

6U OpenVPX 5-Slot BKP6-CEN05-11.2.5-n Backplane



OpenVPX

Description

Elma Bustronic's 6U OpenVPX backplanes come in centralized and distributed topologies. The centralized version features a double fat pipe expansion plane and a dual star routing topology for the data plane. The distributed topologies offer 3.125 to 6.250 Gbauds/performance in one PCB. This design provides maximum performance while saving you money.

Features

- Compliant to ANSI/VITA 65-2010
- Compliant to the latest VITA 46 Specifications
- High-speed Multi-gig connector
- Rugged Eurocard form factor in 6U height
- Provides built in ESD ground protection in every slot
- Signal integrity analysis report available upon request
- Distributed and centralized topology versions available

Board Specifications

- 18 layer stripline design
- 2 oz. power and ground
- PCB FR-4 or equivalent
- PCB .212" thick

Mechanical Specifications

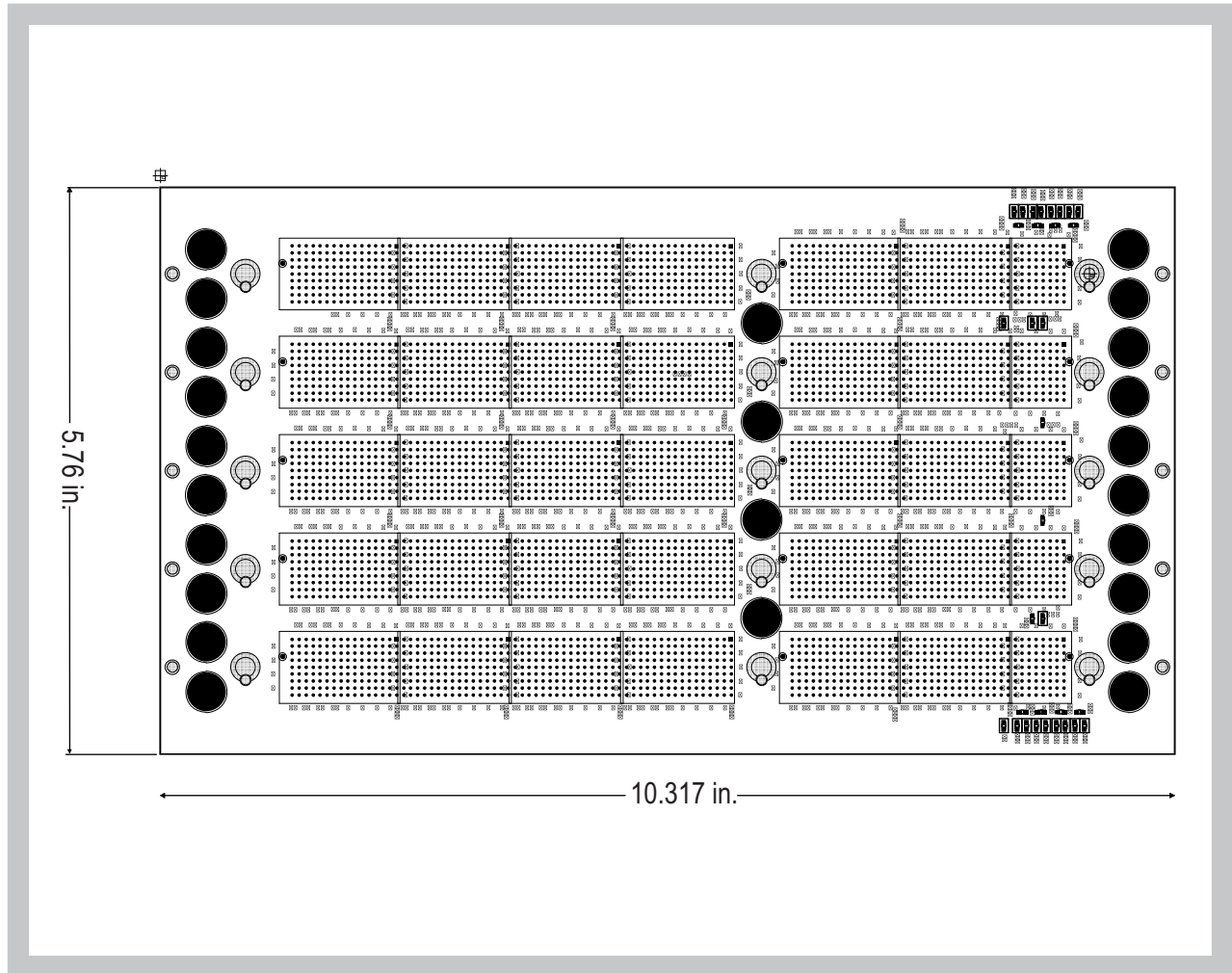
- 6U height
- 5 slots
- MultiGig RT-2 connectors



