

FCI PCI Express™ Card Edge Connectors



SAS (Serial-Attached SCSI)



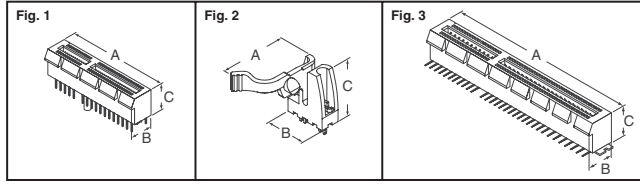
These 1.0mm pitch, vertical card edge connectors are used to implement the evolutionary PCI Express strategy in ATX or ATX-based desktop PCs and server systems. The connector family offers 1 to 16 high-speed serial PCI Express Lanes. Each serial lane supports 2.5 Gbps data rate (per direction). The connector family supports x1, x4, x8, or x16 link widths to suit different bandwidth requirements. All connectors support the PCI Express signal and power requirements, as well as auxiliary signals at the interface between system board and add-in card hardware.

Materials: • Contact Base Metal: Copper alloy • Contact Area Finish: Gold over nickel • Solder Area Finish: Tin over nickel • Housing Material: High-temperature thermoplastic (UL 94V-0) Color: Black • Metal Board Locks: Copper alloy • Board Locks Finish: Tin over nickel **Electrical Performance:** • Contact Resistance: 30mΩ maximum initially with 10mΩ maximum change after environmental exposures • Current Rating: 1.1A minimum per pin for the 7 power pins and 7 nearest ground pins **Mechanical Performance:** • Durability Rating: 50 cycles minimum

SAS was developed to address I/O and direct attach storage requirements that traditional SCSI cannot meet. It provides universal interconnect with SATA, while offering logical SCSI compatibility along with SCSI reliability, performance and manageability.

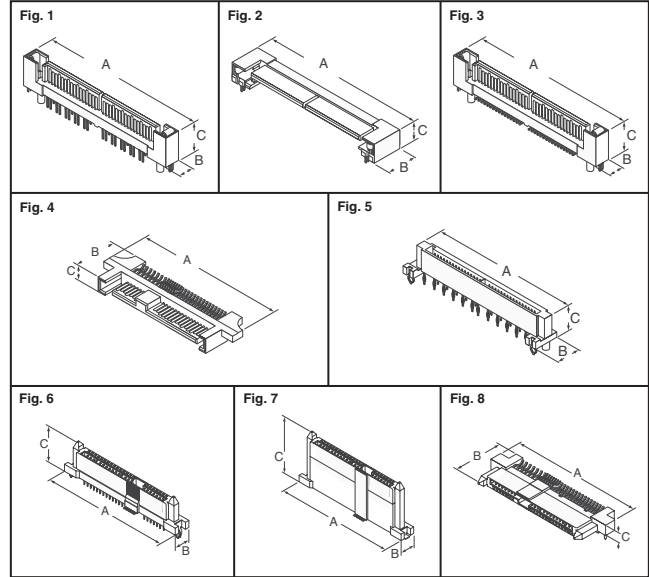
Features: • High density serial data transmission at 1.5 – 3.0Gbps/sec. • Dual port signal and power combined disk drive device I/O • Two different pairs per port • Three different voltage levels power (15 pins) • Combined signal/power receptacle for direct device plug-up • Guide pegs for blind mate • FMLB for hot plugging capability • SAS receptacles also accept SATA drives **Applications:** • Next generation disk drive connection • Servers RAID storage systems • Embedded computing devices

