
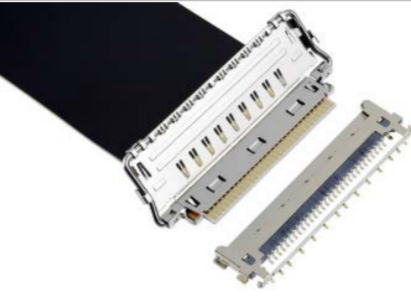
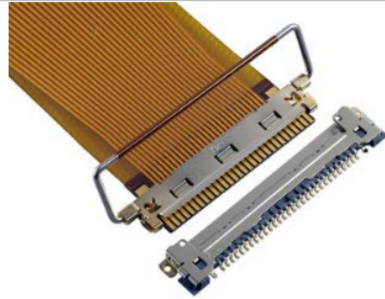


# Micro-coaxial connectors / Horizontal mating type / 0.5 mm pitch

(Related series FPC connectors)

↓ Click the photos below to get more detailed product information.






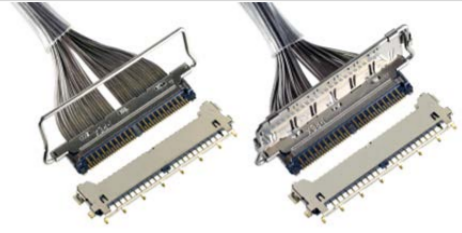
Product name		CABLIN <sup>®</sup> -VS II	CABLIN <sup>®</sup> -VS IIF	CABLIN <sup>®</sup> -VS	CABLIN <sup>®</sup> -VSF
Feature					
		High-speed (20+ Gbps) Full EMI shielding cover Mechanical locking	Full EMI shielding cover VS IIF plug mates to VS II rece. Mechanical locking	VESA standard for 16:9 panel High-speed (20+ Gbps) Mechanical locking	VSF plug mates to VS rece. Mechanical locking
Plug Assembly P/N		20846	20862	20704	20645
Receptacle P/N		20849	20849	20765	20765
Mating Type		Horizontal	Horizontal	Horizontal	Horizontal
Wire (FPC) Pitch (mm)		0.5	0.5	0.5	0.5
Board Pitch (mm)		0.5	0.5	0.5	0.5
Pin Count	Range	10 – 55	10 - 55	10 – 50	10 - 50
	Available	30, 40	30, 40	20, 30, 40, 50	30, 40
Please inquire for pin counts not listed as available or outside of the pin count range.					
Mated Size (mm) (***)	Height	1.2 max. with cover	1.2 max. with cover	1.0 +/- 0.1	1.0 +/- 0.1
	Width Formula	6.85 + (0.5*?p)	6.85 + (0.5*?p)	7.55 + (0.5*?p)	7.55 + (0.5*?p)
	Depth	6.70	7.24	5.80	5.97
Wiping Length (mm)		0.54	0.48	0.61	0.62
Applicable Wire (AWG#) (*)	Micro-coax for Signals (**)	45Ω : #36 or smaller wire	Shielded FPC  FPC thickness: 0.25 +0.02 / -0.03 mm	45Ω : #36 or smaller wire	Shielded/Non-shielded FPC  FPC thickness: 0.28 +0.02 / -0.03 mm
		50Ω : #38 or smaller wire		50Ω : #38 or smaller wire	
	Twincoax	#40		#40	
	Discrete	#32 or smaller wire	#32 or smaller wire		
Contact Point		Top	Top	Top	Top
Compatibility		-	VS IIF plug mates to VS II rece. (20849)	VS rece. can be mounted on VS II rece. PCB layout	VSF plug mates to VS rece. (20765)
Performance (Reference Only)		Thunderbolt™ 3 (20 Gbps/lane) USB® 3.1 Gen 2 (10 Gbps) eDP HBR 3 (8.1 Gbps) HDMI® 2.0 (6 Gbps)	Depends on FPC Impedance Controlled Design	Thunderbolt 3 (20 Gbps/lane) USB 3.1 Gen 2 (10 Gbps) eDP HBR 3 (8.1 Gbps) HDMI 2.0 (6 Gbps)	Depends on FPC Impedance Controlled Design

Note (\*): Wire outer diameter needs to be smaller than connector pitch. Note (\*\*): Non-impedance controlled wire MCX-AWG36 Ø0.39mm is available for control signals and power signals. Note (\*\*\*): Width formula and Depth dimensions are including lock bar.