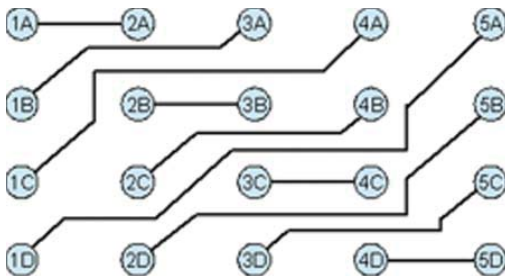
Close-up of Multi-Gig connector

6U OpenVPX 5-Slot BKP6-CEN05-11.2.5-n Backplane

Line Drawing



Connectivity Chart

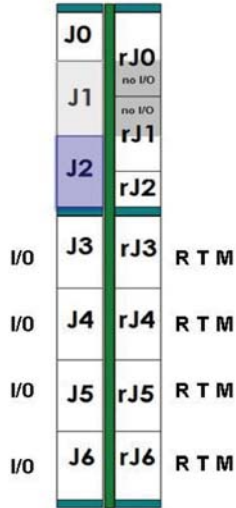


Order Information

Height	Total Slots	Description	Profile Number	Part Number
6U	5	VPX centralized switch, channel Gbaud rate 3.125	BKP6-CEN05-11.2.5-1	10VX605FX1-1X01R
6U	5	VPX centralized switch, channel Gbaud rate 3.125, no RTM connectors	BKP6-CEN05-11.2.5-1	10VX605FX1-1X00R

6U OpenVPX 5-Slot BKP6-CEN05-11.2.5-n Backplane

Connector Positions



J0 Signal Assignments

	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	GND	GND	GND	TMS	TRST*
8	GND	REF_CLK-	REF_CLK+	GND	GND	AUX_CLK-	AUX_CLK+	GND	GND

J1/P1 Payload Signal Assignments

Plug-In Module P1	Row G	Row F	Row E		Row D	Row C	Row B		Row A
Backplane 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	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	UD	GND	GND-J1	DP03-T0-	DP03-T0+	GND	GND-J1	DP03-R0-	DP03-R0+
10	GND	DP03-T1-	DP03-T1+	GND-J1	GND	DP03-R1-	DP03-R1+	GND-J1	GND
11	UD	GND	GND-J1	DP03-T2-	DP03-T2+	GND	GND-J1	DP03-R2-	DP03-R2+
12	GND	DP03-T3-	DP03-T3+	GND-J1	GND	DP03-R3-	DP03-R3+	GND-J1	GND
13	UD	GND	GND-J1	DP04-T0-	DP04-T0+	GND	GND-J1	DP04-R0-	DP04-R0+
14	GND	DP04-T1-	DP04-T1+	GND-J1	GND	DP04-R1-	DP04-R1+	GND-J1	GND
15	Maskable Reset*	GND	GND-J1	DP04-T2-	DP04-T2+	GND	GND-J1	DP04-R2-	DP04-R2+
16	GND	DP04-T3-	DP04-T3+	GND-J1	GND	DP04-R3-	DP04-R3+	GND-J1	GND

J2/P2 Payload Signal Assignments

Plug-In Module P2	Row G	Row F	Row E		Row D	Row C	Row B		Row A
Backplane J2	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	UD	GND	GND-J2	EP00-T+	EP00-R-	GND	GND-J2	EP00-R-	EP00-R+
2	GND	EP01-T-	EP01-T+	GND-J2	GND	EP01-R-	EP01-R+	GND-J2	GND
3	UD	GND	GND-J2	EP02-T-	EP02-T+	GND	GND-J2	EP02-R-	EP02-R+
4	GND	EP03-T-	EP03-T+	GND-J2	GND	EP03-R-	EP03-R+	GND-J2	GND
5	UD	GND	GND-J2	EP04-T-	EP04-T+	GND	GND-J2	EP04-R-	EP04-R+
6	GND	EP05-T-	EP05-T+	GND-J2	GND	EP05-R-	EP05-R+	GND-J2	GND
7	UD	GND	GND-J2	EP06-T-	EP06-T+	GND	GND-J2	EP06-R-	EP06-R+
8	GND	EP07-T-	EP07-T+	GND-J2	GND	EP07-R-	EP07-R+	GND-J2	GND
9	UD	GND	GND-J2	EP08-T-	EP08-T+	GND	GND-J2	EP08-R-	EP08-R+
10	GND	EP09-T-	EP09-T+	GND-J2	GND	EP09-R-	EP09-R+	GND-J2	GND
11	UD	GND	GND-J2	EP10-T-	EP10-T+	GND	GND-J2	EP10-R-	EP10-R+
12	GND	EP11-T-	EP11-T+	GND-J2	GND	EP11-R-	EP11-R+	GND-J2	GND
13	UD	GND	GND-J2	EP12-T-	EP12-T+	GND	GND-J2	EP12-R-	EP12-R+
14	GND	EP13-T-	EP13-T+	GND-J2	GND	EP13-R-	EP13-R+	GND-J2	GND
15	UD	GND	GND-J2	EP14-T-	EP14-T+	GND	GND-J2	EP14-R-	EP14-R+
16	GND	EP15-T-	EP15-T+	GND-J2	GND	EP15-R-	EP15-R+	GND-J2	GND

