

# 3U Open VPX 5 Slot Backplane

## Features

- Compliant to VITA 46.0 baseline specification
- Backplane Profile : BKP3-DIS02-15.2.8-n
- Backplane Profile : BKP3-CEN03-15.2.9-n
- OPEN VITA 65 Specification
- Dual System Design
- 5 Slots VPX, 2 Payload Slot , 3 Peripheral Slot
- M3 studs for power entry
- ATX 24 + 4 poles connector for power entry
- Reference clock
- Aux clock
- System Management Interface(I2CA, I2CB)
- Input current per backplane

VS1 = 40A

VS2 = 40A

VS3 = 70A

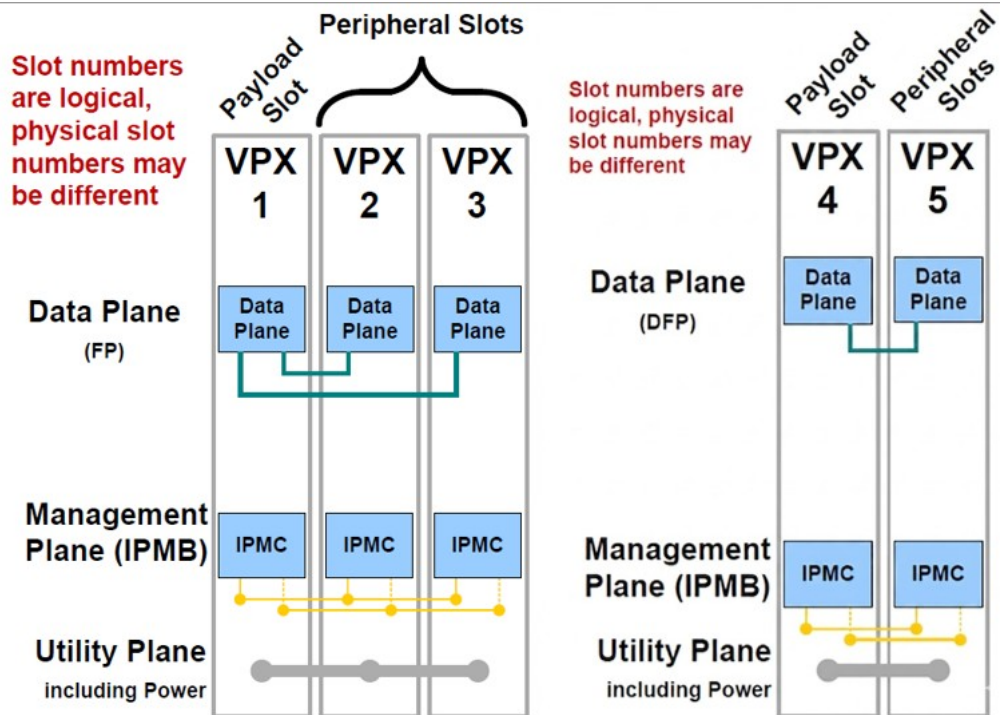
## Board Specifications

- PCB size : 128.7 mm x 156.0mm x 5.4 mm
- 5 HP(25.40 mm) from slot to slot
- Operating temperature: -40° - +85°C
- Storage temperature: -55°C - +85°C

