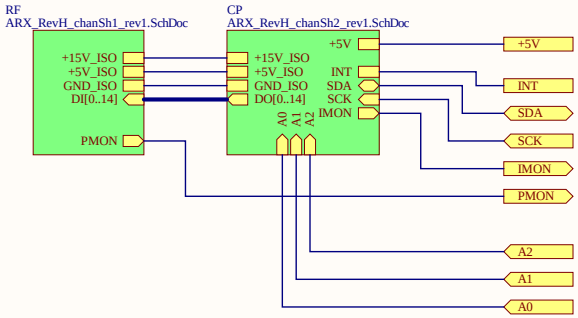
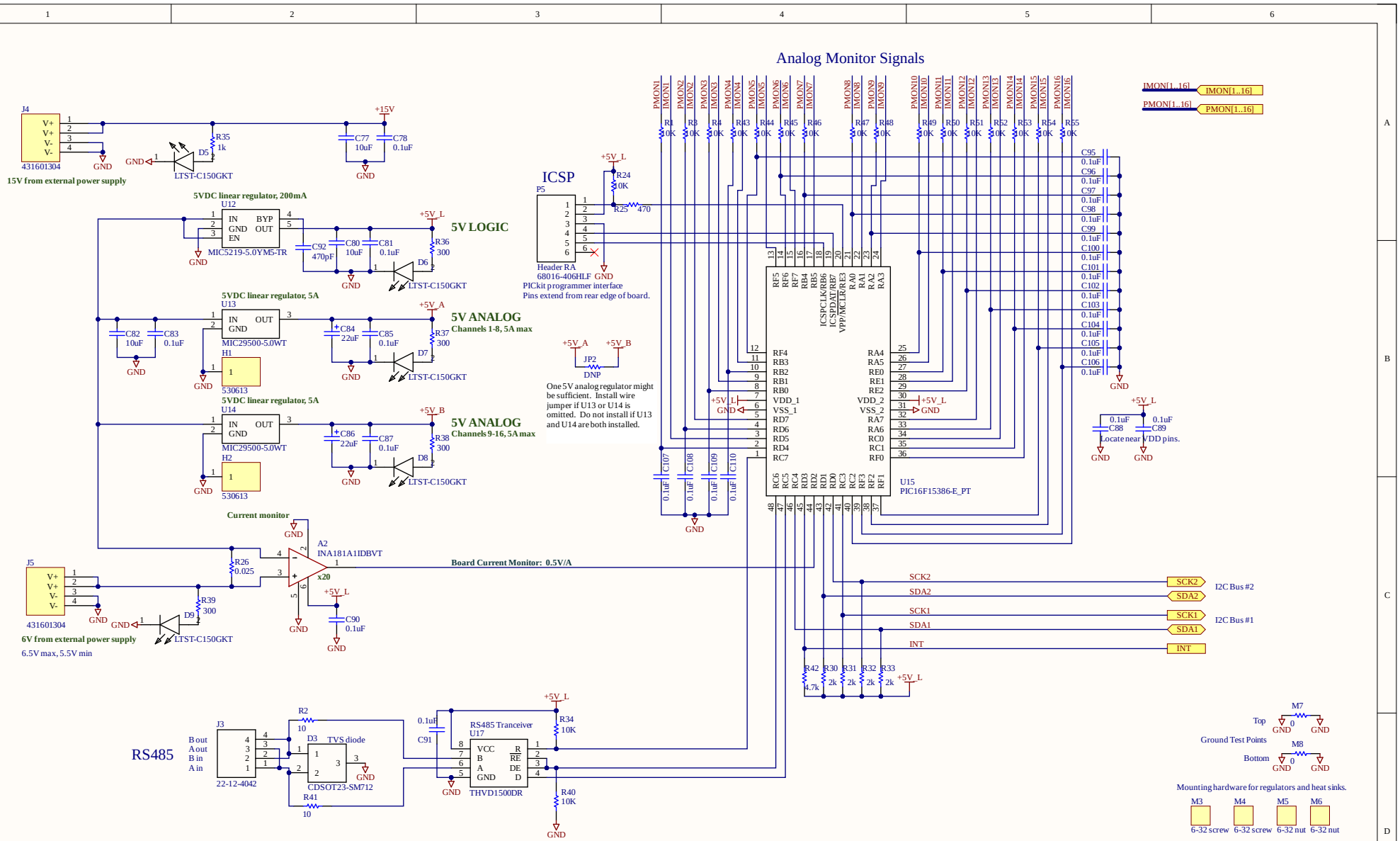
Title	**OVRO-LWA: Analog Receiver, Rev H**	
Size: B	Number	Revision
Date: 7/25/2021		Sheet of
File: C:\Caltech\...\ARX_RevH_top.SchDoc		Drawn By: L. D'Addario



