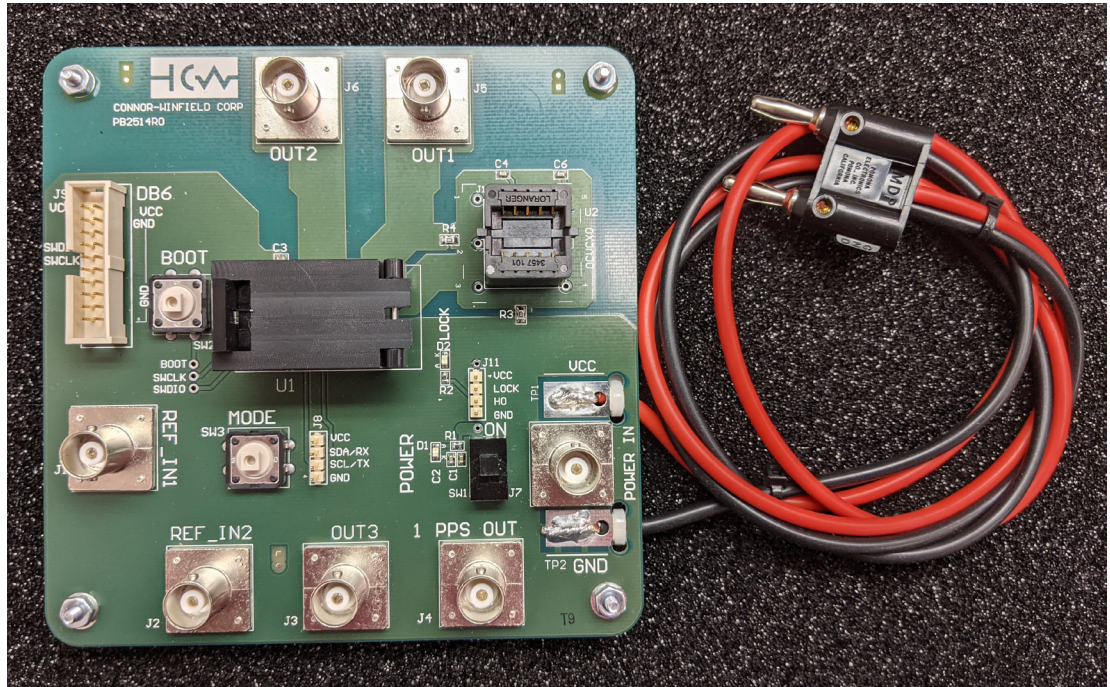


BTFC-EVAL

Eval Board User Manual



General Instructions

1. Insert the BTFC unit into the eval board socket
 - Pin 1 of the BTFC module should be oriented to the lower left of the fixture in the view above.
 - Close the clam-shell cover until it clicks.
2. Connect power
 - Connect the wired Vcc banana plug from connections around J7 to an appropriate 3.3V power supply capable of supplying ~ 1.0A. This wired power connection is more stable than using the J7 BNC connector.
3. Connect the 1PPS input and applicable outputs:
 - For CMOS outputs, use a high impedance probe if possible.
 - For sinewave outputs, use a coaxial cable to a 50ohm DC scope input.

Designator/Label	Input/Output	Voltage/Logic Type	Function
J5 "OUT1"	Output	Sinewave or LVCMOS	OUT1 signal
J6 "OUT2"	Output	LVCMOS	OUT2 signal
J3 "OUT3"	Output	LVCMOS	Variable Freq OUT
J4 "1PPS OUT"	Output	LVCMOS	1PPS Output Signal
J1 REF 1 IN "1PPS IN"	Input	LVCMOS	1PPS Input Signal
J2 "REF 2 IN"	Input	LVCMOS	Not supported at this time
J7 "VCC IN"	Input	+3.3Vdc ±5%	BNC connector Vcc power input
TP1/TP2	Input	+3.3Vdc ±5%	Use for wired Vcc power connection



Connector Pin-outs

Connector J8		Connector J9		Connector J10	
Pins	Description	Pins	Description	Pins	Description
1	+3/3Vdc	1, 2	+3.3Vdc	1	+3.3Vdc
2	SDA/RX	7	SWDIO	2	LOCK
3	SCL/TX	9	SWCLK	3	I/O2
4	GND	4,6,8,10,12,14,16,18,20	GND	4	GND

