

Product Name: ZX230CR-AP USB type C receptacle to USB Type A Plug electrical test breakout adapter

Product Description: USB Type C Receptacle to USB Type A Plug test board - breakout adapter - converter. **ZX230CR-AP** is designed for general purpose electrical signal analysis, test, measurement as well as compatibility & debug applications. ZX230CR-AP is designed for SuperSpeed Gen1 (2.5GHz) SuperSpeed Plus Gen2 (5GHz) and future 20Gbps (**10GHz**) bandwidth - electrical performance. Please refer to page 2 for the s-parameter detained information.

ZX230CR-AP is shipped with cable assembly, ZXJS1173-230C, enabling full access to VBUS, GND, CC1, CC2, SBU1 and SBU2 signals. The cable assembly includes pin socket, mating with any standard pin header (0.025" / 0.63mm SQ pin header).

RX2-P/N as well as TX2-P/N signal pairs are available on the SMA connector.

ZX230CR-AP is designed using 4 layers PCB where the inner layers are GND planes. The GND test point is connected to the inner layer GND planes as well as top/bottom fill.

Application: USB electrical signal analysis & measurements. Compatibility test and debug.

Supported bandwidth: Supporting SuperSpeed Gen1 (2.5GHz) SuperSpeed Gen2 (5GHz) and future 20Gbps (10GHz) Nyquist frequencies, bandwidth.

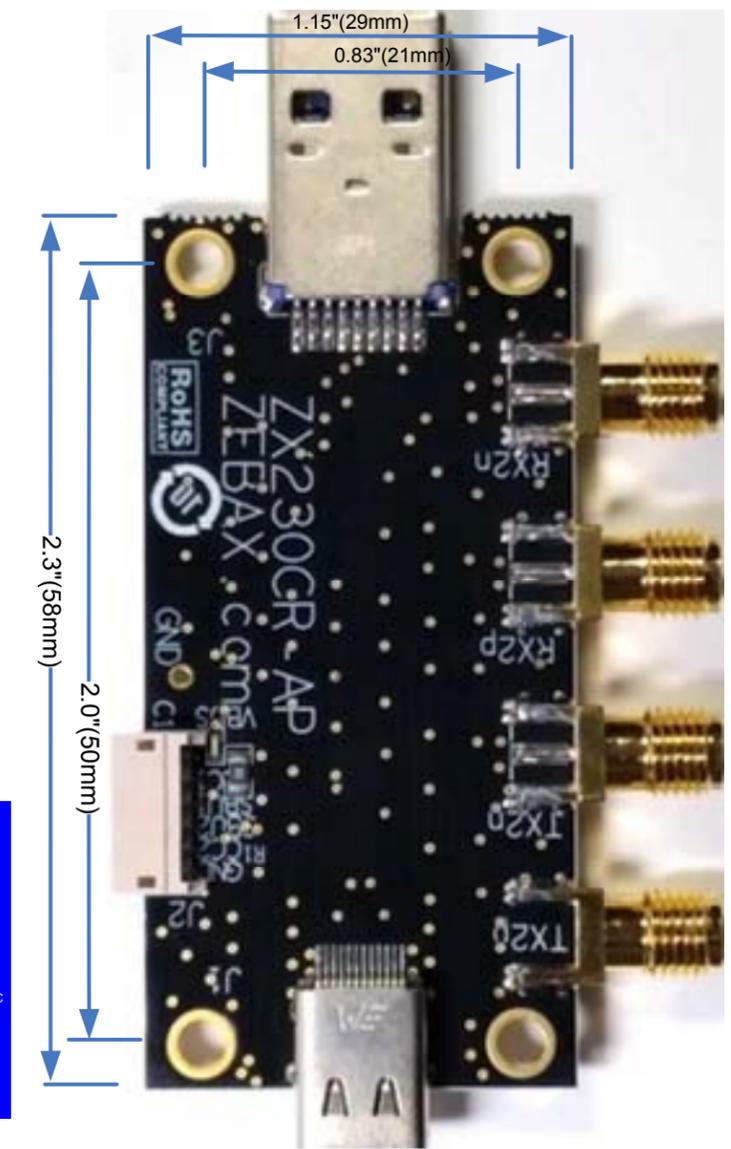
Mates with : **USB Type C Plug**
USB Type A Receptacle
SMA connectors mates with any standard SMA cable assembly.
Wire assembly mates with any 0.025" (0.63mm) SQ post header length 0.23" (5.83mm)



