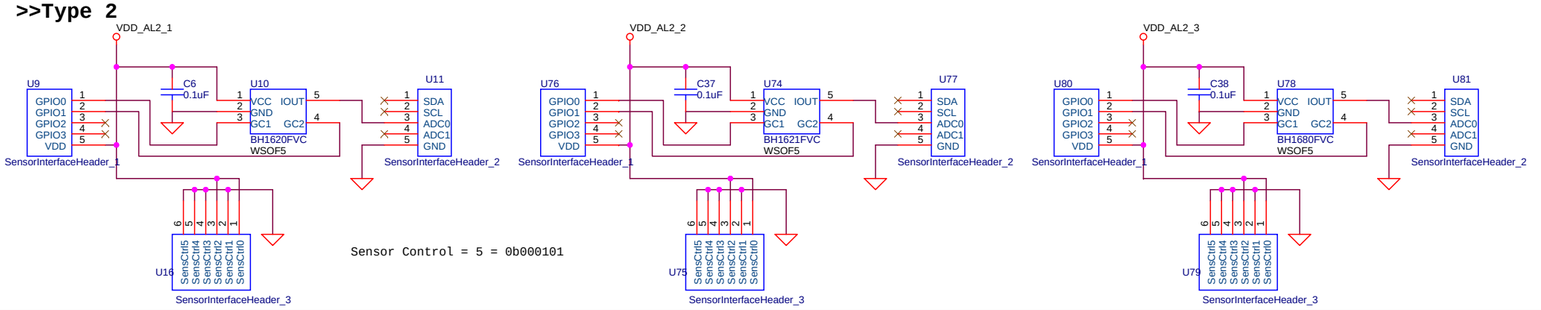
>>Type 4



>>Type 7

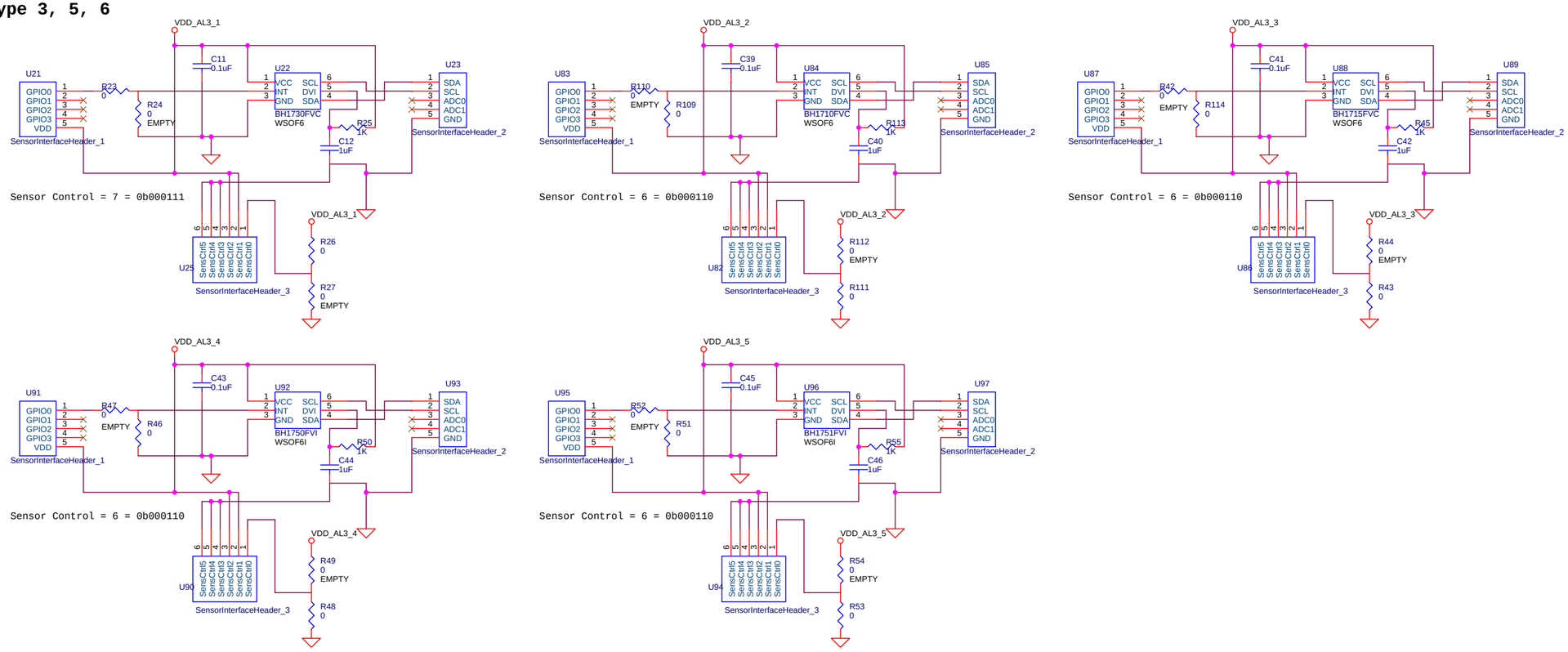


>>Type 2



>> Header_2 needs to be a female header.
Header_1 and Header_3 needs to be male headers.

>>Type 3, 5, 6