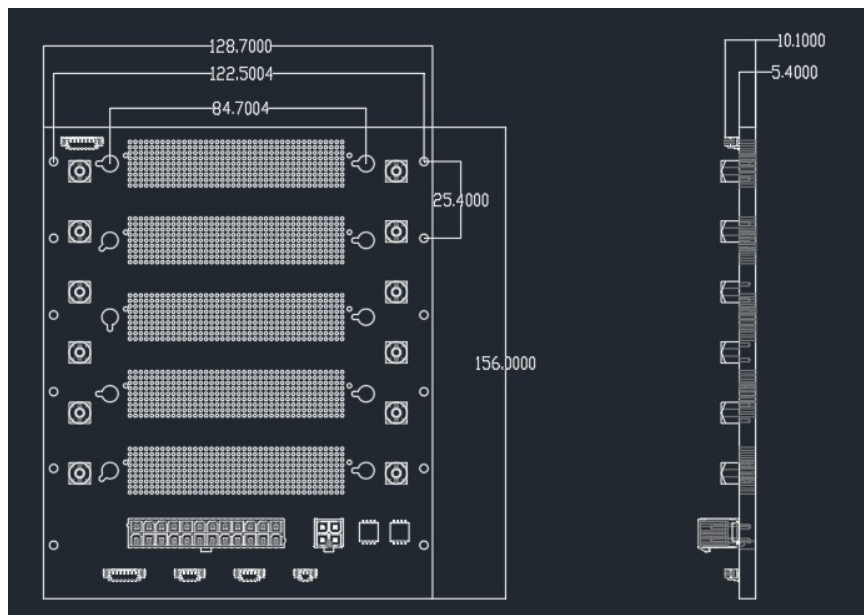
## Slot Profiles

- VPX Slot 1 : Payload Slot
- VPX Slot 2 : Peripheral Slot
- VPX Slot 3 : Peripheral Slot
- VPX Slot 4 : Payload Slot
- VPX Slot 5 : Peripheral Slot

## Backplane Topology



## Mechanical Draw



# VPX Slot1

## Utility Plane Signals on J0

	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	Vs1	Vs1	Vs1	Vs1	No Pad*	Vs2	Vs2	Vs2	Vs2
2	Vs1	Vs1	Vs1	Vs1	No Pad*	Vs2	Vs2	Vs2	Vs2
3	Vs3	Vs3	Vs3	Vs3	No Pad*	Vs3	Vs3	Vs3	Vs3
4	GND	SM2	SM3	GND	-12V_Aux	GND	SYSRESET*	NVMRO	GND
5	GND	GAP*	GA4*	GND	3.3V_Aux	GND	SM0	SM1	GND
6	GND	GA3*	GA2*	GND	+12V_Aux	GND	GA1*	GA0*	GND
7	TCK	GND	GND	TDO	TDI	GND	GND	TMS	TRST*
8	GND	REF_CLK-	REF_CLK+	GND	GND	AUX_CLK-	AUX_CLK+	GND	GND

VS1=12V , VS2=3.3V , VS3=5V

## Slot Profile SLT3-PAY-2F-14.2.7 — P1 & J1

Plug-in Module P1	Row G	Row F	Row E		Row D	Row C	Row B		Row A	
	Row i	Row h	Even	Odd	Row e	Row d	Even	Odd	Row a	
<b>Bplane J1</b>	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a	
1	Data Plane Port 1	GDiscrete1	GND	GND-J1	DP01-T0-	DP01-T0+	GND	GND-J1	DP01-R0-	DP01-R0+
2		GND	DP01-T1-	DP01-T1+	GND-J1	GND	DP01-R1-	DP01-R1+	GND-J1	GND
3		P1-VBAT	GND	GND-J1	DP01-T2-	DP01-T2+	GND	GND-J1	DP01-R2-	DP01-R2+
4		GND	DP01-T3-	DP01-T3+	GND-J1	GND	DP01-R3-	DP01-R3+	GND-J1	GND
5	Data Plane Port 2	SYS_CON*	GND	GND-J1	DP02-T0-	DP02-T0+	GND	GND-J1	DP02-R0-	DP02-R0+
6		GND	DP02-T1-	DP02-T1+	GND-J1	GND	DP02-R1-	DP02-R1+	GND-J1	GND
7		Reserved	GND	GND-J1	DP02-T2-	DP02-T2+	GND	GND-J1	DP02-R2-	DP02-R2+
8		GND	DP02-T3-	DP02-T3+	GND-J1	GND	DP02-R3-	DP02-R3+	GND-J1	GND
9	User defined	UD	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
10		GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
11		UD	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
12		GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
13		UD	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
14		GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
15		Maskable Reset*	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
16		GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND

## Slot Profile SLT3-PAY-2F-14.2.7 — P2 & J2

Plug-in module P2	Row G	Row F	Row E		Row D	Row C	Row B		Row A
	Row i	Row h	Even	Odd	Row e	Row d	Even	Odd	Row a
<b>Bplane J2</b>	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	SEwafer1	GND	GND-J2	LN0-TD-	LN0-TD+	GND	GND-J2	LN0-RD-	LN0-RD+
2	GND	LN1-TD-	LN1-TD+	GND-J2	GND	LN1-RD-	LN1-RD+	GND-J2	GND
3	SEwafer3	GND	GND-J2	LN2-TD-	LN2-TD+	GND	GND-J2	LN2-RD-	LN2-RD+
4	GND	LN3-TD-	LN3-TD+	GND-J2	GND	LN3-RD-	LN3-RD+	GND-J2	GND
5	SEwafer5	GND	GND-J2	LN4-TD-	LN4-TD+	GND	GND-J2	LN4-RD-	LN4-RD+
6	GND	LN5-TD-	LN5-TD+	GND-J2	GND	LN5-RD-	LN5-RD+	GND-J2	GND
7	SEwafer7	GND	GND-J2	LN6-TD-	LN6-TD+	GND	GND-J2	LN6-RD-	LN6-RD+
8	GND	LN7-TD-	LN7-TD+	GND-J2	GND	LN7-RD-	LN7-RD+	GND-J2	GND
9	SEwafer9	GND	GND-J2	LN8-TD-	LN8-TD+	GND	GND-J2	LN8-RD-	LN8-RD+
10	GND	LN9-TD-	LN9-TD+	GND-J2	GND	LN9-RD-	LN9-RD+	GND-J2	GND
11	SEwafer11	GND	GND-J2	LN10-TD-	LN10-TD+	GND	GND-J2	LN10-RD-	LN10-RD+
12	GND	LN11-TD-	LN11-TD+	GND-J2	GND	LN11-RD-	LN11-RD+	GND-J2	GND
13	SEwafer13	GND	GND-J2	LN12-TD-	LN12-TD+	GND	GND-J2	LN12-RD-	LN12-RD+
14	GND	LN13-TD-	LN13-TD+	GND-J2	GND	LN13-RD-	LN13-RD+	GND-J2	GND
15	SEwafer15	GND	GND-J2	LN14-TD-	LN14-TD+	GND	GND-J2	LN14-RD-	LN14-RD+
16	GND	LN15-TD-	LN15-TD+	GND-J2	GND	LN15-RD-	LN15-RD+	GND-J2	GND

# VPX Slot2 & Slot3

## Utility Plane Signals on J0

	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	Vs1	Vs1	Vs1	Vs1	No Pad*	Vs2	Vs2	Vs2	Vs2
2	Vs1	Vs1	Vs1	Vs1	No Pad*	Vs2	Vs2	Vs2	Vs2
3	Vs3	Vs3	Vs3	Vs3	No Pad*	Vs3	Vs3	Vs3	Vs3
4	GND	SM2	SM3	GND	-12V_Aux	GND	SYSRESET*	NVMRO	GND
5	GND	GAP*	GA4*	GND	3.3V_Aux	GND	SM0	SM1	GND
6	GND	GA3*	GA2*	GND	+12V_Aux	GND	GA1*	GA0*	GND
7	TCK	GND	GND	TDO	TDI	GND	GND	TMS	TRST*
8	GND	REF_CLK-	REF_CLK+	GND	GND	AUX_CLK-	AUX_CLK+	GND	GND

VS1=12V , VS2=3.3V , VS3=5V

## Slot Profile SLT3-PER-1F-14.3.2 — P1 & J1

Plug-In Module P1	Row G	Row F	Row E		Row D	Row C	Row B		Row A
	Row i	Row h	Even	Odd	Row e	Row d	Even	Odd	Row a
Bplane J1	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	GDiscrete1	GND	GND-J1	DP01-T0-	DP01-T0+	GND	GND-J1	DP01-R0-	DP01-R0+
2	GND	DP01-T1-	DP01-T1+	GND-J1	GND	DP01-R1-	DP01-R1+	GND-J1	GND
3	P1-VBAT	GND	GND-J1	DP01-T2-	DP01-T2+	GND	GND-J1	DP01-R2-	DP01-R2+
4	GND	DP01-T3-	DP01-T3+	GND-J1	GND	DP01-R3-	DP01-R3+	GND-J1	GND
5	SYS_CON*	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
6	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
7	Reserved	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
8	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
9	UD	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
10	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
11	UD	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
12	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
13	UD	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
14	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
15	Maskable Reset*	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
16	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND