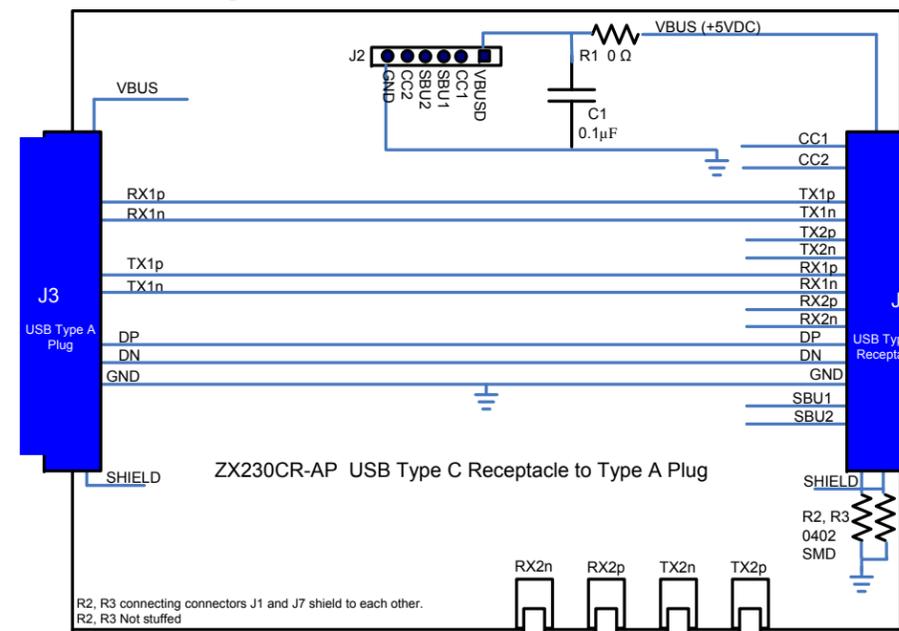
ZXJS1173-USB wire assembly accessing VBUS, GND, CC1, CC2, SBU1 and SBU2



See Page 2 for more data



Circuit Diagram



R2, R3 connecting connectors J1 and J7 shield to each other.
R2, R3 Not stuffed

Ordering INFO:
Part Number ZX230CR-AP



Note
ALL ZEBAX products are RoHS compliant and Lead Free unless otherwise indicated.

Package includes:

Item	Part number	Quantity	Description
1	ZX230CR-AP	1	USB Type C Receptacle to USB Type A Plug electrical test breakout adapter.
2	ZXJS1173-230C	1	Wire assembly for accessing J2 signals, Note 1
3	ZX230CP	0	USB Type C TPA-P electrical test breakout module – Plug.
4	ZX230CR	0	USB Type C TPA-R electrical test breakout module - Receptacle.
5	ZX00WT-09NM	0	SMA Wrench Torque 5/16" (8mm)

Notes: 1- Supplied extension wire assembly enables to interface test equipment or 3rd party modules.

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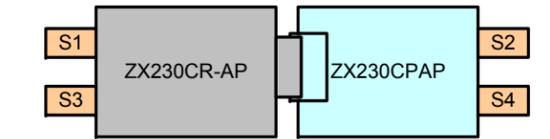
SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING	
	ITEM: ZX230CR-AP	
DESCRIPTION: USB Type C receptacle to USB type A Plug electrical test breakout adapter - converter		
CHECKED: M. MARINA	DRAWN: SLAVIK	REVISION: 1.0
		SHEET: 1 OF 2

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Product Name: ZX230CPAP USB type C receptacle to USB Type A Plug electrical test breakout adapter Cont's

S-Parameter, Insertion loss: The following insertion loss measurements were obtained using Agilent NA with the following test case:

- 1- ZX230CPAP mating with ZX230CR-AP at USB type C connector.
- 2- NT interfacing with the supplied SMA connectors on both ZX230CPAP and ZX230CR-AP modules.coming soon



Test network : ZX230CR-AP (Type C Receptacle) to ZX230CPAP (Type C Plug)

S12 : TX2+ RX2+
S34: TX2- RX2-

Signal Pairs	Insertion Loss at USB Gen1 (2.5GHz) Gen2 (5.0GHz) Nyquist frequencies (dB)			
	0.626GHz	1.25GHz	2.5GHz (Gen1)	5.0GHz (Gen2)
RX2-P/N	-1.30	-0.65	-1.35	-3.75
TX2-P/N	-1.38	-0.63	-1.67	-3.75

All values are dB

S-Parameter files: [ZX230CXAP-S-Parameter](#) – It is .7z file. It consists of .s2p files, only.

Pinouts: USB Type C Plug to USB Type A Plug and J2 signal assignments listed below

ZX230CR-AP - USB Type C receptacle to USB Type A plug

Signal	USB-A		USB Type C		USB-A		Signal
	Pin#	Signal	Top	Bottom	Pin#	Signal	
J2.6 GND	4,7	GND	A1	B12	4,7	GND	J2.6 GND
TX1p	6	RXp	A2	B11	9	TXp	RX1p
TX1n	5	RXn	A3	B10	8	TXn	RX1n
J2.6 VBUS	1	VBUS	A4	B9	1	VBUS	J2.6 VBUS
J2.2 CC1			A5	B8			J2.4 SBU2
DP	3	DP	A6	B7	2	DN	DN
DN	2	DN	A7	B6	3	DP	DP
J2.3 SBU1			A8	B5			J2.5 CC2
J2.6 VBUS	1	VBUS	A9	B4	1	VBUS	J2.6 VBUS
RX2n	SMA		A10	B3	SMA		TX2n
RX2p	SMA		A11	B2	SMA		TX2p
J2.6 GND	4,7	GND	A12	B1	4,7	GND	J2.6 GND

J2	
Pin	Function
1	VBUS
2	CC1
3	SBU1
4	SBU2
5	CC2
6	GND

J2.x signals are accessible on J2 connector

SMA: Signal available on SMA connector

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