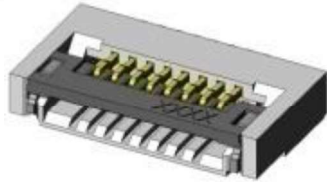


EV Connector for Automotive Application - 0.5mm Pitch

Part Number	1870200	1870201-51AE1N001
3D sketch		
Pitch (mm)	0.5	0.5
Height (mm)	12.50(total height) 10.37(over the PCB)	5.06(total height) 3.66 (over the PCB)
Pin count (pin)	51	51
Orientation	Vertical	Right Angle
Type	LVDS 32	LVDS 33
Mounting Process	Reflow SMT	Reflow SMT
Contact Direction	Single & Vertical Contact	Single & Upper Contact
Current rating	0.5A	0.5A
Rating Voltage (VDC)	200V	200V
Operating Temperature Range (°C)	-40~+125	-40~+125
Durability (cycles)	50	50

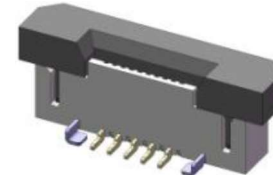
Various FPC Connector Product Types



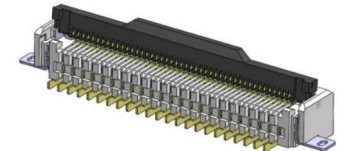
Front Flip



Back Flip



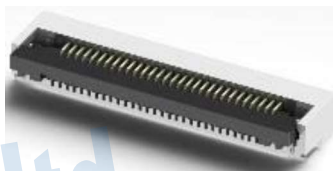
Vertical Slide



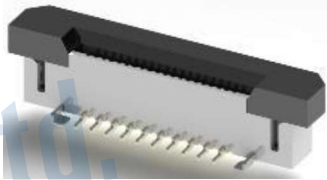
Sink type

Flip Type	Terminal pitch	Height	Contact type	Pin count	cable thickness	Notch option
Back flip	0.3mm	0.8mm, 0.9mm, 1.0mm	Single (lower & upper contact)	71	0.2mm	Without
	0.5mm	0.85mm, 1.0mm, 1.2mm, 2.5mm	Single (lower & upper contact)	4 ~ 80	0.12mm, 0.3mm	With & without
	0.5mm	1.6mm, 1.8mm, 2.0mm, 2.7mm	Dual & lower contact	6 ~ 60	0.3mm	With & without
	0.8mm	1.5mm	Single lower contact	30	0.3mm	with
	1.0mm	1.2mm, 1.5mm, 1.8mm, 2.7mm	Single (lower & upper contact)	4 ~ 30	0.3mm	With & without
Front flip	0.3mm	1.0mm	Single (lower contact)	13 ~ 61	0.2mm	Without
	0.4mm	2.2mm	Dual (lower contact)	80~120pin	0.3mm	With
	0.5mm	0.9mm, 1.1mm, 1.35mm, 1.55mm	Single (lower contact), Dual (lower contact)	4 ~ 96	0.3mm	With & without
	0.5mm	1.0mm, 1.27mm	Single (upper contact), Dual (upper contact)	6 ~ 34	0.3mm	With
	0.5mm	1.75mm, 1.8mm, 2.0mm	Single (lower contact), Dual (lower contact)	4 ~ 80	0.3mm	With & without
	0.5mm	2.1mm 2.2mm, 2.5mm, 2.55mm	Single (lower contact), Dual (lower contact)	8 ~ 96	0.3mm	With & without
	0.8mm	1.2mm, 1.8mm, 2.0mm	Single (lower contact), Dual (lower contact)	26 ~ 42	0.3mm	With & without
	1.0mm	1.5mm, 1.75mm, 2.0mm, 2.25mm	Single (lower contact)	4 ~ 32	0.3mm	With & without
	0.5mm	4.0mm (Sink type)	Single (top contact)	45	0.3mm	With
Ground function	0.5mm	2.1mm, 2.5mm	Single (lower contact), Dual (lower contact)	20 ~ 80	0.3mm	With
Front flip	0.5mm	2.55mm (HDMI 1.4 & 2.0 / LVDS)	Dual (lower contact)	74	0.3mm	With & without