Title	Breakout - Ambient Light Sensor	
Size C	Document Number Sensor Platform - Breakout Board Schematics	Rev 1.0
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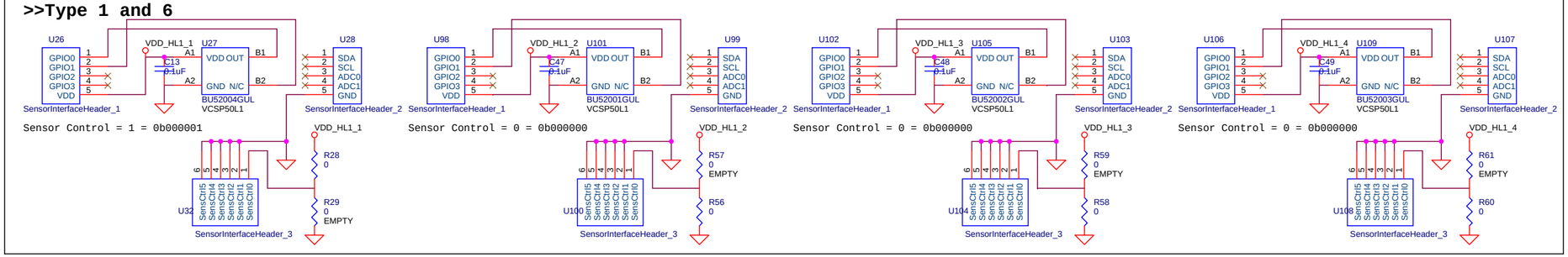
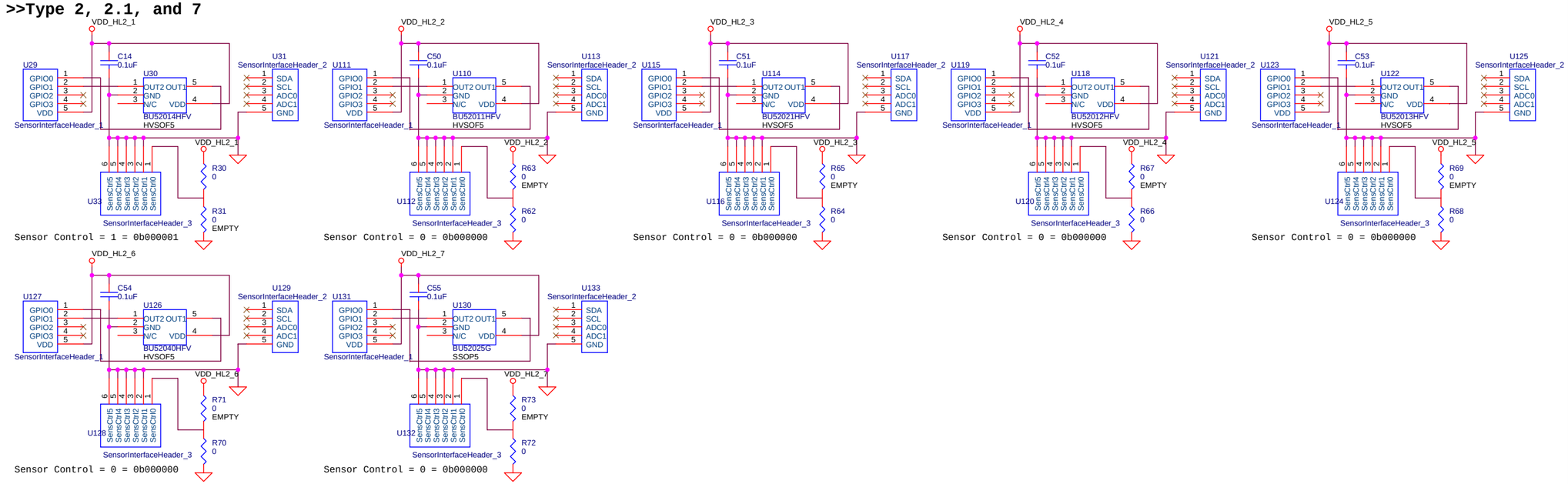
Hall Sensors