2020-09-21 Remove TMON sheet entry and port.

Title	OVRO-LWA: Analog Receiver, Rev H		
Size: B	Number		Revision
Date: 7/25/2021	Sheet 2 of		
File: C:\Caltech\...\ARX_RevH_chan_rev1.SchDoc	Drawn By: L. D'Addario		

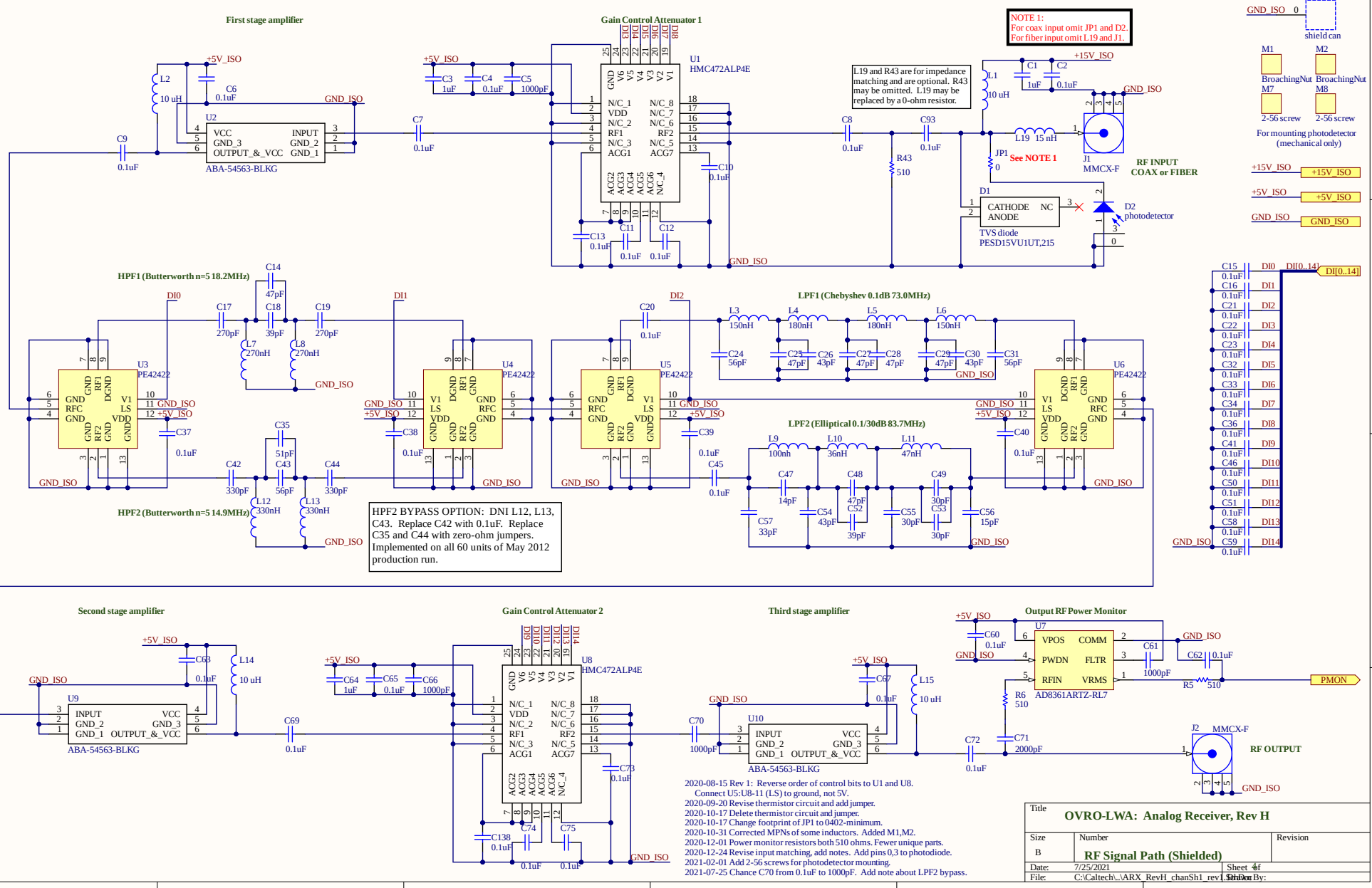


2020-12-01 Correct MPN & descr of RS485 10ohm resistors.
2020-12-01 Change LED resistors to 300,1000 ohms. Fewer unique parts.
2021-01-07 Change RS485 connector from 2x 2-pin to 1x 4-pin.
2021-01-23 Reverse pin numbering on RS485 connector. Ref des J6->J3.
2021-02-01 Add McMaster-Carr as alternate vendor for 6-32 hardware.
2021-03-04 Change 5VA,5VB reg output caps from 10uF cer to 22uF tant.

2020-06-18 Rev 1. Add 470ohm series resistors at OptoIso inputs and 10k pullups to outputs. Add 2k pullups to I2C signals. Swap J1-2,3 so +DATA=A, -DATA=B.