A



No. of Fig. Pos.	Peg Opt. §	Tail Length (mm)	Dimensions (mm)			Digi-Key Part No.	Price Each			FCI Part No.
			A	B	C		1	25	100	
PCI Express										
36	0	2.30	25.00	8.80	11.25	609-1960-ND	.81	.45	.38	10018783-10000TLF
64	0	2.30	39.00	8.80	11.25	609-1961-ND	1.51	.82	.72	10018783-10001TLF
98	0	2.30	56.00	8.80	11.25	609-1962-ND	1.98	1.08	.97	10018783-10002TLF
164	0	2.30	89.00	8.80	11.25	609-1963-ND	2.08	1.28	1.11	10018783-10003TLF
36	0	3.10	25.00	8.80	11.25	609-1964-ND	.81	.45	.38	10018783-10010TLF
64	0	3.10	39.00	8.80	11.25	609-1965-ND	1.24	.67	.59	10018783-10011TLF
98	0	3.10	56.00	8.80	11.25	609-1966-ND	1.54	.91	.79	10018783-10012TLF
164	0	3.10	89.00	8.80	11.25	609-1967-ND	2.08	1.28	1.11	10018783-10013TLF
36	0	2.30	25.00	8.80	11.25	609-1968-ND	.54	.28	.24	10018783-10100TLF
64	0	2.30	39.00	8.80	11.25	609-1969-ND	.97	.54	.45	10018783-10101TLF
98	0	2.30	56.00	8.80	11.25	609-1970-ND	1.10	.60	.54	10018783-10102TLF
164	0	2.30	89.00	8.80	11.25	609-1971-ND	1.36	.81	.70	10018783-10103TLF
36	0	3.10	25.00	8.80	11.25	609-1972-ND	.69	.36	.31	10018783-10110TLF
64	0	3.10	39.00	8.80	11.25	609-1973-ND	.97	.54	.45	10018783-10111TLF
98	0	3.10	56.00	8.80	11.25	609-1974-ND	1.16	.63	.55	10018783-10112TLF
164	0	3.10	89.00	8.80	11.25	609-1975-ND	1.50	.86	.77	10018783-10113TLF
98	0	2.54	56.00	8.80	11.25	609-1976-ND	1.20	.66	.57	10018783-10122TLF
36	0	2.30	25.00	8.80	11.25	609-1977-ND	.37	.19	.16	10018783-10200TLF
64	0	2.30	39.00	8.80	11.25	609-1978-ND	.63	.33	.28	10018783-10201TLF
98	0	2.30	56.00	8.80	11.25	609-1979-ND	.76	.42	.35	10018783-10202TLF
164	0	2.30	89.00	8.80	11.25	609-1980-ND	.84	.46	.40	10018783-10203TLF
36	0	3.10	25.00	8.80	11.25	609-1981-ND	.65	.31	.26	10018783-10210TLF
64	0	3.10	39.00	8.80	11.25	609-1982-ND	.68	.34	.29	10018783-10211TLF
98	0	3.10	56.00	8.80	11.25	609-1983-ND	1.00	.53	.46	10018783-10212TLF
164	0	3.10	89.00	8.80	11.25	609-1984-ND	1.42	.80	.69	10018783-10213TLF
98	1	2.30	56.00	8.80	11.25	609-1986-ND	1.66	.93	.81	10018783-11002TLF
98	1	3.10	56.00	8.80	11.25	609-1989-ND	1.57	.93	.80	10018783-11012TLF
164	1	3.10	89.00	8.80	11.25	609-1990-ND	2.25	1.33	1.18	10018783-11013TLF
64	1	3.10	39.00	8.80	11.25	609-2002-ND	.74	.38	.31	10018783-11211TLF
164	1	3.10	89.00	8.80	11.25	609-2004-ND	1.04	.58	.49	10018783-11213TLF
36	2	2.30	25.00	8.80	11.25	609-2005-ND	.89	.46	.39	10018783-12000TLF
164	2	2.30	89.00	8.80	11.25	609-2006-ND	2.19	1.32	1.15	10018783-12003TLF
98	2	3.10	56.00	8.80	11.25	609-2007-ND	1.63	.91	.80	10018783-12012TLF
64	2	2.30	39.00	8.80	11.25	609-2008-ND	.72	.36	.30	10018783-12201TLF
36	0	2.30	25.00	8.80	11.25	609-2009-ND	.77	.43	.36	10018784-10000TLF
64	0	2.30	39.00	8.80	11.25	609-2010-ND	1.16	.63	.55	10018784-10001TLF
164	0	2.30	89.00	8.80	11.25	609-2012-ND	2.00	1.23	1.07	10018784-10003TLF
36	0	3.10	25.00	8.80	11.25	609-2013-ND	1.03	.57	.48	10018784-10010TLF
64	0	3.10	39.00	8.80	11.25	609-2014-ND	1.16	.63	.55	10018784-10011TLF
98	0	3.10	56.00	8.80	11.25	609-2015-ND	1.45	.86	.74	10018784-10012TLF
164	0	3.10	89.00	8.80	11.25	609-2016-ND	1.92	1.16	1.01	10018784-10013TLF
36	0	2.30	25.00	8.80	11.25	609-2017-ND	.49	.25	.21	10018784-10100TLF
64	0	2.30	39.00	8.80	11.25	609-2018-ND	1.02	.56	.47	10018784-10101TLF
98	0	2.30	56.00	8.80	11.25	609-2019-ND	1.33	.74	.63	10018784-10102TLF
164	0	2.30	89.00	8.80	11.25	609-2020-ND	1.92	1.10	.98	10018784-10103TLF
64	0	3.10	39.00	8.80	11.25	609-2022-ND	1.02	.56	.47	10018784-10111TLF
98	0	3.10	56.00	8.80	11.25	609-2023-ND	1.13	.63	.54	10018784-10112TLF
164	0	3.10	89.00	8.80	11.25	609-2024-ND	1.92	1.13	.98	10018784-10113TLF
36	0	2.30	25.00	8.80	11.25	609-2025-ND	.34	.17	.14	10018784-10200TLF
64	0	2.30	39.00	8.80	11.25	609-2026-ND	.65	.32	.26	10018784-10201TLF
98	0	2.30	56.00	8.80	11.25	609-2027-ND	.83	.43	.36	10018784-10202TLF
164	0	2.30	89.00	8.80	11.25	609-2028-ND	.65	.37	.31	10018784-10203TLF
36	0	3.10	25.00	8.80	11.25	609-2029-ND	.41	.21	.17	10018784-10210TLF
64	0	3.10	39.00	8.80	11.25	609-2030-ND	.62	.32	.26	10018784-10211TLF
98	0	3.10	56.00	8.80	11.25	609-2031-ND	.93	.47	.40	10018784-10212TLF
164	0	3.10	89.00	8.80	11.25	609-2032-ND	.80	.44	.37	10018784-10213TLF
164	1	2.30	89.00	8.80	11.25	609-2036-ND	2.29	1.25	1.11	10018784-11003TLF
36	1	2.30	25.00	8.80	11.25	609-2040-ND	.73	.36	.30	10018784-11100TLF
164	1	2.30	89.00	8.80	11.25	609-2043-ND	1.57	.88	.77	10018784-11103TLF
36	1	2.30	25.00	8.80	11.25	609-2048-ND	.49	.24	.19	10018784-11200TLF
98	1	2.30	56.00	8.80	11.25	609-2050-ND	.78	.39	.33	10018784-11202TLF
164	1	2.30	89.00	8.80	11.25	609-2051-ND	.86	.47	.40	10018784-11203TLF
280	0	2.54	149.00	8.80	11.25	609-2067-ND	4.97	3.31	2.97	10057596-10020TLF
PCI Express Retention Mechanism										
2	Green	—	23.00	12.50	16.00	609-2059-ND	.30	.15	.12	10042618-001LF
	Blue	—	23.00	12.50	16.00	609-2060-ND	.25	.13	.11	10042618-002LF
	Black	—	23.00	12.50	16.00	609-2061-ND	.29	.14	.12	10042618-003LF
PCI Express with Positioning Pins — Surface Mount										
3	36	—	25.00	8.80	11.10	609-2882-ND	2.16	1.32	1.15	10061913-1000CLF
	64	—	39.00	8.80	11.10	609-2883-ND	2.64	1.63	1.44	10061913-1011CLF
	98	—	56.00	8.80	11.10	609-2884-ND	3.13	2.01	1.79	10061913-1021CLF
	164	—	89.00	8.80	11.10	609-2996-ND	3.92	2.62	2.34	10061913-1031CLF