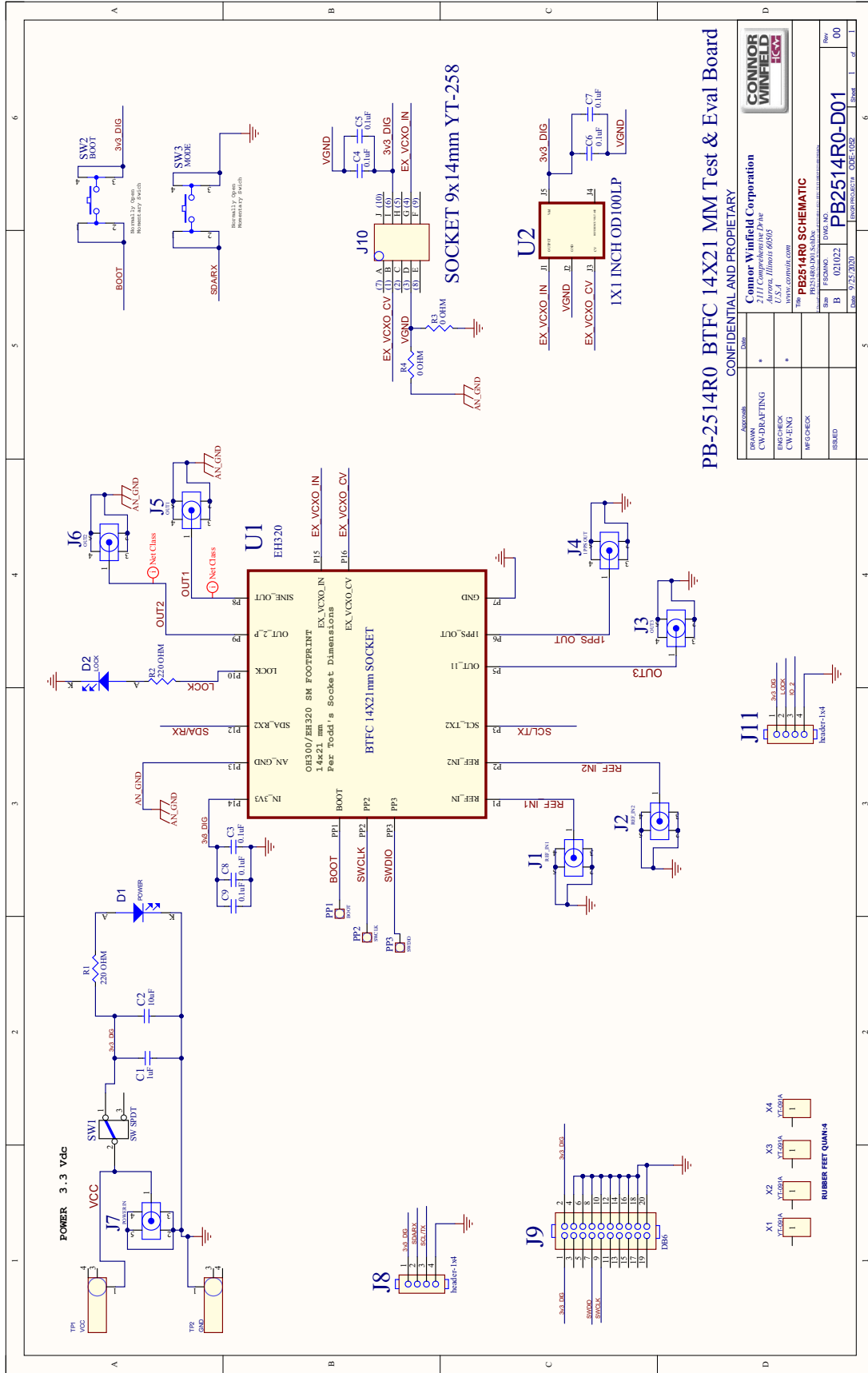
DC Power Connector

The DC Power connector is a Vertical jack 50 Ohm BNC TYCO 227699-1

J7 DC-IN

Pins	Description
CENTER	DC Power in + (3.3Vdc)
OUTER	DC Power in - (GND)

Eval Board Schematic



PB-2514R0 BTFC 14X21 MM Test & Eval Board

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The **PB2514R0 SCHEMATIC**

APPROVAL	DATE
DRAWN	
CW-DRAFTING	
ENG-CHECK	
CW-ENG	
MFG-CHECK	
RELEASD	
Size	FIG. NO.
B	021022
Rev	00
Doc. No.	021022
Rev	00

BILL OF MATERIAL

Test board for PB2510/2511 Module

Quantity	Designator	Description
1		130 C 2L .062 LPImask Pb HASL 1U EVAL Board B-series 14 x 20mm Solder Paste (Low Temp), w/Orange Piston
2	C1,C6	1 uf 0603 X7R 10% 6.3V Capacitor
2	C2,C3	10 uf 0603 X5R 20% 6.3V Capacitor
1	C4	.1 uf 0603 X7R 5% 16V Capacitor
1	C5	.01 uf 0402 X7R 10% 25V Capacitor
2	C7, C8	.1 uf 0402 X7R 10% 16V Cap
1	C9	1.0 uf 0402 X5R 10% 6.3V Capacitor
2	D1,D2	LTST-C170GKT LED Green Clear
2	R1,R2	220 ohm 0603 5% Resistor
2	R3,R4	0 ohm 0805 5% Resistor
1	U1	Test Socket - B-Package Time to Frequency Converter 1PPS in
7	J1-J7	Vertical Jack 50 Ohm BNC TYCO 227699-1
1	J8, J11	1x10 single row header Samtec HTSW-110-07-G-S
1	J9	HTST-110-01-L-D 10X2 Samtec Shrouded High temp .1 ctr terminal
1	J10	03457 101 6255 LLC Open Top Socket with Loader/Unloader Bar
1	SW1	Switch Slide SPDT .5a 125v G107-0513 Digi key #SW-101
2		Switch - (Momentary Tact) - SW413-ND
	14	P13-4023 Harwin 1.27mm Two Part Probe - Serrated
	3	P13-0123 Harwin 1.27mm Two Part Probe - Spear Head
		Wire Solder Low Temp SN63PB37 245 1.1% .020 No Clean Kester
4	X1-X4	Recessed Bumpers - 727K-ND
4		Washers - (#4 Internal Tooth Lock) - H236-ND
4		4-40 Hex Nuts - H216-ND
4		Machine Screws (4-40 x 1/2) - H146-ND
		Solder Paste (Low Temp), w/Orange Piston
		Label, white polyester, .70"X.375" 10K per roll
1		SCREW TYPE DBL BANANA Jack (Black) Pomona MDP-0
1		Cable Tie (4" natural nylon) - 7130K12
2		Cable Tie (4 in. black nylon) 100 per package
		TEST LEAD 18AWG 10KV BLACK 50' Pomona 6733-0
		TEST LEAD 18AWG 10KV RED 50' Pomona 6733-2

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Delivering a New Generation of Time and Frequency Solutions for a Connected World.

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