

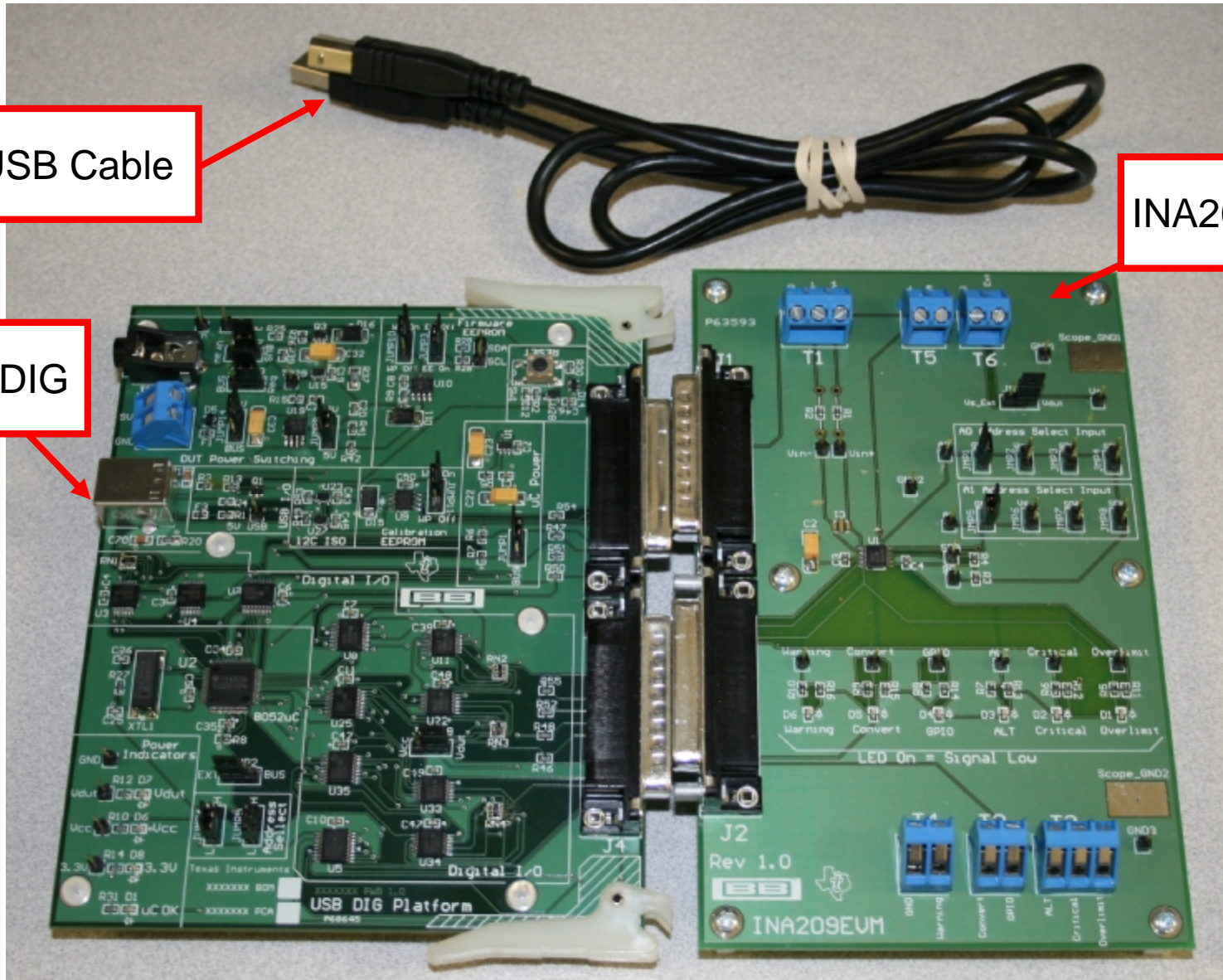
Hardware Documentation

Provided Hardware

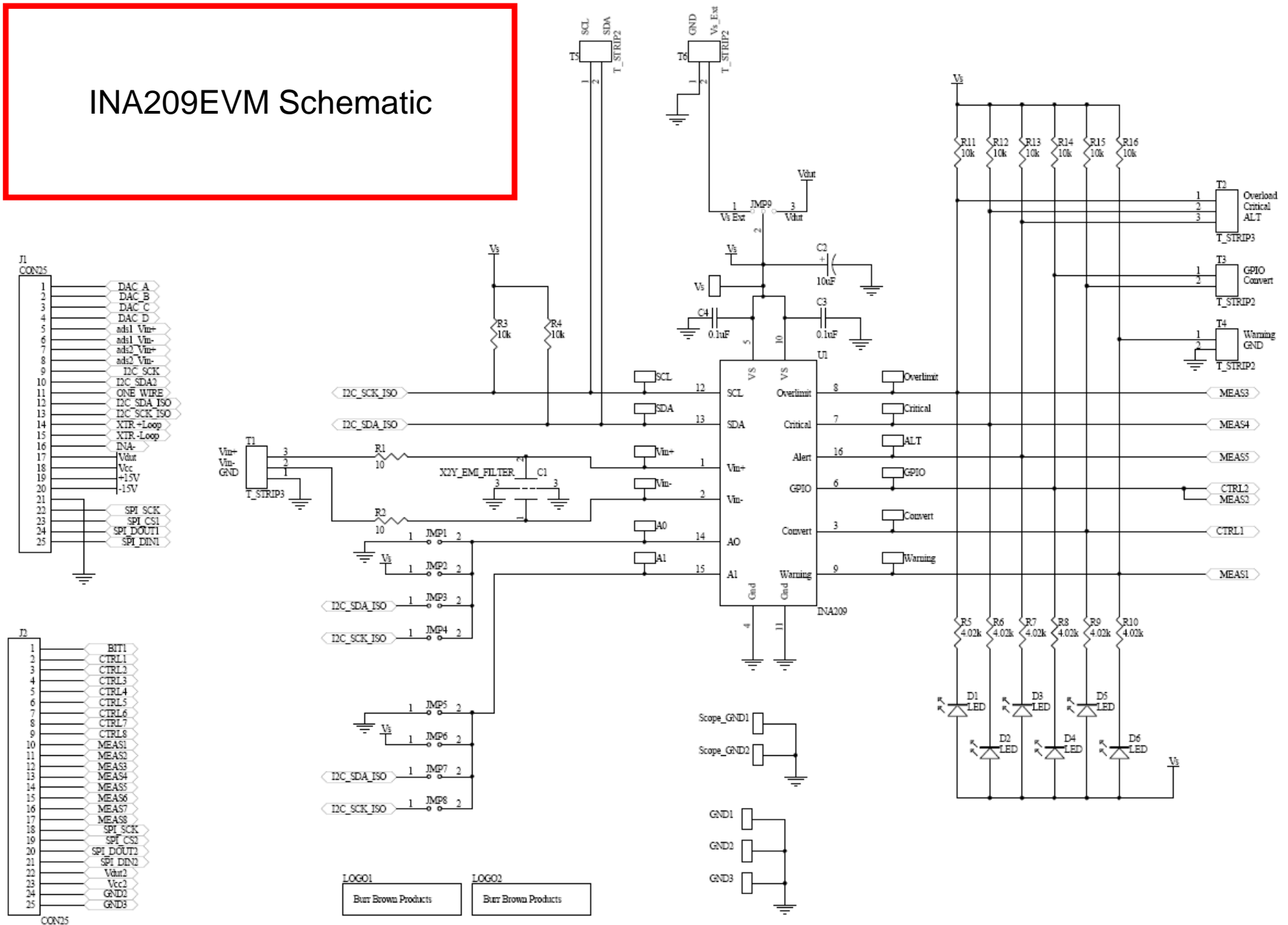
USB Cable

INA209EVM

USB DIG



INA209EVM Schematic



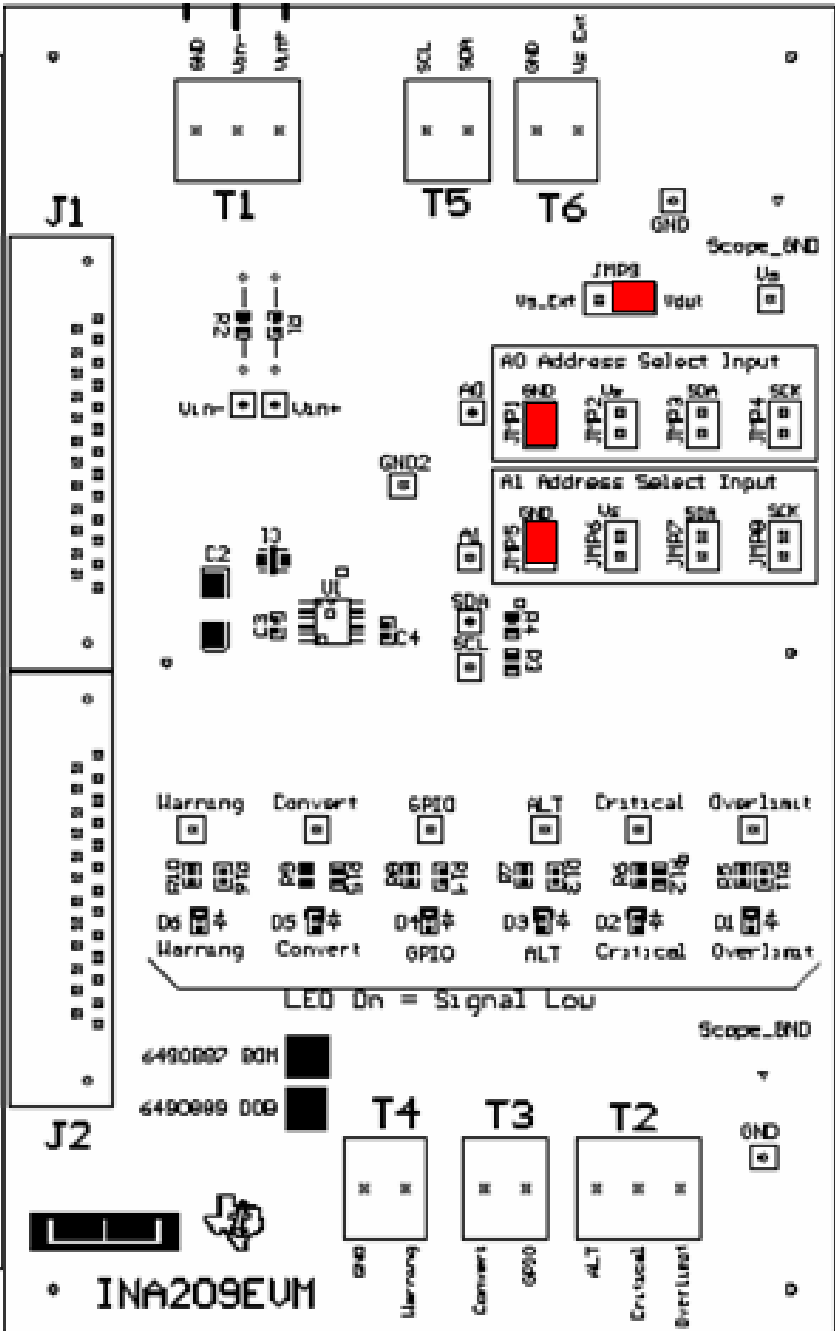
INA209 EVM Jumper Settings

Jumper	Default	Purpose
JMP1, JMP2, JMP3, JMP4	JMP1	A0 Address select input. These jumpers determine where the address select pin is connected. This connects A0 to GND.
JMP5, JMP6, JMP7, JMP8	JMP5	A1 Address select input. These jumpers determine where the address select pin is connected. This connects A1 to GND.
JMP9	Vdut	This jumper determines where the INA209 gets it's power supply. In the "Vdut" position the EVM provide power. In the Vs_Ext position, the power is connected externally.

USB DIG Platform Jumper Settings

Jumper	Default	Purpose
JUMP1	EXT	This jumper selects external power or Bus power. External power is applied on J5 or T3 (9V dc). Bus power is 5V from the USB Bus. External power is typically used because the USB Bus power is noisy.