## Slot Profile SLT3-PER-1F-14.3.2 — P2 & J2

Plug-in module P2	Row G	Row F	Row E		Row D	Row C	Row B		Row A
	Row i	Row h	Even	Odd	Row e	Row d	Even	Odd	Row a
Bplane J2	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	SEwafer1	GND	GND-J2	LN0-TD-	LN0-TD+	GND	GND-J2	LN0-RD-	LN0-RD+
2	GND	LN1-TD-	LN1-TD+	GND-J2	GND	LN1-RD-	LN1-RD+	GND-J2	GND
3	SEwafer3	GND	GND-J2	LN2-TD-	LN2-TD+	GND	GND-J2	LN2-RD-	LN2-RD+
4	GND	LN3-TD-	LN3-TD+	GND-J2	GND	LN3-RD-	LN3-RD+	GND-J2	GND
5	SEwafer5	GND	GND-J2	LN4-TD-	LN4-TD+	GND	GND-J2	LN4-RD-	LN4-RD+
6	GND	LN5-TD-	LN5-TD+	GND-J2	GND	LN5-RD-	LN5-RD+	GND-J2	GND
7	SEwafer7	GND	GND-J2	LN6-TD-	LN6-TD+	GND	GND-J2	LN6-RD-	LN6-RD+
8	GND	LN7-TD-	LN7-TD+	GND-J2	GND	LN7-RD-	LN7-RD+	GND-J2	GND
9	SEwafer9	GND	GND-J2	LN8-TD-	LN8-TD+	GND	GND-J2	LN8-RD-	LN8-RD+
10	GND	LN9-TD-	LN9-TD+	GND-J2	GND	LN9-RD-	LN9-RD+	GND-J2	GND
11	SEwafer11	GND	GND-J2	LN10-TD-	LN10-TD+	GND	GND-J2	LN10-RD-	LN10-RD+
12	GND	LN11-TD-	LN11-TD+	GND-J2	GND	LN11-RD-	LN11-RD+	GND-J2	GND
13	SEwafer13	GND	GND-J2	LN12-TD-	LN12-TD+	GND	GND-J2	LN12-RD-	LN12-RD+
14	GND	LN13-TD-	LN13-TD+	GND-J2	GND	LN13-RD-	LN13-RD+	GND-J2	GND
15	SEwafer15	GND	GND-J2	LN14-TD-	LN14-TD+	GND	GND-J2	LN14-RD-	LN14-RD+
16	GND	LN15-TD-	LN15-TD+	GND-J2	GND	LN15-RD-	LN15-RD+	GND-J2	GND

# VPX Slot4 & Slot5

## Utility Plane Signals on J0

	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	Vs1	Vs1	Vs1	Vs1	No Pad*	Vs2	Vs2	Vs2	Vs2
2	Vs1	Vs1	Vs1	Vs1	No Pad*	Vs2	Vs2	Vs2	Vs2
3	Vs3	Vs3	Vs3	Vs3	No Pad*	Vs3	Vs3	Vs3	Vs3
4	GND	SM2	SM3	GND	-12V_Aux	GND	SYSRESET*	NVMRO	GND
5	GND	GAP*	GA4*	GND	3.3V_Aux	GND	SM0	SM1	GND
6	GND	GA3*	GA2*	GND	+12V_Aux	GND	GA1*	GA0*	GND
7	TCK	GND	GND	TDO	TDI	GND	GND	TMS	TRST*
8	GND	REF_CLK-	REF_CLK+	GND	GND	AUX_CLK-	AUX_CLK+	GND	GND

