

PCI-EXPRESS 3.0 COPPER/FIBER CONVERSION

For Rugged Applications

PDS - 314



Amphenol Aerospace Oval Contact System MIL-DTL-38999 Technology and MT MIL-DTL-38999 fiber optics employed along with integrated electronics convert PCI-E to and from fiber optics and high speed copper.

Amphenol now has an active technology, utilizing Amphenol Oval contact System MIL-DTL-38999 technology and MT MIL-DTL-38999 fiber optic connectors, that converts PCI-express 3.0 to fiber optics (a x8 link and @ 8Gbps speeds) and back to copper PCI-express thereby extending the length of the overall channel to over 100 meters if needed.

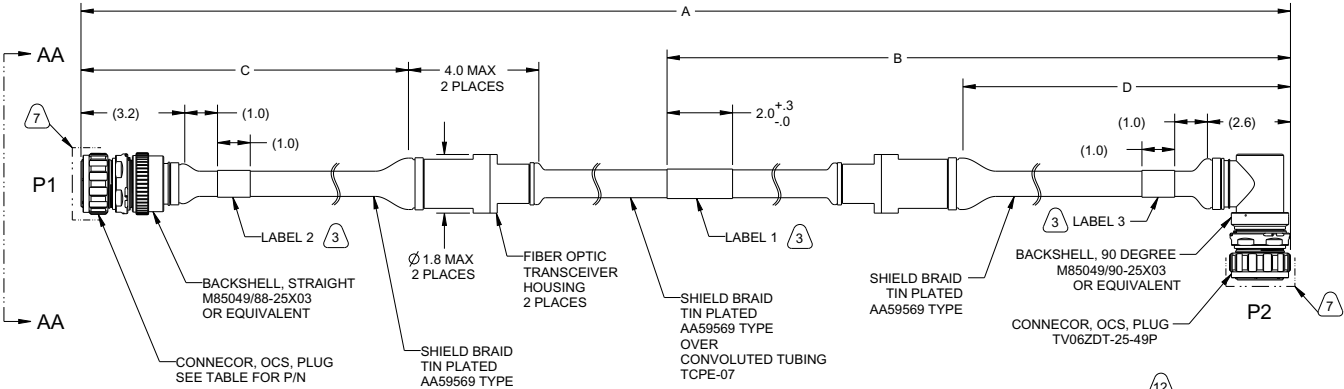
This is an 64Gbps solution and allows flexibility for systems integrators in building architecture and connecting PCI-express devices and hosts. The architecture is employed in either active cable or box mount media converter applications.

FEATURES & BENEFITS

- The solution works up to a x8 link and can down shift to PCI express 1.0 and 2.0 if required.
 - x16 links are possible as well for future implementations
- Input power is 5-25V and configurable
- The technology is modular and can be instantiated inside receptacle connectors, backshells, and other applications.
- Rugged for military and airborne applications.



ACTIVE CABLE INSTANTIATION



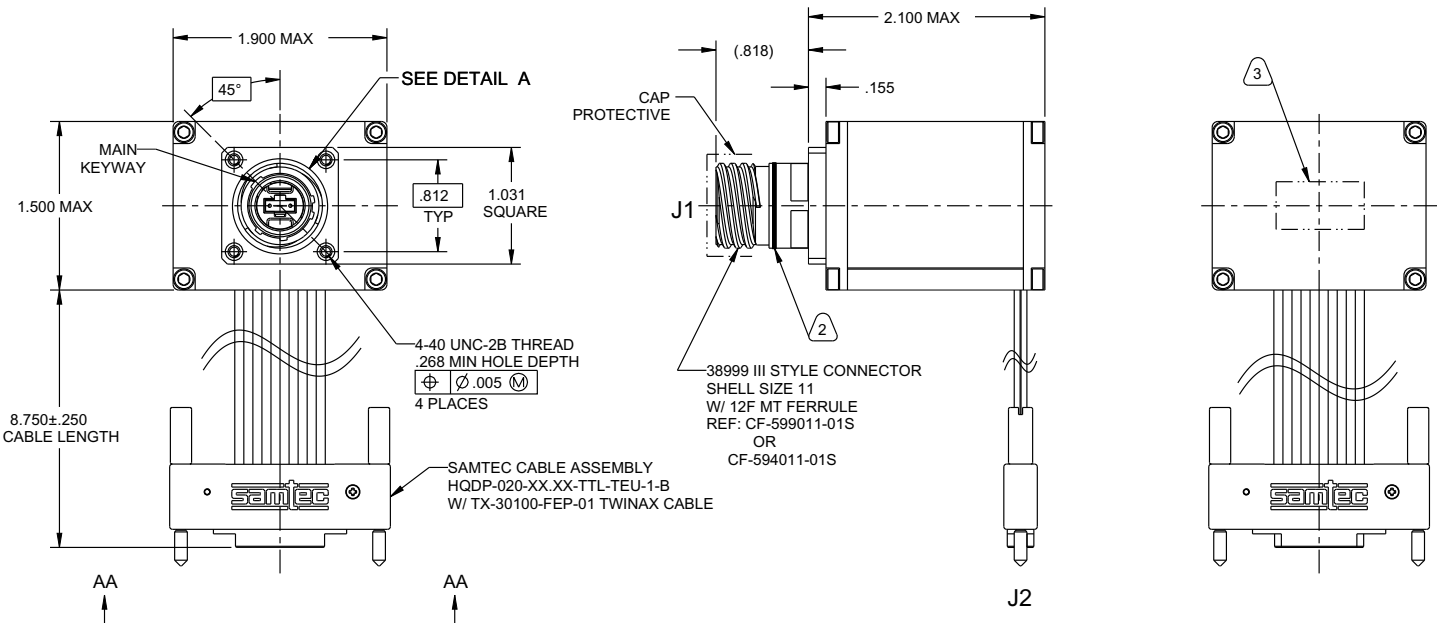
PIN-OUT		
P1	P2	DESCRIPTION
N1	M1	POS[*]_POS[*]SBC1_PCIE_0_P
N2	M2	POS[*]_POS[*]SBC1_PCIE_0_N
X1	L1	POS[*]_POS[*]SBC1_PCIE_1_P
X2	L2	POS[*]_POS[*]SBC1_PCIE_1_N
Y1	K1	POS[*]_POS[*]SBC1_PCIE_2_P
Y2	K2	POS[*]_POS[*]SBC1_PCIE_2_N
V1	W1	POS[*]_POS[*]SBC1_PCIE_3_P
V2	W2	POS[*]_POS[*]SBC1_PCIE_3_N
U1	J1	POS[*]_POS[*]SBC1_PCIE_4_P
U2	J2	POS[*]_POS[*]SBC1_PCIE_4_N
F1	H1	POS[*]_POS[*]SBC1_PCIE_5_P
F2	H2	POS[*]_POS[*]SBC1_PCIE_5_N
E1	G1	POS[*]_POS[*]SBC1_PCIE_6_P
E2	G2	POS[*]_POS[*]SBC1_PCIE_6_N
T1	D1	POS[*]_POS[*]SBC1_PCIE_7_P
T2	D2	POS[*]_POS[*]SBC1_PCIE_7_N
M1	N1	POS[*]SBC1_POS[*]_PCIE_0_P
M2	N2	POS[*]SBC1_POS[*]_PCIE_0_N
L1	X1	POS[*]SBC1_POS[*]_PCIE_1_P
L2	X2	POS[*]SBC1_POS[*]_PCIE_1_N
K1	Y1	POS[*]SBC1_POS[*]_PCIE_2_P
K2	Y2	POS[*]SBC1_POS[*]_PCIE_2_N
W1	V1	POS[*]SBC1_POS[*]_PCIE_3_P
W2	V2	POS[*]SBC1_POS[*]_PCIE_3_N
J1	U1	POS[*]SBC1_POS[*]_PCIE_4_P
J2	U2	POS[*]SBC1_POS[*]_PCIE_4_N
H1	F1	POS[*]SBC1_POS[*]_PCIE_5_P
H2	F2	POS[*]SBC1_POS[*]_PCIE_5_N
G1	E1	POS[*]SBC1_POS[*]_PCIE_6_P
G2	E2	POS[*]SBC1_POS[*]_PCIE_6_N
D1	T1	POS[*]SBC1_POS[*]_PCIE_7_P
D2	T2	POS[*]SBC1_POS[*]_PCIE_7_N