J4/P4 Payload Signal Assignments

Plug-In Mod P4	Row G	Row F	Row E		Row D	Row C	Row B		Row A	
Backplane J4	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a	
1	UD	GND	GND-J4	UD	UD	GND	GND-J4	UD	UD	
2	GND	UD	UD	GND-J4	GND	UD	UD	GND-J4	GND	
3	UD	GND	GND-J4	UD	UD	GND	GND-J4	UD	UD	
4	GND	UD	UD	GND-J4	GND	UD	UD	GND-J4	GND	
5	UD	GND	GND-J4	UD	UD	GND	GND-J4	UD	UD	
6	GND	UD	UD	GND-J4	GND	UD	UD	GND-J4	GND	
7	UD	GND	GND-J4	UD	UD	GND	GND-J4	UD	UD	
8	GND	UD	UD	GND-J4	GND	UD	UD	GND-J4	GND	
9	UD	GND	GND-J4	UD	UD	GND	GND-J4	UD	UD	
10	GND	UD	UD	GND-J4	GND	UD	UD	GND-J4	GND	
11	2 UTP	UD	GND	GND-J4	CPUTp02-T-	CPUTp02-T+	GND	GND-J4	CPUTp02-R-	CPUTp02-R+
12	2 UTP	GND	CPUTp01-T-	CPUTp01-T+	GND-J4	GND	CPUTp01-R-	CPUTp01-R+	GND-J4	GND
13	UD	GND	GND-J4	CPTp02-DB-	CPTp02-DB+	GND	GND-J4	CPTp02-DA-	CPTp02-DA+	
14	GND	CPTp02-DD-	CPTp02-DD+	GND-J4	GND	CPTp02-DC-	CPTp02-DC+	GND-J4	GND	
15	UD	GND	GND-J4	CPTp01-DB-	CPTp01-DB+	GND	GND-J4	CPTp01-DA-	CPTp01-DA+	
16	GND	CPTp01-DD-	CPTp01-DD+	GND-J4	GND	CPTp01-DC-	CPTp01-DC+	GND-J4	GND	

J3, J5-J6 Signal Assignments = User Defined

6U OpenVPX 5-Slot BKP6-CEN05-11.2.5-n Backplane

J1/P1 Switch Signal Assignments

Plug-In Module P1	Row G	Row F	Row E		Row D	Row C	Row B		Row A
	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
Bplane J1	UD	GND	GND-J1	CSubp01-T+	CSubp01-T+	GND	GND-J1	CSubp01-R-	CSubp01-R+
Control Plane Payload UTPIs Ports 1-12	GND	CSubp02-T-	CSubp02-T+	GND-J1	GND	CSubp02-R-	CSubp02-R+	GND-J1	GND
	P1-VBAT	GND	GND-J1	CSubp03-T-	CSubp03-T+	GND	GND-J1	CSubp03-R-	CSubp03-R+
	GND	CSubp04-T-	CSubp04-T+	GND-J1	GND	CSubp04-R-	CSubp04-R+	GND-J1	GND
	SYS_CON*	GND	GND-J1	CSubp05-T-	CSubp05-T+	GND	GND-J1	CSubp05-R-	CSubp05-R+
	GND	CSubp06-T-	CSubp06-T+	GND-J1	GND	CSubp06-R-	CSubp06-R+	GND-J1	GND
	Reserved	GND	GND-J1	CSubp07-T-	CSubp07-T+	GND	GND-J1	CSubp07-R-	CSubp07-R+
	GND	CSubp08-T-	CSubp08-T+	GND-J1	GND	CSubp08-R-	CSubp08-R+	GND-J1	GND
	UD	GND	GND-J1	CSubp09-T-	CSubp09-T+	GND	GND-J1	CSubp09-R-	CSubp09-R+
	GND	CSubp10-T-	CSubp10-T+	GND-J1	GND	CSubp10-R-	CSubp10-R+	GND-J1	GND
	UD	GND	GND-J1	CSubp11-T-	CSubp11-T+	GND	GND-J1	CSubp11-R-	CSubp11-R+
	GND	CSubp12-T-	CSubp12-T+	GND-J1	GND	CSubp12-R-	CSubp12-R+	GND-J1	GND
	UD	GND	GND-J1	CSubp13-T-	CSubp13-T+	GND	GND-J1	CSubp13-R-	CSubp13-R+
	GND	CSubp14-T-	CSubp14-T+	GND-J1	GND	CSubp14-R-	CSubp14-R+	GND-J1	GND
	UD	GND	GND-J1	CSubp15-T-	CSubp15-T+	GND	GND-J1	CSubp15-R-	CSubp15-R+
	GND	CSubp16-T-	CSubp16-T+	GND-J1	GND	CSubp16-R-	CSubp16-R+	GND-J1	GND

