







Hirose are a world-class Japanese manufacturer of innovative connectors that are sold across all markets of the electronics industry. Renowned for quality and reliability, their broad range offers technically advanced solutions at the leading edge of product development.

Strong capital investment and close contact with the industry enables Hirose to readily adapt to changes in connector technology through its network of production facilities across the globe and the widening of the scope of its business activities.

Constantly developing new connectors, Hirose are also able to meet the challenge of progressive miniaturisation and increased performance within a fast moving electronics environment.

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Anglia is the largest privately owned electronic component distributor in the UK and supplies a very wide range of semiconductors, opto-electronics and interconnect products together with passive and electro-mechanical components.

Awarded the prestigious 'RoHS Trusted' Kitemark, Anglia supports OEM and EMS companies in every sector of electronics manufacturing. It aims to streamline logistics and reduce customers' transaction costs through services that include KAN-BAN, EDI, and customer-dedicated inventory culminating in accurate, on-time delivery.

Technical support spans a sampling service, telephone advice from product specialists and on-site visits from field applications engineers. An in-house design team adds expert resources, helps reduce final product costs and accelerates development times.





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Hirose have an excellent reputation in the electronics industry as a world-class manufacturer of innovative connectors. To help provide a convenient overview of their product portfolio this brochure lists Hirose's primary lines under seven connector categories.

Board to Board Connectors



A comprehensive range of PCB stacking connectors, with pitches from 0.4 to 2mm. The connectors listed allow users to stack PCB's at varying heights from 0.9 to 46.2mm. Additional innovative features within this family include a shockproof DF17 range and shielded FX10, FX11 and FX12 connectors.

Series	Contact Pitch mm	Board Mounting	Stack Height mm	Number of Contacts	
DF30	DF30 0.4 SMT		0.9	20, 22, 24, 30, 34, 40, 44, 50, 60, 70, 80	
DF18	0.4	SMT	1.5	20, 24, 30, 40, 50, 60, 70, 80, 100, 120	
FX12	0.4	SMT	1.5	24, 40, 60, 80	
DF23	0.5	SMT	1.5	10, 12, 14, 16, 18, 20, 22, 30, 40, 50, 60	
DF16	0.5	SMT	2, 2.5	14, 16, 20, 30, 34, 40, 50, 60, 80	
DF12	0.5	SMT	3, 3.5, 4, 5	10, 14, 20, 30, 32, 36, 40, 50, 60, 80	
DF17	0.5	SMT	4, 5, 5.5, 6, 6.5, 7, 8	20, 26, 30, 40, 50, 60, 70, 80, 100, 120	
FX11	0.5	SMT	2, 2.5, 3	60, 68, 80, 92, 100, 116, 120, 140	
FX10 0.5		SMT	4, 5	80, 96, 100, 120, 140, 144, 168	
IT1	0.5	SMT	19, 23, 30	168, 252	
FX8	FX8 0.6		3, 4	40, 60, 80, 90, 100, 120, 140, 160, 180, 200, 240, 280	
FX8C	0.6	SMT	5 to 16, 17.5	40, 60, 80, 100, 120, 140, 160, 200, 240, 280	
DF15	0.65	SMT	4, 5, 6, 7, 8	20, 30, 40, 50	
FX6	0.8	SMT	5 to 9	12, 20, 40, 50, 60, 80, 100	
DF9	1	SMT	2.9, 4.3, 4.5	9, 11, 13, 15, 17, 19, 21, 23, 25, 31, 41, 51	
FX4	1.27	SMT / Through hole	5 to 11	20, 32, 40, 52, 60, 68, 80	
FX2 1.27		SMT / Through hole *	12 to 16, 28.2 to 46.2	20, 32, 40, 44, 52, 60, 64, 68, 80, 100, 120	
HIF6A	1.27	Through Hole *	14.8	20, 26, 32, 34, 40, 50, 52, 60, 68, 80, 100	
DF3	DF3 2 SMT / Through hole * 6.6, 7.5		6.6, 7.5	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	
DF11 2 SMT / Through hole * 7.55, 7.8, 8.2, 8.45 4, 6		4, 6, 8, 10, 12, 14, 15, 16, 18, 20, 22, 24, 26, 28, 30, 32, 40			
FX1	2	Through Hole	Right Angle only	144, 192, 216	

^{*} Right angle options are also available.