2020-10-05: Delete optoisolator and 5V/GND on RS485 bus.
2020-10-06: Add pullup on INT to support optional 1-wire sensors.
2020-10-17: Revert PMON, IMON to 1:16..
2020-10-17: Add RC filters to all PMON signals.
2020-10-17: Change P5 to right angle, delete P4.
2020-10-31: Add ground clip test point.

Title	OVRO-LWA: Analog Receiver, Rev H	
Size: Orcad B	Number: Common Circuitry: Control and Power	Revision: Rev H
Date: 7/25/2021	Sheet 3 of	
File: C:\Caltech\..\ARX_RevH_Control&Power.SchDoc	Drawn By: L. D'Addario	

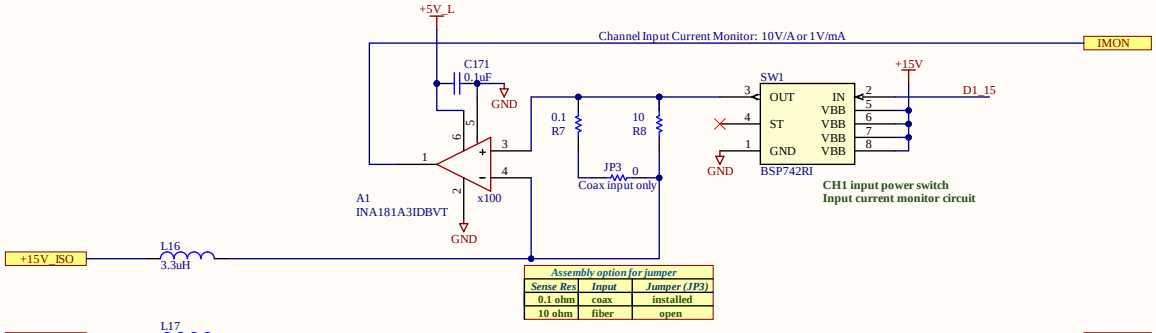
Shield can encloses components on this sheet, all of which are on top side of board unless otherwise stated