§ Peg Options: 0 - Plastic Pegs, 1 - Metal Board Locks, 2 - Single Plastic Pegs



No. of Fig. Pos.	Dimensions (mm)	Digi-Key Part No.	Price Each			FCI Part No.	
			A	B	C		1
Plugs - Vertical PC Mount							
1	32	57.14 5.10 9.95	609-1603-ND	2.77	1.72	1.56	10044625-001LF
	32	57.14 5.10 9.95	609-1608-ND	3.98	2.56	2.28	10044625-104LF
	32	57.14 5.10 9.95	609-1597-ND	2.66	1.64	1.45	10028542-001LF
	32	57.14 5.10 9.95	609-1598-ND	2.86	1.77	1.56	10028542-002LF
Plugs - Right Angle PC Mount							
2	32	57.14 12.30 6.50	609-1600-ND	3.11	1.92	1.69	10035104-001LF
	32	57.14 12.30 6.50	609-1601-ND	3.16	1.95	1.72	10035104-002LF
	32	57.14 12.30 6.50	609-1602-ND	3.11	1.92	1.69	10035104-003LF
Plugs - Vertical Surface Mount							
3	29	55.34 4.00 12.00	609-1528-ND	2.00	1.19	1.07	10023060-001LF
	29	55.77 5.50 9.93	609-1547-ND	2.86	1.79	1.64	10045105-001LF
	29	45.35 5.50 8.40	609-1546-ND	2.03	1.25	1.12	10041724-001LF
	29	45.75 5.50 8.40	609-1532-ND	1.77	1.05	.93	10031193-001LF
	32	57.14 5.10 9.95	609-1609-1-ND†	3.92	2.44	2.21	10045646-001TRLF
	32	57.14 5.10 9.95	609-1609-2-ND‡	1893.15	1,000		10045646-001TRLF
Plug - Right Angle Surface Mount							
4	29	52.00 12.85 4.40	609-1534-ND	1.94	1.17	1.02	10034524-001LF
Receptacles - Vertical PC Mount							
5	29	42.73 7.00 9.85	609-1548-ND	4.09	2.73	2.45	10045782-001LF
	22	43.50 4.65 9.85	609-1549-ND	6.43	4.56	4.03	10054542-001LF
	29	45.75 5.50 9.85	609-1529-ND	2.08	1.28	1.11	10031077-001LF