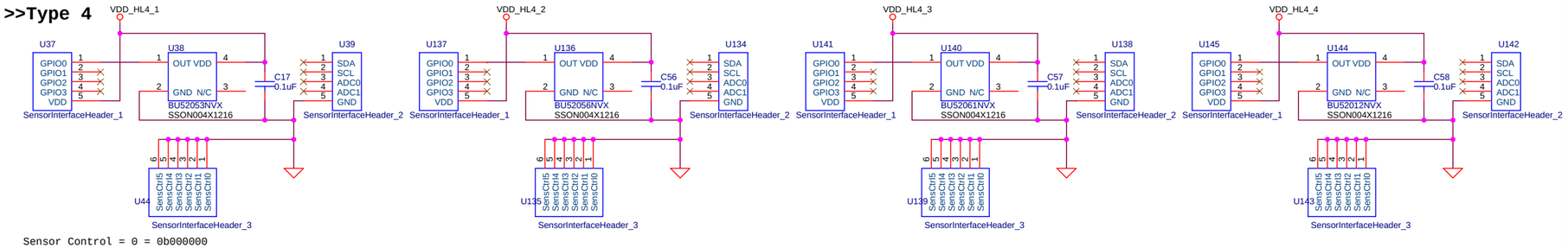
>>Type 1 and 6



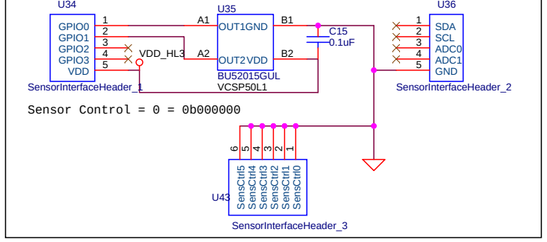
>>Type 2, 2.1, and 7



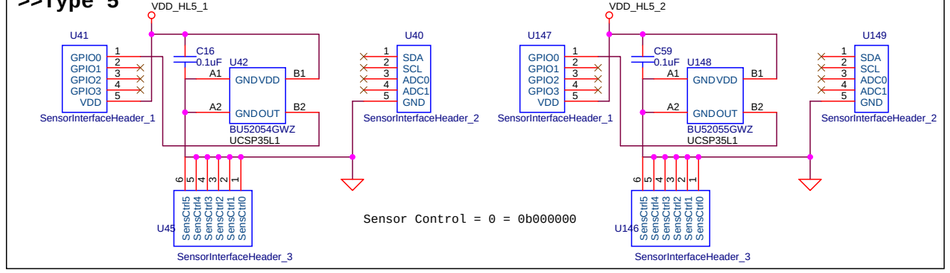
>>Type 4



>>Type 3



>>Type 5



>> Header_2 needs to be a female header.
Header_1 and Header_3 needs to be male headers.

