



Millipacs is a standard 2.0mm Interconnect System featuring 5 and 8 contact rows and 2 rows for shielding and grounding. Millipacs is a modular system built up by a number of specific types of modules with different functions and features signal modules with up to 200 signal contacts per 50mm module (in 8 row versions). Both headers and receptacles are equipped with the well known FCI "eye of the needle" press-fit section for stable and reliable connections in the boards.

A

Features: • **Housing Material:** High-temperature thermoplastic (UL94V-0) • **Contact Base Material:** Phosphor Bronze • **Operating Temperature:** -55°C ~ 125°C • **Signal Contact Current:** 1.5A @ 20°C, 1.0A @ 70°C • **Contact Resistance:** 20mΩ Maximum • **Insulation Resistance:** 10,000MΩ Minimum • **Approvals and Certification:** UL and CSA Certified

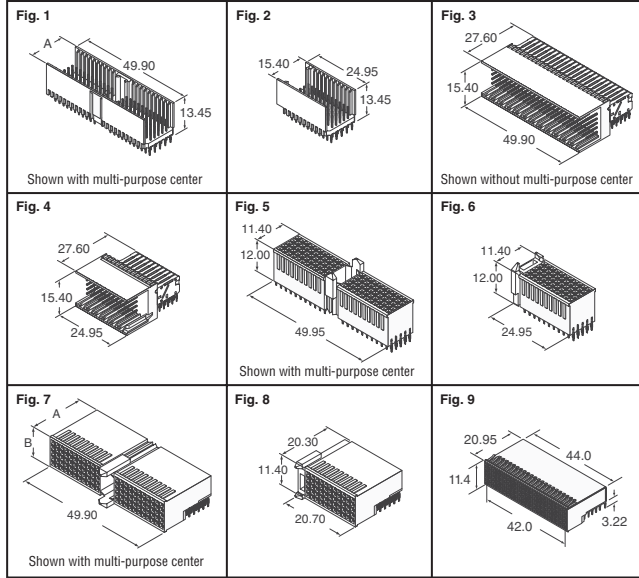


Fig.	No. of Pos.	Dimensions (mm)		Multi-Purpose Center	Shield	Digi-Key Part No.	Price Each			FCI Part No.
		A	B				1	25	100	
Vertical Headers										
1	200	21.40	—	No	Yes	609-2136-ND	12.71	8.29	7.63	HM2P88PD8111N9LF
	176	21.40	—	Yes	Yes	609-2135-ND	7.27	5.00	4.55	HM2P87PD8111N9LF
	125	15.40	—	No	No	609-2129-ND	3.36	2.11	1.93	HM2P08PD5110N9LF
	125	15.40	—	No	Yes	609-2130-ND	3.90	2.60	2.33	HM2P08PD5111N9LF
	110	15.40	—	Yes	No	609-2125-ND	2.60	1.62	1.47	HM2P07PD5110N9LF
	110	15.40	—	Yes	Yes	609-2126-ND	3.42	2.15	1.96	HM2P07PD5111N9LF
	110	15.40	—	Yes	No	609-2127-ND	7.22	5.12	4.71	HM2P07PK5110GFLF
	110	15.40	—	No	Yes	609-2134-ND	4.83	3.22	2.89	HM2P70PDE121N9LF
	2	55	—	—	No	No	609-2131-ND	2.45	1.51	1.33
55		—	—	No	Yes	609-2132-ND	3.03	1.89	1.71	HM2P09PD5111N9LF
Right Angle Headers										
3	125	—	—	No	No	609-2123-ND	7.14	5.20	4.71	HM2J08PE5110N9LF
	110	—	—	Yes	No	609-2122-ND	7.06	5.12	4.56	HM2J07PE5110N9LF
4	55	—	—	No	No	609-2124-ND	7.60	5.39	4.96	HM2J09PE5110N9LF
Vertical Receptacles										
5	110	—	—	Yes	No	609-2154-ND	7.24	4.98	4.53	HM2S10PE5100N9LF
	110	—	—	Yes	Yes	609-2155-ND	7.73	5.48	5.04	HM2S10PE5101N9LF
	125	—	—	No	No	609-2152-ND	8.54	5.70	5.17	HM2S02PE5100N9LF
	125	—	—	No	Yes	609-2153-ND	9.40	6.84	6.20	HM2S02PE5101N9LF
6	55	—	—	No	No	609-2156-ND	4.84	3.05	2.73	HM2S03PE5100N9LF
	55	—	—	No	Yes	609-2157-ND	5.09	3.53	3.12	HM2S03PE5101N9LF
Right Angle Receptacles										
7	110	20.30	11.40	Yes	No	609-2137-ND	4.01	2.53	2.27	HM2R01PA5100N9LF
	110	20.30	11.40	Yes	Yes	609-2138-ND	4.07	2.64	2.42	HM2R01PA5108N9LF
	110	20.30	11.40	Yes	No	609-2143-ND	6.75	4.18	3.69	HM2R10PA5100N9LF
	110	20.30	11.40	Yes	Yes	609-2144-ND	5.97	4.24	3.74	HM2R10PA5108N9LF
	176	22.30	17.40	Yes	No	609-2148-ND	11.41	7.94	7.20	HM2R87PA8100N9LF
	176	23.20	17.40	Yes	Yes	609-2149-ND	9.40	6.66	6.13	HM2R87PA8108N9LF
	125	20.30	11.40	No	No	609-2139-ND	4.05	2.65	2.34	HM2R02PA5100N9LF
	125	20.30	11.40	No	Yes	609-2140-ND	4.11	2.74	2.46	HM2R02PA5108N9LF
	200	22.30	17.40	No	No	609-2150-ND	12.05	8.39	7.60	HM2R88PA8100N9LF
8	55	—	—	No	No	609-2141-ND	2.45	1.43	1.31	HM2R03PA5100N9LF
	55	—	—	No	Yes	609-2142-ND	2.67	1.65	1.45	HM2R03PA5108N9LF
	55	—	—	No	No	609-2145-ND	2.45	1.43	1.31	HM2R30PA5100N9LF
	55	—	—	No	Yes	609-2146-ND	3.05	1.98	1.81	HM2R30PA5108N9LF
9	110	—	—	No	Yes	609-3631-ND	8.21	5.82	5.36	HM2R70PA5108N9LF