PIN-OUT		
P1	P2	DESCRIPTION
B1	--	POS_[*]_PCIE_12VDC_PWR
B2	--	POS_[*]_PCIE_12VDC_PWR_RTN
C1	--	POS_[*]_PCIE_12VDC_PWR
C2	--	POS_[*]_PCIE_12VDC_PWR_RTN
A1	--	RESERVED_NC
A2	--	RESERVED_NC
P1	--	RESERVED_NC
P2	--	RESERVED_NC
R1	--	RESERVED_NC
R2	--	RESERVED_NC
--	A1	RESERVED_NC
--	A2	RESERVED_NC
--	B1	RESERVED_NC
--	B2	RESERVED_NC
--	C1	RESERVED_NC
--	C2	RESERVED_NC
--	P1	RESERVED_NC
--	P2	RESERVED_NC
--	R1	RESERVED_NC
--	R2	RESERVED_NC

PART NUMBER RAYTHEON P/N [*]		
CF-901201-231	D1631415-1	0
CF-901201-232	D1631415-2	1
CF-901201-233	D1631415-3	2
CF-901201-234	D1631415-4	3



ACTIVE CABLE INSTANTIATION



J2 PIN-OUT			
1	PCIE 0 Tx P	21	PCIE 5 Tx P
2	PCIE 0 Rx P	22	PCIE 5 Rx P
3	PCIE 0 Tx N	23	PCIE 5 Tx N
4	PCIE 0 Rx N	24	PCIE 5 Rx N
5	PCIE 1 Tx P	25	PCIE 6 Tx P
6	PCIE 1 Rx P	26	PCIE 6 Rx P
7	PCIE 1 Tx N	27	PCIE 6 Tx N
8	PCIE 1 Rx N	28	PCIE 6 Rx N
9	PCIE 2 Tx P	29	PCIE 7 Tx P
10	PCIE 2 Rx P	30	PCIE 7 Rx P
11	PCIE 2 Tx N	31	PCIE 7 Tx N
12	PCIE 2 Rx N	32	PCIE 7 Rx N
13	PCIE 3 Tx P	33	5V
14	PCIE 3 Rx P	34	GND
15	PCIE 3 Tx N	35	5V
16	PCIE 3 Rx N	36	GND
17	PCIE 4 Tx P	37	Reserved
18	PCIE 4 Rx P	38	Reserved
19	PCIE 4 Tx N	39	Reserved
20	PCIE 4 Rx N	40	Reserved

J1 PIN-OUT			
1	Tx 1	13	Rx 1
2	Tx 2	14	Rx 2
3	Tx 3	15	Rx 3
4	Tx 4	16	Rx 4
5	Tx 5	17	Rx 5
6	Tx 6	18	Rx 6
7	Tx 7	19	Rx 7
8	Tx 8	20	Rx 8
9	N/C	21	N/C
10	N/C	22	N/C
11	N/C	23	N/C
12	N/C	24	N/C