Title	Breakout - Hall Sensor		
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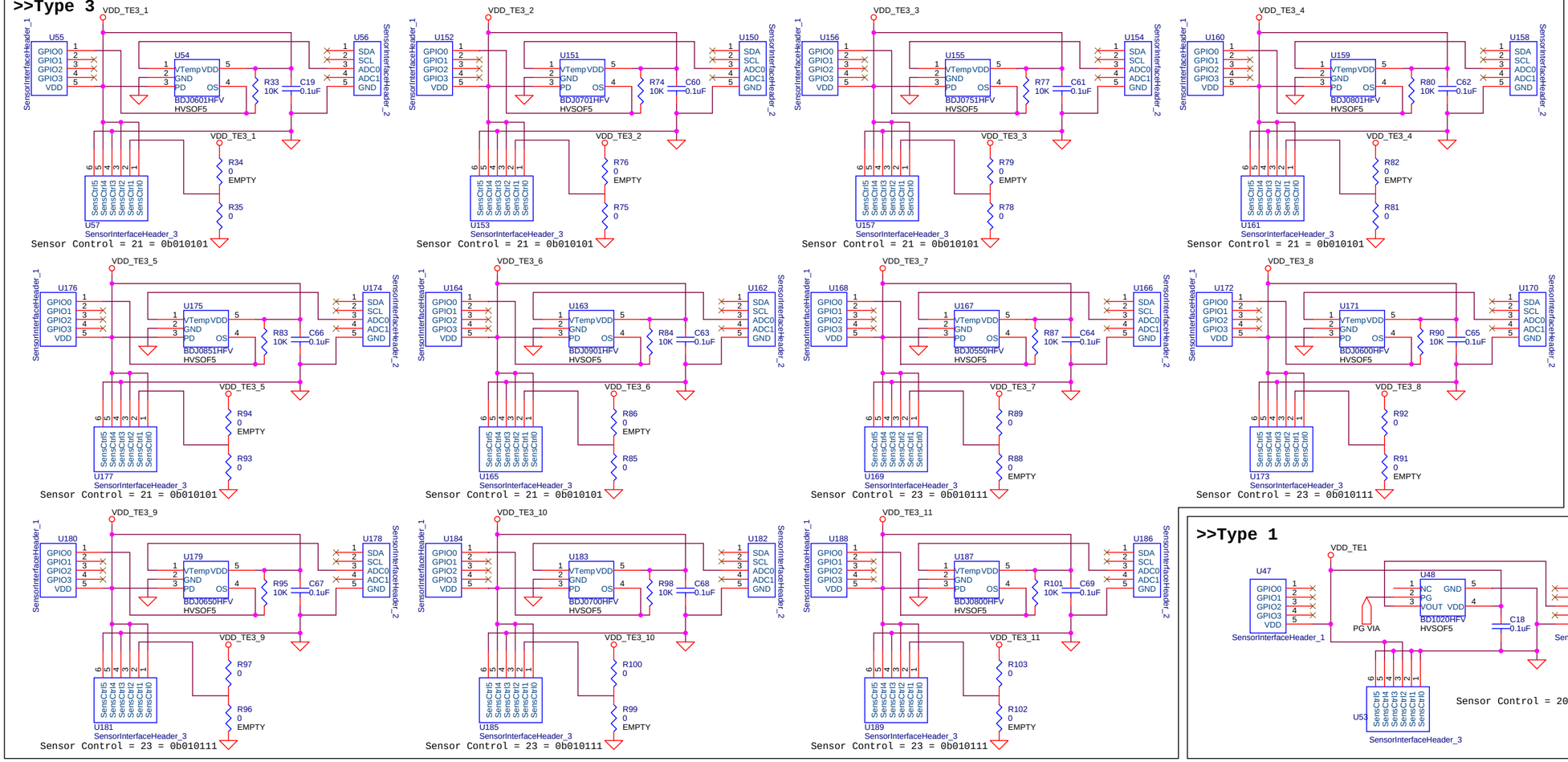
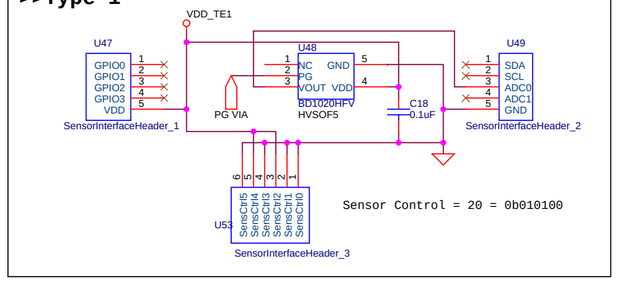
Temperature Sensors