FCI's Metral series is a high-speed 2mm backpanel connector system consisting of right-angle receptacles and vertical headers. The Metral series features a unique stripline structure in the receptacle and outer ground shields in the header. The stripline structure allows the Metral series to have improved signal performance when routed in either a single-ended or a differential pair configuration.

Materials: • **Housing:** High-temperature, glass filled LCP, UL94V-0 • **Receptacle Contacts:** Beryllium-copper • **Header Pins:** Phosphor-bronze • **Ground Shields:** Phosphor-bronze • **Contact Area:** Selective gold over nickel • **Press-Fit Tails:** Tin

Mechanical Performance: • **Mating Force:** 0.55N maximum per contact pair including ground and shield contacts • **Withdrawal Force:** 0.20N minimum per contact pair including ground and shield contacts

Electrical Performance: • **Operating Temperature:** -55°C ~ 105°C • **Current Rating:** 1A when all contacts are powered or 3A when one contact is powered at a 30°C maximum temperature rise • **Contact Resistance:** 20 mΩ Maximum • **Insulation Resistance:** 1000 MΩ Minimum

Applications: • **Communications:** Transmissions, Access, Switches, Routers • **Data:** Servers, Storage Enclosures • **Miscellaneous:** Rack-based systems

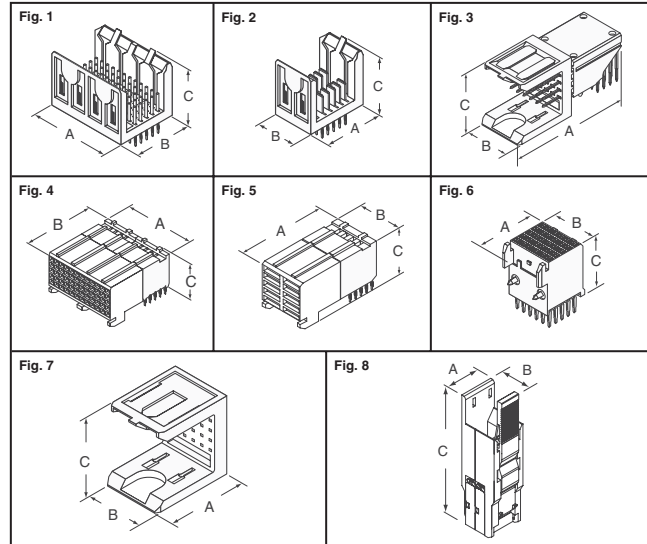


Fig.	No. of Pos.	No. of Rows	Dimensions (mm)			Digi-Key Part No.	Price Each			FCI Part No.
			A	B	C		1	25	100	
Vertical Headers										
1	24	4	11.93	15.80	17.00	609-2492-ND	2.10	1.21	1.04	70232-111LF
	30	5	11.88	17.80	17.00	609-2490-ND	7.17	4.94	4.49	55003-101003LF
	30	5	11.88	17.80	17.00	609-2491-ND	3.83	2.44	2.23	55003-101004LF
	30	5	11.88	17.80	17.00	609-2498-ND	3.53	2.24	2.05	84817-101001LF
	30	5	11.93	17.80	17.00	609-2502-ND	2.69	1.61	1.42	89006-110LF
	48	4	23.93	15.80	17.00	609-2493-ND	3.11	1.94	1.75	70233-111LF
	60	5	23.93	17.80	17.00	609-2503-ND	2.71	1.68	1.48	89007-110LF
	96	4	47.93	15.80	17.00	609-2494-ND	5.12	3.55	3.14	70234-111LF
	Vertical Power Header									
2	10	5	17.80	11.93	17.00	609-2507-ND	5.12	3.17	2.84	89099-110LF
	10	5	17.80	11.93	17.00	609-3524-ND	4.66	3.11	2.79	89099-111LF
Right Angle Header										