Wire to Board Connectors





Series	Contact Pitch mm	Cable Connection	Number of Contacts		
DF19	DF19 1 Crimp		8, 14, 20, 30		
DF20	1	Crimp	10, 20, 30, 40, 50		
DF13	1.25	Crimp	2 to 15, 18, 20, 30, 40		
DF14	1.25	Crimp	2 to 10, 15, 20, 25, 30		
HIF6	1.27	IDC	20, 26, 32, 34, 40, 50, 52, 60, 68, 80, 100		
FX2B	1.27	IDC	20, 32, 40, 52, 60, 68, 80, 100		
DF11*	DF11 * 2 Cr		4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32		
DF3*	2	Crimp / IDC	2 to 15		
DF4	2	Crimp	2 to 16, 18, 20, 22, 24, 26, 28, 30, 32		
DF1E	2.5	Crimp	2 to 15		
DF1B	2.5	Crimp / IDC	2 to 16, 18, 19, 20, 22, 23, 24, 26, 28, 30, 32, 34, 36, 40		
DF1	2.5	Crimp / IDC	2 to 16, 18, 20		
HNC	2.5	Crimp	2 to 8, 10, 12, 15		
DF2*	2.5	Crimp	2 to 16, 18, 20		
A1	2.54	Crimp	4, 6, 8, 9, 10, 12, 14, 16, 18, 20, 24, 26, 30, 34, 36, 40, 50, 60, 64		
A2 & A3	2.54	Crimp	1 to 20, 22, 24, 26, 28, 30, 32, 36, 40, 43, 44, 47, 48, 49, 50, 62		
MDF6*	3.5	Crimp	4, 6, 8, 10, 12, 14, 16, 18, 20		
DF6	3.96	Crimp	1 to 8, 10		
DF5	5	Crimp	2 to 10, 12, 14, 16		

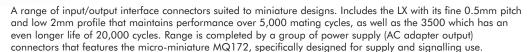
^{*} UL / CSA Approved

FPC/FFC Connectors

Flexible printed circuit / flat flexible cable connectors, with pitches from 0.3 to 1.0mm and heights as low as 0.9mm, which can cater for a variety of applications. Unique features include latches that are hinged along the whole length of the connector whilst some also feature latches that will self close when the latch is actuated.

Series	Contact Pitch mm	Height above Board mm	Applicable FPC/FFC Thickness	Number of Contacts
FH26	0.3	1	0.2	13, 15, 17, 21, 23, 25, 27, 29, 31, 33, 35, 39, 41, 45, 51, 55, 57, 61, 71
FH23	0.3	1.25	0.2	15, 17, 21, 23, 25, 27, 31, 33, 37, 39, 45, 61, 71
FH27	0.4	1.2	0.2	10, 26, 40, 50, 54, 57, 60
FH19	0.5	0.9	0.2 or 0.3	4 to 18, 20, 21, 22, 24, 26, 27, 28, 30, 32, 40, 45, 50
FH28	0.5	2.55	0.3	20, 30, 40, 50, 55, 60, 64, 68, 74, 80
FH12	0.5 / 1.0	2	0.18 or 0.3	4 to 20, 22, 24, 25, 26, 28, 29, 30, 32 to 36, 40, 42, 45, 49, 50, 53, 60

Interface Connectors



Series	Contact Pitch mm	No. of Contacts	Height of PCB mm	Notes
LX	0.5	12, 16, 20	2	Snap Lock, Sequential mating
ST	0.5	10, 18, 24, 36	3	Shielded, Latched, Docking options
UX	0.8	5	3.95	USB 2.0 (480Mbps)
ZX	0.65	5	2.5	Micro USB
3500	0.8	10, 16, 24	5.3	Shielded, Latched, Docking options
3200	0.8	8, 10	2.9	Shielded, Latched
3100	1.27	6, 8, 12, 16	7	Shielded, Latched, straight or right angled cable entry
QM	1.78	8, 14, 26, 32	8.1	Shielded, Latched or Snap Lock, straight or angled cable entry
MD	0.5 / 1.0	19	5.5	High-Definition Multimedia Interface (HDMI)

Power Supply Connectors

Series	Contact Pitch mm	No. of Height of PCB Contacts mm		Notes
MQ172	0.8	3, 4	3.9	Snap Lock, 3 Amp rating, for power supply or signal
RP34L	-	2, 3	5 or 6.1	Snap Lock, 5 Amp rating, straight or right angled cable entry
RP34	-	3, 4	10	Snap Lock, 3 Amp rating, straight or right angled cable entry

Memory Card Connectors

Hirose have been manufacturing memory card connectors for all standards from the first PCMCIA cards, through CompactFlash $^{\text{TM}}$, onto the latest SD $^{\text{TM}}$, miniSD $^{\text{TM}}$ and microSD $^{\text{TM}}$ /TransFlash $^{\text{TM}}$ connectors with one of the smallest packages available today.