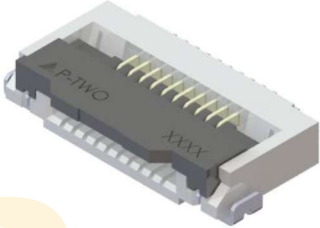
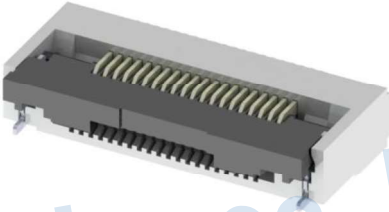
FPC for Automotive Application

Part Number	196415-XXXXX-36	1961014	1961002	196588
3D sketch				
Pitch (mm)	0.5	0.5	0.5	0.5
Height (mm)	1.75	2.0	2.55	2.5
Pin count (pin)	6/8/10/12/15/18/20/24/30/40/50/60/64/68/80	68	6/8/10/12/15/16/18/20/24/30/40/45/50/55/60/68/70/80	8/10/12/30/40/50/60
Flip type	Front type	Front type	Front type	Front type
Orientation	Right Angle	Right Angle	Right Angle	Right Angle
Mounting Process	SMT	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ Inner Notch
Contact type	Single & Lower Contact	Single & Lower Contact	Dual & Lower Contact	Dual & Lower Contact
Transmission SPEC	HDMI-1.4&2.0/ USB2.0/USB3.0/USB3.1 Gen1&2/USB3.2 Gen1&2/Disport 100Ω	HDMI-1.4&2.0/ USB2.0/USB3.0/USB3.1 Gen1&2/USB3.2 Gen1&2/Disport 100Ω	USB2.0/MIPI	-----
Current rating	0.5A	0.4A	0.4A	0.4A
Voltage	50V	50V	50V	50V

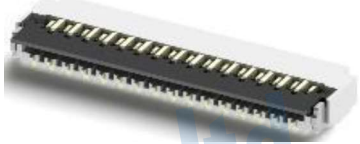
FPC for Automotive Application

Part Number	196598	1961008	196541	196564
3D sketch				
Pitch (mm)	0.5	0.5	1.0	0.5
Height (mm)	2.5	2.55	2.0	5.5
Pin count (pin)	20/30/40/50/60/68	10/15/20/30/40/60/68/74	8/10/14/18/30	20/40/50/60
Flip type	Front type	Front type	Front type	Vertical type
Orientation	Right Angle	Right Angle	Right Angle	Vertical
Mounting Process	SMT	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ Inner Notch
Contact type	Single & Lower Contact Dual & Lower Contact w/GND	Dual & Lower Contact	Dual & Lower Contact	Dual Contact
Transmission SPEC	HDMI 1. 4 & 2.0	HDMI 1.4 & 2.0 / LVDS	-----	MIPI
Current rating	0.4A	0.4A	1.0A	0.4A
Voltage	50V	50V	50V	50V

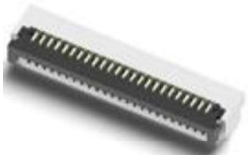
FPC for Automotive Application

Part Number	1961024	1961025
3D sketch		
Pitch (mm)	0.5	0.4
Height (mm)	2.0	2.5
Pin count (pin)	10	80, 100, 120
Flip type	Front type	Front type
Orientation	Right Angle	Right Angle
Mounting Process	SMT	SMT
FPC/FPC thickness & Lock Type	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ External Prominent
Contact type	Dual & Lower Contact	Dual & Lower Contact
Transmission SPEC	LVDS	HDMI 1.4 & 2.0 / LVDS
Current rating	0.4A	0.4A
Voltage	50V	50V

FPC for Consumer Application – 0.3mm Pitch

Part Number	196533	196673 / 1960673	196200 / 196551
3D sketch			
Pitch (mm)	0.3	0.3	0.3
Height (mm)	0.9	0.9	1.0
Pin count (pin)	11/15/17/19/21/25/35/41/45/ 51/61	7/71	13/15/17/21/23/25/27/ 31/33/35/39/41/45/51/61
Flip type	Back Flip	Back Flip	Front Flip
Mounting Process	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC 0.2mm/None	FPC 0.2mm/ None & External Prominent	FPC 0.2mm/None
Contact type	Single & Lower/ Upper Contact	Single & Lower/ Upper Contact	Single & Lower Contact
Transmission SPEC	MIPI	USB2.0/USB3.0/USB3.1Gen1 /USB3.2 Gen1	USB3.0/USB3.1Gen1 / USB3.2 Gen2
Current rating	0.2A	0.2A	0.2A
Voltage	30V	30V	30V