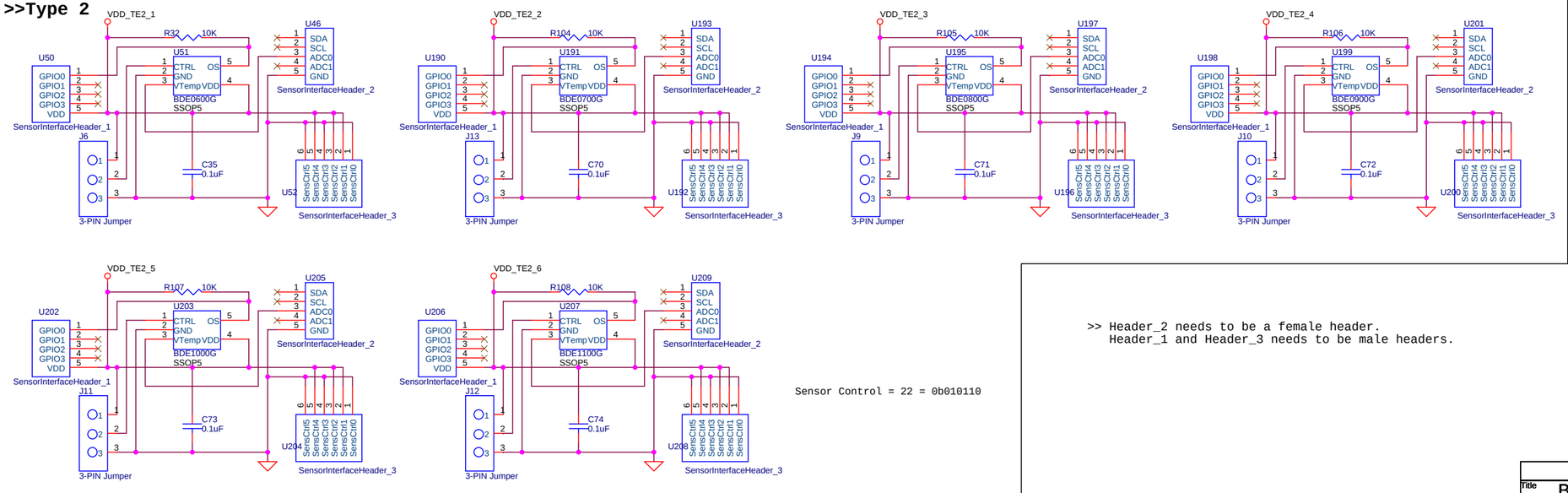
>>Type 3



>>Type 1



>>Type 2



>> Header_2 needs to be a female header.
Header_1 and Header_3 needs to be male headers.

Title	Breakout - Temp Sensors	
Size: C	Document Number: Sensor Platform - Breakout Board Schematics	Rev: 1.0
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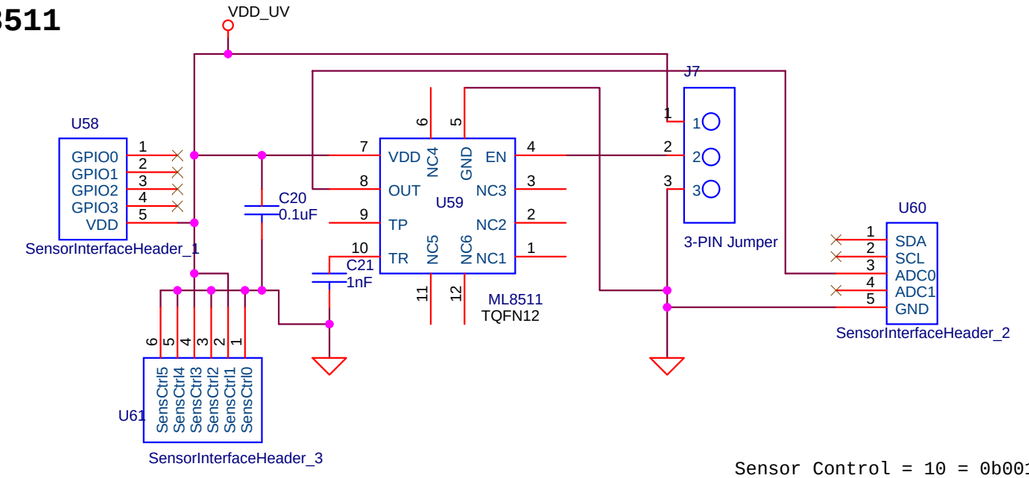
UV Sensor