VS1=12V , VS2=3.3V , VS3=5V

## Payload Slot Profile SLT3-PAY-1D-14.2.6 — P1 & J1

Plug-In Module P1	Row G	Row F	Row E		Row D	Row C	Row B		Row A
			Even	Odd			Even	Odd	
Eplane J1	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	GD iscrete1	GND	GND-J1	D P 01-T 0-	D P 01-T 0+	GND	GND-J1	D P 01-R 0-	D P 01-R 0+
2	GND	D P 01-T 1-	DP01-T1+	GND-J1	GND	D P 01-R 1-	D P 01-R 1+	GND-J1	GND
3	P 1-VB A T	GND	GND-J1	D P 01-T 2-	D P 01-T 2+	GND	GND-J1	D P 01-R 2-	D P 01-R 2+
4	GND	D P 01-T 3-	DP01-T3+	GND-J1	GND	D P 01-R 3-	D P 01-R 3+	GND-J1	GND
5	SYS_C ON *	GND	GND-J1	D P 01-T 4-	D P 01-T 4+	GND	GND-J1	D P 01-R 4-	D P 01-R 4+
6	GND	D P 01-T 5-	DP01-T5+	GND-J1	GND	D P 01-R 5-	D P 01-R 5+	GND-J1	GND
7	R eserved	GND	GND-J1	D P 01-T 6-	D P 01-T 6+	GND	GND-J1	D P 01-R 6-	D P 01-R 6+
8	GND	D P 01-T 7-	DP01-T7+	GND-J1	GND	D P 01-R 7-	D P 01-R 7+	GND-J1	GND
9	UD	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
10	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
11	UD	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
12	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
13	UD	GND	GND-J1	UD	D P 04-T 0+	GND	GND-J1	UD	UD
14	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND
15	Maskable	GND	GND-J1	UD	UD	GND	GND-J1	UD	UD
16	GND	UD	UD	GND-J1	GND	UD	UD	GND-J1	GND

## Payload Slot Profile SLT3-PAY-1D-14.2.6 — P2 & J2

Plug-In Module P2	Row G	Row F	Row E		Row D	Row C	Row B		Row A
			Even	Odd			Even	Odd	
Eplane J2	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	SEwafer1	GND	GND-J2	LN0-TD-	LN0-TD+	GND	GND-J2	LN0-RD-	LN0-RD+
2	GND	LN1-TD-	LN1-TD+	GND-J2	GND	LN1-RD-	LN1-RD+	GND-J2	GND
3	SEwafer3	GND	GND-J2	LN2-TD-	LN2-TD+	GND	GND-J2	LN2-RD-	LN2-RD+
4	GND	LN3-TD-	LN3-TD+	GND-J2	GND	LN3-RD-	LN3-RD+	GND-J2	GND
5	SEwafer5	GND	GND-J2	LN4-TD-	LN4-TD+	GND	GND-J2	LN4-RD-	LN4-RD+
6	GND	LN5-TD-	LN5-TD+	GND-J2	GND	LN5-RD-	LN5-RD+	GND-J2	GND
7	SEwafer7	GND	GND-J2	LN6-TD-	LN6-TD+	GND	GND-J2	LN6-RD-	LN6-RD+
8	GND	LN7-TD-	LN7-TD+	GND-J2	GND	LN7-RD-	LN7-RD+	GND-J2	GND
9	SEwafer9	GND	GND-J2	LN8-TD-	LN8-TD+	GND	GND-J2	LN8-RD-	LN8-RD+
10	GND	LN9-TD-	LN9-TD+	GND-J2	GND	LN9-RD-	LN9-RD+	GND-J2	GND
11	SEwafer11	GND	GND-J2	LN10-TD-	LN10-TD+	GND	GND-J2	LN10-RD-	LN10-RD+
12	GND	LN11-TD-	LN11-TD+	GND-J2	GND	LN11-RD-	LN11-RD+	GND-J2	GND
13	SEwafer13	GND	GND-J2	LN12-TD-	LN12-TD+	GND	GND-J2	LN12-RD-	LN12-RD+
14	GND	LN13-TD-	LN13-TD+	GND-J2	GND	LN13-RD-	LN13-RD+	GND-J2	GND
15	SEwafer15	GND	GND-J2	LN14-TD-	LN14-TD+	GND	GND-J2	LN14-RD-	LN14-RD+
16	GND	LN15-TD-	LN15-TD+	GND-J2	GND	LN15-RD-	LN15-RD+	GND-J2	GND