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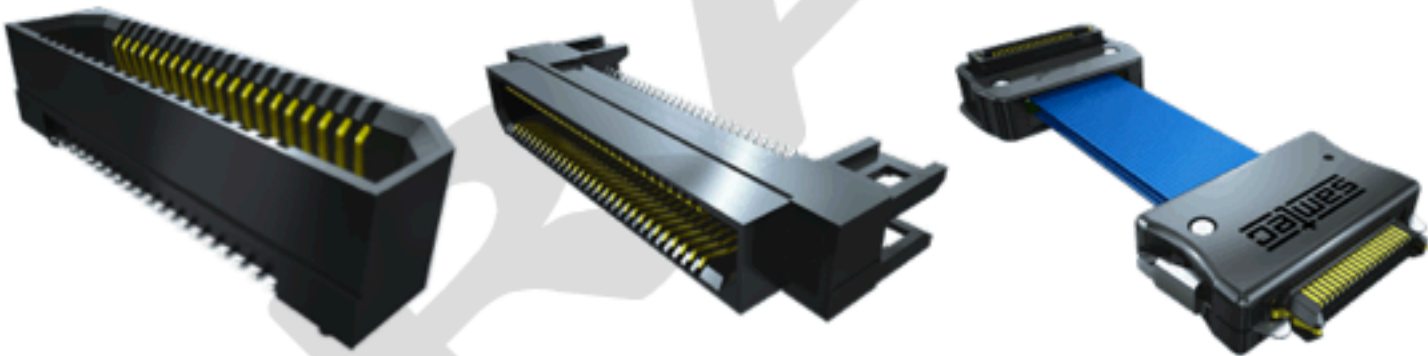
5.5.1. Standard Analogue Connector for Front Ends

As part of the development program various generic front end cards are being produced. To be able to switch between these front end modules (eg switching between ASICs or discrete ADC readout) we use a standardized front end connector.

The connector has been selected on the basis of the following

- Reasonably high density
- Wide variety of connector types (normal, right angle, edge mount etc.)
- Reasonable supply (second source options)
- Reasonable cost
- Easy of assembly (easy to solder etc)
- Availability of extensions cables in a suitable form

The chosen connector is Samtec ERF8 80 way part supporting 64 analogue signals. This is 0.8mm pitch, so easy to solder by hand if the pins are accessible. It is dual source by Hirose. Microcoax cables are available with wide options for connection topology. The female variant is used on the readout cards – this can plug directly to a male variant on a chamber or to a cable that could mate with either sex. Note that latch ground connections are important if using cables to ensure shield grounds – small mods can be made to standard Samtec cables for optimal use.



1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40

41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79
22	44	46	48	50	52	44	56	58	60	62	64	66	68	70	72	74	76	78	80

Pin connections showing signal (yellow) signal ground (green) and reserved pins (red)

The channel number within the signals pins is expanded for each of the generic front-end modules that use this connector. Typically it is not important (all channels are equivalent). Only small signals may be presented, eg HV decoupling and breakdown protection should be included on the host board.