JUMP2	EXT	Same as JUMP1.
JUMP3	EE ON	This jumper determines where the INA209 gets it's power supply. In the "Vdut" position the EVM provide power. The default is the "Vdut" position. In the Vs_Ext position, the power is connected externally.
JUMP4, JUMP5	L, L	This sets the address for the USB board. The only reason to change from the default is if multiple boards are being used.
JUMP9	5V	This selects the voltage of the device under test supply (Vdut = 5V or 3V)
JUMP10	WP ON	This write protects the firmware EEPROM.
JUMP11	WP ON	This write protects the calibration EEPROM
JUMP13	Reg	Uses the regulator output to generate the Vdut supply. The USB bus can be used as the Vdut supply.
JUMP14	9V	Uses the external power (9V as apposed to the bus)
JUMP17	BUS	While in the BUS position Vdut operation is normal. While in the Vraw position the Vdut supply is connected to an external source. This allows for any value of Vdut between 3V and 5V. However, adjusting outside of this range will damage the EVM!
JUMP18	Vdut	Connects the pull-up on GPIO to the Vdut supply or the Vcc supply.

Default Jumpers



J1 (25 pin male DSUB): INA209 Connector Signals

PIN	Signal	Used On This EVM	INA209 Pin
1	DAC A	NO	
2	DAC B	NO	
3	DAC C	NO	
4	DAC D	NO	
5	ADS1+	NO	
6	ADS1-	NO	
7	ADS2+	NO	
8	ADS2-	NO	
9	I2C_SCK	NO	
10	I2C_SDA2	NO	
11	ONE_WIRE	NO	
12	I2C_SCK_ISO	YES	SCL
13	I2C_SDA_ISO	YES	SDA
14	XTR_LOOP+	NO	
15	XTR_LOOP-	NO	
16	INA-	NO	
17	Vdut	YES	Vs
18	Vcc	NO	
19	+15v	NO	
20	-15v	NO	
21	GND	YES	GND
22	SPI_SCK	NO	
23	SPI_CS1	NO	
24	SPI_DOUT	NO	
25	SPI_DIN1	NO	

J2 (25 pin Female DSUB): INA209 Connector Signals

PIN	Signal	Used On This EVM	INA209 Pin
1	nc	NO	
2	CTRL1	YES	Convert
3	CTRL2	YES	GPIO
4	CTRL3	NO	
5	CTRL4	NO	
6	CTRL5	NO	
7	CTRL6	NO	
8	CTRL7	NO	
9	CTRL8	NO	
10	MEAS1	YES	Warning
11	MEAS2	YES	GPIO
12	MEAS3	YES	Overlimit
13	MEAS4	YES	Critical
14	MEAS5	YES	ALT
15	MEAS6	NO	
16	MEAS7	NO	
17	MEAS8	NO	
18	SPI_SCK	NO	
19	SPI_CS2	NO	
20	SPI_DOUT2	NO	
21	SPI_DIN2	NO	
22	Vdut	NO	Vs
23	Vcc	NO	
24	GND	YES	GND
25	GND	YES	GND