J2/P2 Switch Signal Assignments

Plug-In Module P2	Row G	Row F	Row E		Row D	Row C	Row B		Row A
	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
Bplane J2	UD	GND	GND-J2	DP16-T0-	DP16-T0+	GND	GND-J2	DP16-R0-	DP16-R0+
Data Plane Payload UTPIs Ports 1-12	GND	DP16-T1-	DP16-T1+	GND-J2	GND	DP16-R1-	DP16-R1+	GND-J2	GND
	UD	GND	GND-J2	DP16-T2-	DP16-T2+	GND	GND-J2	DP16-R2-	DP16-R2+
	GND	DP16-T3-	DP16-T3+	GND-J2	GND	DP16-R3-	DP16-R3+	GND-J2	GND
	UD	GND	GND-J2	DP15-T0-	DP15-T0+	GND	GND-J2	DP15-R0-	DP15-R0+
	GND	DP15-T1-	DP15-T1+	GND-J2	GND	DP15-R1-	DP15-R1+	GND-J2	GND
	UD	GND	GND-J2	DP15-T2-	DP15-T2+	GND	GND-J2	DP15-R2-	DP15-R2+
	GND	DP15-T3-	DP15-T3+	GND-J2	GND	DP15-R3-	DP15-R3+	GND-J2	GND
	UD	GND	GND-J2	DP14-T0-	DP14-T0+	GND	GND-J2	DP14-R0-	DP14-R0+
	GND	DP14-T1-	DP14-T1+	GND-J2	GND	DP14-R1-	DP14-R1+	GND-J2	GND
	UD	GND	GND-J2	DP14-T2-	DP14-T2+	GND	GND-J2	DP14-R2-	DP14-R2+
	GND	DP14-T3-	DP14-T3+	GND-J2	GND	DP14-R3-	DP14-R3+	GND-J2	GND
	UD	GND	GND-J2	DP13-T0-	DP13-T0+	GND	GND-J2	DP13-R0-	DP13-R0+
	GND	DP13-T1-	DP13-T1+	GND-J2	GND	DP13-R1-	DP13-R1+	GND-J2	GND
	UD	GND	GND-J2	DP13-T2-	DP13-T2+	GND	GND-J2	DP13-R2-	DP13-R2+
	GND	DP13-T3-	DP13-T3+	GND-J2	GND	DP13-R3-	DP13-R3+	GND-J2	GND