>>ML8511

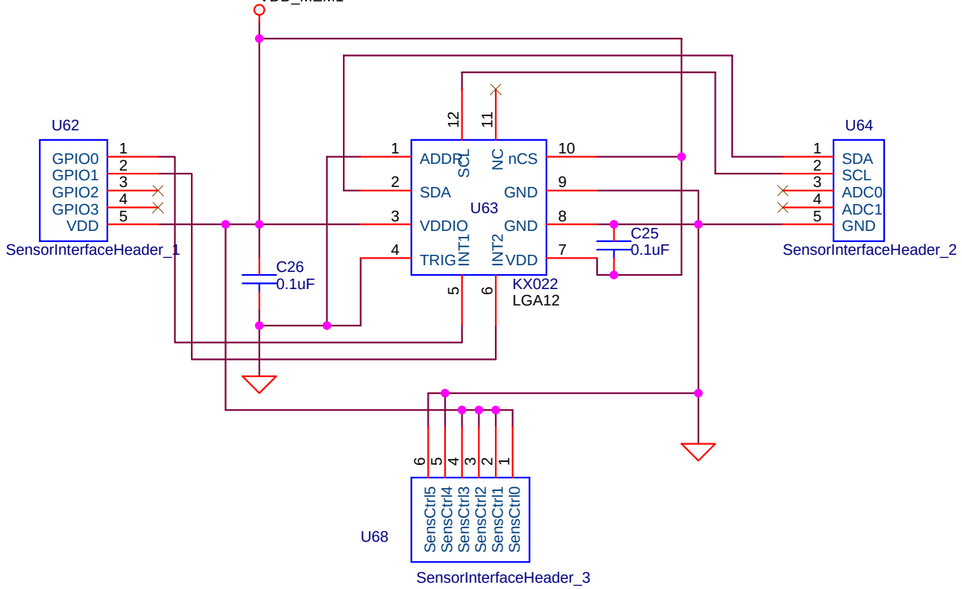


Sensor Control = 10 = 0b001010

>> Header_2 needs to be a female header.
Header_1 and Header_3 needs to be male headers.