FPC for Consumer Application – 0.5mm Pitch (Front Flip)

Part Number	196294	196447	196660 / 196695	196688	196678	196666
3D sketch						
Pitch (mm)	0.5	0.5	0.5	0.5	0.5	0.5
Height (mm)	0.9	0.9	1	1	1.1	1.1
Pin count (pin)	4/6/8/10/12/13/14/ 20/24/30	4/6/8/9/10/15/30	6/8/10/12/20/34	8	6/8	6/8/10
Flip type	Front Flip	Front Flip	Front Flip	Front Flip	Front Flip	Front Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC/FFC 0.3mm/ None	FPC/FFC 0.2mm/ None	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ External Prominent
Contact type	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact
Current rating	0.5A	0.5A	0.5A	0.5A	0.5A	0.5A
Voltage	50V	50V	50V	50V	50V	50V

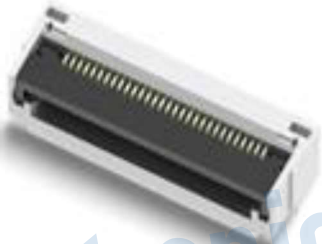
FPC for Consumer Application – 0.5mm Pitch (Front Flip)

Part Number	196665	196668	196597	196479	196570
3D sketch					
Pitch (mm)	0.5	0.5	0.5	0.5	0.5
Height (mm)	1.25	1.27	1.35	1.55	1.55
Pin count (pin)	40	32	8	4/6/8/10/12/15/16/20/24/ 30/33/40/45	96
Flip type	Front Flip	Front Flip	Front Flip	Front Flip	Front Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness& Lock Type	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.30mm/ Inner Notch	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.3mm/ None	FFC 0.3mm/ Inner Notch
Contact type	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact
Current rating	0.5A	0.5A	0.5A	0.5A	0.4A
Voltage	50V	50V	50V	50V	50V

FPC for Consumer Application – 0.5mm Pitch (Front Flip)

Part Number	196415-XXXXX-3 / 1960415	196538	196225	196614	196527 / 1960527
3D sketch					
Pitch (mm)	0.5	0.5	0.5	0.5	0.5
Height (mm)	1.75	1.75	1.8	1.8	1.8
Pin count (pin)	4/6/8/11/12/15/18/20/24/ 26/30/32/40/50/60	30/34/40	60/80	60/68/80	30/40/45/50/60/64/ 68/72/80
Flip type	Front Flip	Front Flip	Front Flip	Front Flip	Front Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC/FFC 0.3mm/ None & External Prominent	FPC/FFC 0.3mm/ None & External Prominent	FPC/FFC 0.3mm/ None & External Prominent	FPC/FFC 0.3mm/ None & External Prominent	FPC/FFC 0.3mm/ None & External Prominent
Contact type	Single & Lower Contact	Single & Lower Contact	Dual & Lower Contact	Dual & Lower Contact	Single & Lower Contact
Current rating	0.5A	0.5A	0.5A	0.5A	0.5A
Voltage	50V	50V	50V	50V	50V

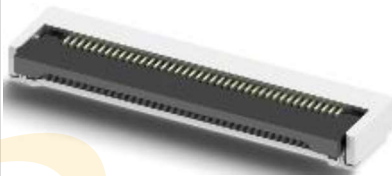
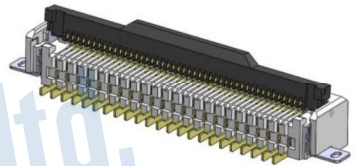
FPC for Consumer Application – 0.5mm Pitch (Front Flip)