Series	Туре	Description		
DM1	SD™	Push to latch, Push to unlatch, Standard or reverse mounting		
DM2	MiniSD™	Push to latch, Push to unlatch, Standard or reverse mounting		
DM3	MicroSD™/TransFlash™	Push to latch, Push to unlatch, Flip lid, Std or reverse mounting		
MI20, MI21 CompactFlash™		Standard or Reverse mounting, With or without ejectors		
CB1	Memory Stick®	Push to latch, Push to unlatch, With or without ejectors		
IC7, 11, 14 & 15	PC Card (PCMCIA)	Single slot PCMCIA connector, Standard or reverse mounting		
IC1 PC Card (PCMCIA)		PC card socket used on PCMCIA cards		
ID1 SIM Socket		Slide lock cover		
ID2	Smart Card	Suitable for cards conforming to ISO-7816		

Coaxial Connectors

Hirose can provide a complete range of miniature coaxial solutions with profiles as low as 1.4mm high and a performance up to 6GHz. Products such as the U.FL have become the de facto standard interface in many wireless & GSM modules. Coaxial switches, developed for the inspection of high frequency circuits, completes the group with the MS156NB having a height of just 1.6mm.

Coaxial Wire to PCB Connectors

Series	Mated Height	Impedance	Frequency	Cable Diameter
W.FL	1.18, 1.4 & 1.65mm	50Ω	DC - 6GHz	0.81mm
N.FL	1.4mm	50Ω	DC - 6GHz	0.81mm
U.FL	2.0, 2.4 & 2.5mm	50Ω	DC - 6GHz	0.81, 1.0, 1.13, 1.32, 1.37mm
H.FL	3.0mm	50Ω & 75Ω	DC - 3GHz	1.48mm
E.FL	3.0mm	50Ω	DC - 2GHz	0.8, 1.32mm

Coaxial Connectors With Integral Switch

Series	Height of PCB	Impedance	Frequency	Notes
MS145NB	6.0mm	50Ω	DC - 2.5GHz	10,000 mating cycles
MS147	3.9mm	50Ω	DC - 6GHz	12,000 mating cycles
MS151	7.3mm	50Ω	DC - 6GHz	Click latching
MS156NB	1.6mm	50Ω	DC - 6GHz	Test switch
MS162	2.5mm	50Ω	DC - 10GHz	12,000 mating cycles

Circular Connectors



Synonymous with connectors used in professional broadcast equipment Hirose can also offer a vast portfolio of metal and plastic circular connectors, which includes environmental types that meet IP67. The range delivers numerous options from 1 contact to 55 contact positions, current ratings up to 40 Amps and push-pull, bayonet or screw locking mating actions.

Metal Connectors

Series	Number of Contacts	Shell Size mm	Locking Method	Features
RM	2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 20, 31, 40, 55	12, 15, 21, 24, 31	Bayonet, Screw	Waterproof options
RM-W	2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 31, 40, 55	12, 15, 21, 24, 31	Screw	Waterproof to IP67, Right angle backshell
JR	3, 4, 5, 7, 8, 10, 14, 16, 24, 26	13, 16, 21, 25	Screw	JIS C 5432
JR*W	3, 4, 5, 7, 8, 10, 16, 24, 34	13, 16, 21, 25	Screw	JIS C 5432 Waterproof
HS	2, 3, 4, 5, 6, 7, 8, 10, 12, 16, 20	12, 14, 16, 21, 25, 28, 35	Screw	-
HR22	13, 20	12	Screw	-
HR10 & HR10A	4, 5, 6, 10, 12, 20	7, 10, 13	Push Pull	Used on broadcast equipment
НА	3, 4, 5, 6, 7, 9, 12	16	Push Latch	Audio XLR connector
HR25	4, 6, 8, 12, 16, 20	7, 9	Screw, Push Pull	Waterproof options
MXR	3, 4, 6, 8	8	Push Pull	Miniature microphone connector
SR30 & SR38	3, 4, 6, 7	4, 10	Screw, Push Pull	Miniature microphone connector
LF	3, 4, 6, 12	7, 10	Bayonet	Shielded, IP67

Plastic Connectors

	Series	Number of Contacts	Shell Size mm	Locking Method	Description
	HR30	3, 6, 10, 12	6, 7, 8	Push Pull	Waterproof to IP67
	RP13	13, 15, 20	12	Push Pull	ESD options
	RP17	12	13	Push Pull	3 contacts rated 5A, 9 contacts rated 2A
	RPC & RP9	3, 4, 6, 7	7, 12	Push Latch	Current rating 5A & 1A
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