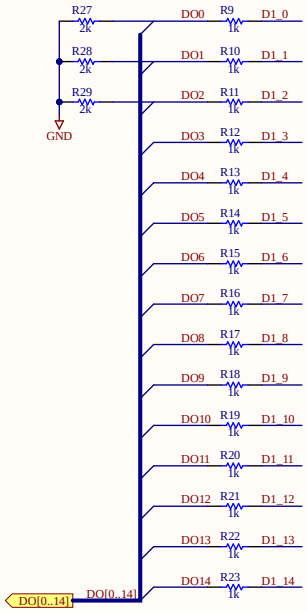


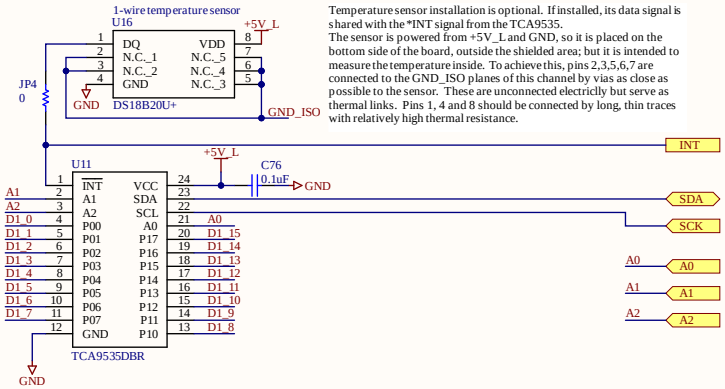
2020-08-15 Rev 1: Reverse order of control bits to U1 and U8. Connect U5:U8-11 (LS) to ground, not 5V.
2020-09-20 Revise thermistor circuit and add jumper.
2020-10-17 Delete thermistor circuit and jumper.
2020-10-17 Change footprint of JP1 to 0402-minimum.
2020-10-31 Corrected MPNs of some inductors. Added M1,M2.
2020-12-01 Power monitor resistors both 510 ohms. Fewer unique parts.
2020-12-24 Revise input matching, add notes. Add pins 0,3 to photodiode.
2021-02-01 Add 2-56 screws for photodetector mounting.
2021-07-25 Chance C70 from 0.1uF to 1000pF. Add note about LPF2 bypass.

Title: **OVRO-LWA: Analog Receiver, Rev H**		
Size: B	Number: **RF Signal Path (Shielded)**	Revision:
Date: 7/25/2021	Sheet 4 of	
File: C:\Caltech\..\ARX_RevH_chanSh1_rev1.SchDoc	Drawn By:	

Components on this sheet to be placed on bottom side







Temperature sensor installation is optional. If installed, its data signal is shared with the *INT signal from the TCA9535.
The sensor is powered from +5V_L and GND, so it is placed on the bottom side of the board, outside the shielded area; but it is intended to measure the temperature inside. To achieve this, pins 2,3,5,6,7 are connected to the GND_ISO planes of this channel by vias as close as possible to the sensor. These are unconnected electricly but serve as thermal links. Pins 1, 4 and 8 should be connected by long, thin traces with relatively high thermal resistance.

2020-08-15 Rev 1: Correct A1 pin 5,6 corrections. Pin 6 is VCC; pin 5 is REF, should be grounded.
Add resistors to nets DO0,DO1,DO2 to make high 3.3V for RF switches.
2020-09-21: Add header for IMON scale selection.
2002-10-05. Add optional 1-wire temperature sensor.
2002-10-05. Replace isolation inductors L16-18 with lower Rs parts.
2002-12-24. Change JP3 from header to wire jumper.

Title	OVRO-LWA: Analog Receiver, Rev H	
Size: Orcad B	Number: Signal path power & control	Revision
Date: 7/25/2021	Sheet of 5	
File: C:\Caltech\..\ARX_RevH_chanSh2_rev1.SchDoc	Drawn By:	