Part Number	196033	196332	196522	196395/196677	196625
3D sketch					
Pitch (mm)	0.5	0.5	0.5	0.5	0.5
Height (mm)	2	2	2	2	2
Pin count (pin)	4/5/6/7/8/9/10/12/13/14/15/ 16/17/18/20/22/24/25/26/ 28/30/32/34/36/40/45/50	4/5/6/8/10/12/14/16/17/18/ 20/22/24/25/26/28/30/32/ 34/36/40/45/50	14/20/22/30/40	60	26
Flip type	Front Flip	Front Flip	Front Flip	Front Flip	Front Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/None & External Prominent	FPC/FFC 0.3mm/None
Contact type	Single/Dual & Lower Contact	Dual & Lower Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact
Transmission SPEC	-----	-----	-----	DisplayPort 1.4 HBR3	-----
Current rating	0.5A	0.5A	0.5A	0.5A	0.5A
Voltage	50V	50V	50V	50V	50V

FPC for Consumer Application – 0.5mm Pitch (Front Flip)

Part Number	196595/196616	196657/196687	196070
3D sketch			
Pitch (mm)	0.5	0.5	0.5
Height (mm)	2.1	2.1	2.2
Pin count (pin)	30/51	51/60/68/80	30/40/50/55/56/60/64
Flip type	Front Flip	Front Flip	Front Flip
Mounting Process	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.3mm/ None
Contact type	Dual & Lower Contact w/GND	Dual & Lower Contact w/GND	Single & Lower Contact
Current rating	0.5A	0.5A	0.5A
Voltage	50V	50V	50V

FPC for Consumer Application – 0.5mm Pitch (Front Flip)

Part Number	196112	196119	196637	1961005
3D sketch				
Pitch (mm)	0.5	0.5	0.5	0.5
Height (mm)	2.5	2.55	2.55	4.25
Pin count (pin)	8/30/45/51/55/61/80	30/40/41/50/60/64/81	8/10/12/15/20/30/40/50/60/68	45
Flip type	Front Flip	Front Flip	Front Flip	Sink type Front Flip
Mounting Process	SMT	SMT	SMT	SMT
FFC/FPC thickness& Lock Type	FPC/FFC 0.3mm/ None & External Prominent	FPC/FFC 0.3mm/ None & External Prominent	FPC/FFC 0.3mm/ None & External Prominent	FPC/FFC 0.3mm/ None
Contact type	Single & Lower Contact	Dual & Lower Contact	Dual & Lower Contact	Dual & upper contact
Current rating	0.5A	0.4A	0.4A	0.5A
Voltage	50V	50V	50V	50V

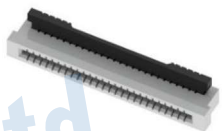
FPC for Consumer Application – 0.5mm Pitch (Back Flip)

Part Number	196601	196640	196545	196650	196655	196670	196684
3D sketch							
Pitch (mm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Height (mm)	0.85	1	1	1	1	1	1
Pin count (pin)	8	4/5/6/8/10/12/14/15/16/18/20/22/24/26/30/32/34/40/45	6	20/30/40/50	6	6	30/40/50
Flip type	Back Flip	Back Flip	Back Flip	Back Flip	Back Flip	Back Flip	Back Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC/FFC 0.12mm/ Inner Notch	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.3mm/ None
Contact type	Single & Lower Contact	Single & Lower/ Upper Contact	Single & Lower/ Upper Contact	Single & Lower/ Upper Contact	Single & Lower/ Upper Contact	Single & Lower/ Upper Contact	Single & Lower/ Upper Contact
Transmission SPEC	NA	USB 4 / Thunderbolt-4 / type C / PCIe	NA	USB 4 / Thunderbolt-4 / type C / PCIe	USB 4 / Thunderbolt-4 / type C / PCIe	USB 4 / Thunderbolt-4 / type C / PCIe	USB 4 / Thunderbolt-4 / type C / PCIe
Current rating	0.3A	0.5A	0.5A	0.5A	0.5A	0.5A	0.5A
Voltage	50V	50V	50V	50V	50V	50V	50V

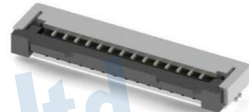
FPC for Consumer Application – 0.5mm Pitch (Back Flip)