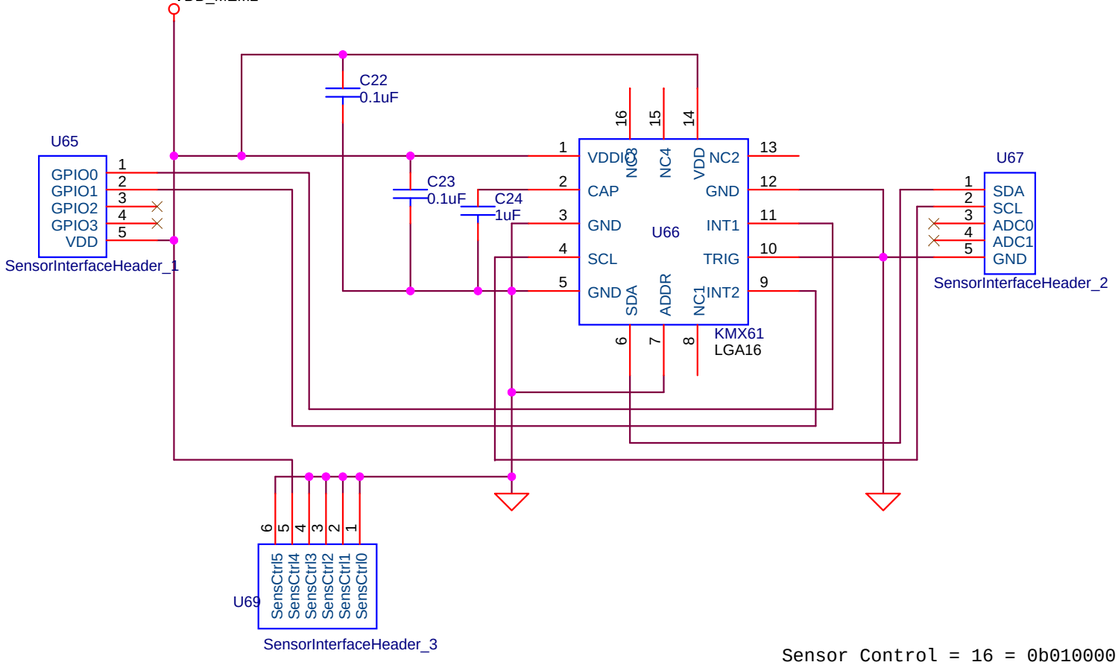
MEM Sensors

>>KX022



Sensor Control = 15 = 0b001111

>>KMX061



Sensor Control = 16 = 0b010000

Please refer to the "ROHM Sensor Eval Kit"
Specification for infromation on PNs pertaining to each
of the different types of breakout boards

Title	Breakout - UV, MEM Sensors	
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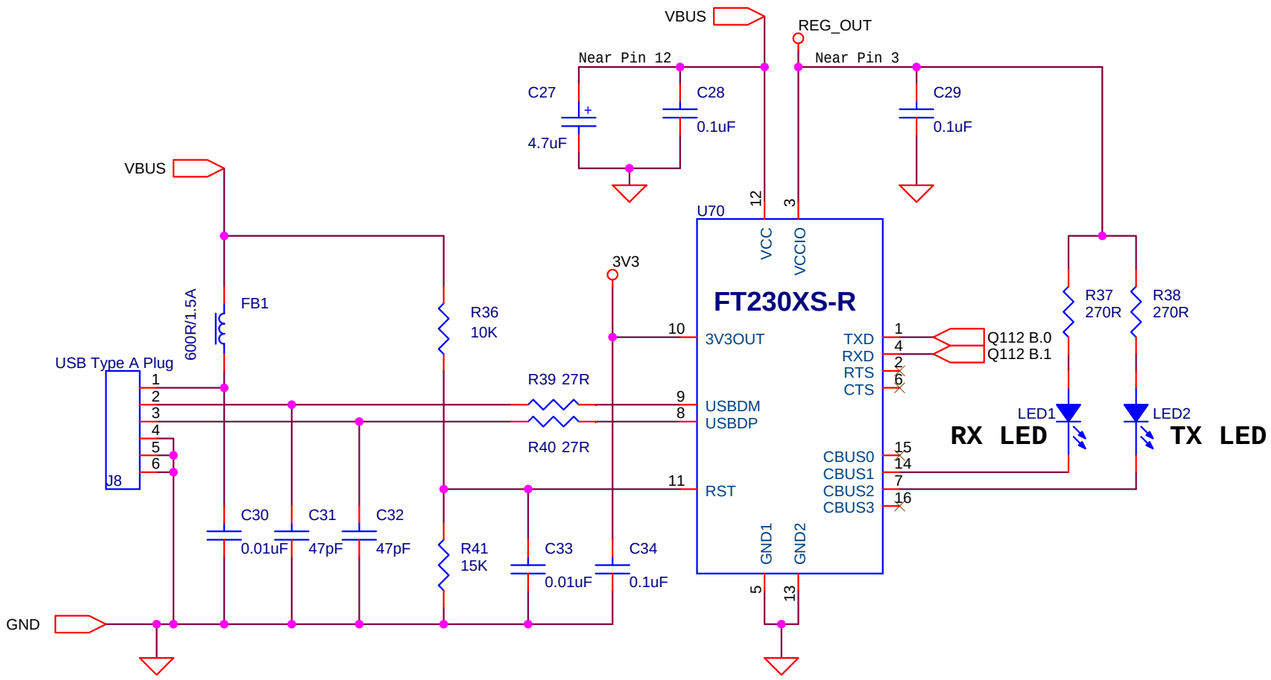
USB to serial UART interface



» FT230XS-R RST => Active Low

The MTP memory on this FT-230XS-R device can be programmed directly over USB, using the FT_Prog utility to set the required options and program it. See: www.ftdichip.com/Support/Utilities.htm#FT_Prog

Title	Sensor Platform - Base Board FTDI IC	
Size B	Document Number FTDI Portion of Circuit	Rev 1.9
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