J3/P3 - J4/P4 Switch Signal Assignments

Plug-In Module P3	Row G	Row F	Row E		Row D	Row C	Row B		Row A
	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
Bplane J3	UD	GND	GND-J3	DP12-T0-	DP12-T0+	GND	GND-J3	DP12-R0-	DP12-R0+
Data Plane Payload UTPIs Ports 1-12	GND	DP12-T1-	DP12-T1+	GND-J3	GND	DP12-R1-	DP12-R1+	GND-J3	GND
	UD	GND	GND-J3	DP12-T2-	DP12-T2+	GND	GND-J3	DP12-R2-	DP12-R2+
	GND	DP12-T3-	DP12-T3+	GND-J3	GND	DP12-R3-	DP12-R3+	GND-J3	GND
	UD	GND	GND-J3	DP11-T0-	DP11-T0+	GND	GND-J3	DP11-R0-	DP11-R0+
	GND	DP11-T1-	DP11-T1+	GND-J3	GND	DP11-R1-	DP11-R1+	GND-J3	GND
	UD	GND	GND-J3	DP11-T2-	DP11-T2+	GND	GND-J3	DP11-R2-	DP11-R2+
	GND	DP11-T3-	DP11-T3+	GND-J3	GND	DP11-R3-	DP11-R3+	GND-J3	GND
	UD	GND	GND-J3	DP10-T0-	DP10-T0+	GND	GND-J3	DP10-R0-	DP10-R0+
	GND	DP10-T1-	DP10-T1+	GND-J3	GND	DP10-R1-	DP10-R1+	GND-J3	GND
	UD	GND	GND-J3	DP10-T2-	DP10-T2+	GND	GND-J3	DP10-R2-	DP10-R2+
	GND	DP10-T3-	DP10-T3+	GND-J3	GND	DP10-R3-	DP10-R3+	GND-J3	GND
	UD	GND	GND-J3	DP09-T0-	DP09-T0+	GND	GND-J3	DP09-R0-	DP09-R0+
	GND	DP09-T1-	DP09-T1+	GND-J3	GND	DP09-R1-	DP09-R1+	GND-J3	GND
	UD	GND	GND-J3	DP09-T2-	DP09-T2+	GND	GND-J3	DP09-R2-	DP09-R2+
	GND	DP09-T3-	DP09-T3+	GND-J3	GND	DP09-R3-	DP09-R3+	GND-J3	GND

J5/P5 - J6/P6 Switch Signal Assignments

Plug-In Module P4	Row G	Row F	Row E		Row D	Row C	Row B		Row A
	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
Bplane J4	UD	GND	GND-J4	DP08-T0-	DP08-T0+	GND	GND-J4	DP08-R0-	DP08-R0+
Data Plane Payload UTPIs Ports 1-12	GND	DP08-T1-	DP08-T1+	GND-J4	GND	DP08-R1-	DP08-R1+	GND-J4	GND
	UD	GND	GND-J4	DP08-T2-	DP08-T2+	GND	GND-J4	DP08-R2-	DP08-R2+
	GND	DP08-T3-	DP08-T3+	GND-J4	GND	DP08-R3-	DP08-R3+	GND-J4	GND
	UD	GND	GND-J4	DP07-T0-	DP07-T0+	GND	GND-J4	DP07-R0-	DP07-R0+
	GND	DP07-T1-	DP07-T1+	GND-J4	GND	DP07-R1-	DP07-R1+	GND-J4	GND
	UD	GND	GND-J4	DP07-T2-	DP07-T2+	GND	GND-J4	DP07-R2-	DP07-R2+
	GND	DP07-T3-	DP07-T3+	GND-J4	GND	DP07-R3-	DP07-R3+	GND-J4	GND
	UD	GND	GND-J4	DP06-T0-	DP06-T0+	GND	GND-J4	DP06-R0-	DP06-R0+
	GND	DP06-T1-	DP06-T1+	GND-J4	GND	DP06-R1-	DP06-R1+	GND-J4	GND
	UD	GND	GND-J4	DP06-T2-	DP06-T2+	GND	GND-J4	DP06-R2-	DP06-R2+
	GND	DP06-T3-	DP06-T3+	GND-J4	GND	DP06-R3-	DP06-R3+	GND-J4	GND
	UD	GND	GND-J4	DP05-T0-	DP05-T0+	GND	GND-J4	DP05-R0-	DP05-R0+
	GND	DP05-T1-	DP05-T1+	GND-J4	GND	DP05-R1-	DP05-R1+	GND-J4	GND
	UD	GND	GND-J4	DP05-T2-	DP05-T2+	GND	GND-J4	DP05-R2-	DP05-R2+
	GND	DP05-T3-	DP05-T3+	GND-J4	GND	DP05-R3-	DP05-R3+	GND-J4	GND

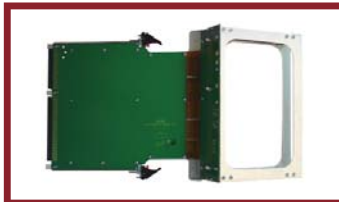
6U OpenVPX 5-Slot BKP6-CEN05-11.2.5-n Backplane

Backplane Profile

Profile name	Mechanical		Slot Profiles and Section		Channel Gbaud Rate		
	Pitch (in)	RTM Conn	Payload	Switch	Control Plane	Data Plane	Expansion Plane
BKP6-CEN05-11.2.5-1	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.1	SLT6-SWH-16U20F-10.4.2	1.25	3.125	5.0
BKP6-CEN05-11.2.5-2	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.1	SLT6-SWH-16U20F-10.4.2	1.25	5.0	5.0
BKP6-CEN05-11.2.5-3	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.1	SLT6-SWH-16U20F-10.4.2	1.25	6.25	5.0

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