Part Number	196357	196652	196433	196532/196651	196356	196182
3D sketch						
Pitch (mm)	0.5	0.5	0.5	0.5	0.5	0.5
Height (mm)	1.2	1.6	1.8	2	2.5	2.7
Pin count (pin)	4/8/10/12/15/24/30	42	8/12/15/20	6/10/12/30/32/40/50/60	20/40/41/51	8/9/10/30/41/51
Flip type	Back Flip	Back Flip	Back Flip	Back Flip	Back Flip	Back Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ None	FPC/FFC 0.33mm/ Inner Notch	FPC/FFC 0.3mm/ None
Contact type	Single & Lower/ Upper Contact	Dual & Lower Contact	Dual & Lower Contact	Dual & Lower/ Upper Contact	Single & Lower Contact w/GND	Dual & Lower Contact
Current rating	0.5A	0.5A	0.5A	0.5A	0.5A	0.5A
Voltage	70V	50V	50V	50V	50V	50V

FPC for Consumer Application – 0.8mm Pitch

Part Number	196579	196451	196546 / 1960546	196391	196528
3D sketch					
Pitch (mm)	0.8	0.8	0.8	0.8	0.8
Height (mm)	1.2	1.75	1.8	2	1.5
Pin count (pin)	30	26/30/32	36/40/42	26/34	30
Flip type	Front Flip	Front Flip	Front Flip	Front Flip	Back Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness & Lock Type	FPC /FFC 0.2mm/ Inner Notch	FPC/FFC 0.3mm/ None & External Prominent	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ None	FPC/FFC 0.2mm/ Inner Notch
Contact type	Single & Lower Contact	Single & Lower Contact	Dual & Lower Contact	Single & Lower Contact	Single & Lower/ Upper Contact
Current rating	0.5A	0.5A	0.5A	0.5A	0.5A
Voltage	50V	50V	50V	50V	50V

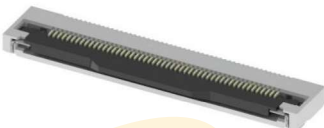
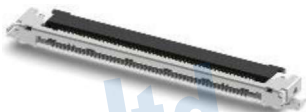
FPC for Consumer Application – 1.0mm Pitch (Front Flip)

Part Number	196087	196503	196047	196301	196090
3D sketch					
Pitch (mm)	1.0	1.0	1.0	1.0	1.0
Height (mm)	1.5	1.75	2.0	2.0	2.25
Pin count (pin)	4/6/7/8/9/10/12/14/ 18/24/28/30	4/6/8	4/5/6/7/8/9/10/12/ 14/24/26/30	10/26/32	4/10/11/15/16/20/ 22/24/25/26/30
Flip type	Front Flip	Front Flip	Front Flip	Front Flip	Front Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness& Lock Type	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/None & External Prominent	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ External Prominent	FPC/FFC 0.3mm/ None
Contact type	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact
Current rating	0.5A	0.5A	0.5A	0.5A	0.5A
Voltage	50V	50V	50V	50V	50V

FPC for Consumer Application – 1.0mm Pitch (Back Flip)

Part Number	196496	196539	196507	196161	196508
3D sketch					
Pitch (mm)	1.0	1.0	1.0	1.0	1.0
Height (mm)	1.2	1.5	1.8	2.7	2.7
Pin count (pin)	6	24	8	5/8/30	4/6/8/10/15/20/30
Flip type	Back Flip	Back Flip	Back Flip	Back Flip	Back Flip
Mounting Process	SMT	SMT	SMT	SMT	SMT
FFC/FPC thickness& Lock Type	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.3mm/ None	FPC/FFC 0.3mm/ Inner Notch
Contact type	Single & Lower/ Upper Contact	Single & Lower/ Upper Contact	Single & Lower Contact	Single & Lower Contact	Single & Lower Contact
Current rating	0.5A	0.5A	1.0A	0.5A	1.0A
Voltage	70V	50V	125V	50V	125V

FPC for Consumer Application with Grounding Function

Part Number	1960616	196657/196687	196356
3D sketch			
Pitch (mm)	0.5	0.5	0.5
Height (mm)	2.1	2.1	2.5
Pin count (pin)	30/51	51/60/68/80	20/40/41/51
Flip type	Front Flip	Front Flip	Back Flip
Mounting Process	SMT	SMT	SMT
FFC/FPC thickness& Lock Type	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.3mm/ Inner Notch	FPC/FFC 0.33mm/ Inner Notch
Contact type	Dual & Lower Contact w/GND	Dual & Lower Contact w/GND	Single & Lower Contact w/GND
Current rating	0.5A	0.5A	0.5A
Voltage	50V	50V	50V