3	24	4	31.86	11.98	15.8	609-3602-ND	3.01	1.87	1.70	HM1L41AAP000H6PLF
Right Angle Receptacles										
4	24	4	11.95	21.15	9.35	609-2499-ND	2.47	1.45	1.26	88945-102LF
	30	5	11.95	23.15	11.35	609-2504-ND	3.06	1.73	1.56	89047-102LF
	30	5	11.98	23.70	10.80	609-2495-ND	6.38	4.52	3.99	73981-102LF
	30	5	11.98	23.85	10.80	609-2488-ND	5.71	3.89	3.50	52057-102LF
	30	5	11.98	23.85	10.80	609-2489-ND	5.95	4.05	3.58	52057-302LF
	48	4	23.95	21.15	9.35	609-2500-ND	4.24	2.57	2.35	88946-102LF
	60	5	23.95	23.15	11.35	609-2505-ND	4.74	3.16	2.83	89093-102LF
	96	4	47.95	21.15	9.35	609-2501-ND	6.91	4.52	3.99	88947-102LF
	96	8	23.98	29.70	16.80	609-2496-ND	18.60	14.23	13.02	74981-102LF
96	8	23.98	29.70	16.80	609-2487-ND	15.99	11.64	10.36	10041744-102LF	
Right Angle Power Receptacle										
5	10	5	23.14	11.95	13.30	609-2506-ND	4.21	2.24	2.05	89096-102LF
	24	5	23.14	11.95	13.30	609-3551-ND	2.31	1.43	1.26	89096-112LF
	120	5	23.15	47.95	14.25	609-3552-ND	7.63	5.41	4.98	89094-102LF
Straight Receptacle										
6	30	5	13.3	11.95	14.3	609-3603-ND	3.54	2.22	2.03	85761-1101LF
Shroud, Wide Body										
7	30	5	17.0	11.98	17.8	609-3604-ND	88	.53	.47	89055-111LF
Cable Connector Kits										
8	24	4	12.0	13.9	45.0	609-3193-ND	6.27	4.45	3.93	72476-1111LF
	24	4	12.0	13.9	45.0	609-3194-ND	4.53	3.02	2.71	72476-1121LF
	48	4	24	13.9	45.0	609-3195-ND	7.49	5.31	4.69	72477-1111LF
	48	4	24	13.9	45.0	609-3196-ND	10.58	7.70	6.98	72477-1121LF
	30	5	12.0	16.9	45.0	609-3197-ND	7.40	5.03	4.63	72478-1111LF
	30	5	12.0	16.9	45.0	609-3198-ND	6.43	4.21	3.72	72478-1121LF
	30	5	12.0	16.9	45.0	609-3119-ND	7.40	5.03	4.63	72478-1211LF
	30	5	12.0	16.9	45.0	609-3122-ND	5.94	4.21	3.72	72478-1221LF
	48	4	24.0	13.9	45.0	609-3118-ND	10.90	7.93	7.19	72477-1221LF
	60	5	24.0	16.9	45.0	609-3199-ND	7.55	5.35	4.93	72479-1111LF
	60	5	24.0	16.9	45.0	609-3200-ND	12.77	9.29	8.28	72479-1121LF
	60	5	24.0	16.9	45.0	609-3120-ND	—	—	8.28	72479-1211LF
60	5	24.0	16.9	45.0	609-3123-ND	13.00	9.46	8.43	72479-1221LF	

Free shipping on orders over £50! All prices are in British pound sterling and include duties.

502 (UK2011-EN) www.digikey.co.uk — FREEPHONE: 0-800-587-0991 • 0-800-904-7786 — FREEFAX: 0-800-587-0992 • 0-800-904-7783