# Micro-coaxial connectors / Horizontal mating type / 0.4 mm and smaller pitch

(Related series FPC connectors)




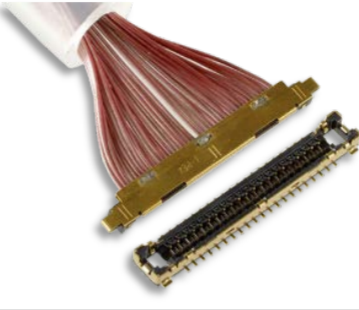
Click the photos below to get more detailed product information.

Product name		CABLINE® -CA II PLUS	CABLINE® -CA II	CABLINE® -CA IIF	CABLINE® -CA	CABLINE® -CAL	CABLINE® -CX II
Features							
		High-speed (20+ Gbps) Full EMI shielding cover Mechanical locking	High-speed (20+ Gbps) Full EMI shielding cover Mechanical locking	Full EMI shielding cover CA IIF plug mates to CA II rece. Mechanical locking	High-speed (20+ Gbps) Mechanical locking	Mating height 0.8 mm max. High-speed (20+ Gbps) Mechanical locking	Mating height 0.78 mm max. EMI shield cover option Mechanical locking
Plug Assembly P/N		20788	20679	20856	20736	20728	Without cover : 20845 / With cover : 20844
Receptacle P/N		20790	20682	20682	20738	20729	20835
Mating Type		Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Wire Pitch (mm)		0.4	0.4	0.4	0.4	0.4	0.25
Board Pitch (mm)		0.4	0.4	0.4	0.4	0.4	0.5
Pin Count	Range	6 - 60	6 - 60	6 - 60	6 - 60	10 - 40	6 - 40
	Available	60	20, 30, 40, 50	40	10, 12, 20, 30, 40, 50, 60	30, 40	40
Please inquire for pin counts not listed as available or outside of the pin count range.							
Mated Size (mm) (***)	Height	1.2 max. with cover	1.1 max. with cover	1.1 max. with cover	1.0 +/- 0.1	0.7 +/- 0.1	Without cover : 0.73 +0.05, -0.10 With cover : 1.0 max. with cover
	Width Formula	6.95 + (0.4*?p)	6.95 + (0.4*?p)	6.95 + (0.4*?p)	6.95 + (0.4*?p)	10 - 20p : 6.85 + (0.4*?p) 22p - 40p : 8.05 + (0.4*?p)	6.45 + (0.25*?p)
	Depth	6.70	6.20	6.74	5.73	5.50	Without cover : 5.21 / With cover : 5.60
Wiping Length (mm)		0.54	0.54	0.48	0.54	0.40	0.54
Applicable Wire (AWG#) (*)	Micro-coax for Signals (**)	45Ω : #38 or smaller wire	45Ω : #38 or smaller wire	Shielded FPC  FPC thickness: 0.25 +0.02 / -0.03 mm	45Ω : #38 or smaller wire	45Ω : #38 or smaller wire	45Ω : #44 or smaller wire
		50Ω : #40 or smaller wire	50Ω : #40 or smaller wire		50Ω : #40 or smaller wire	50Ω : #40 or smaller wire	50Ω : #46 or smaller wire
	Twincoax	#40	#40		#40	-	-
	Discrete	#34 or smaller wire	#34 or smaller wire	#34 or smaller wire	#34 or smaller wire	#34 or smaller wire	#39
Contact Point		Top	Top	Top	Top	Top	Top & Bottom
Compatibility		-	-	CA IIF plug mates to CA II rece. (20682)	CA rece. can be mounted on CA II & CA II PLUS PCB layout	-	-
Performance (Reference Only)		Thunderbolt™ 3 (20 Gbps/lane) USB® 3.1 Gen 2 (10 Gbps) eDP HBR 3 (8.1 Gbps) HDMI® 2.0 (6 Gbps)	Thunderbolt 3 (20 Gbps/lane) USB 3.1 Gen 2 (10 Gbps) eDP HBR 3 (8.1 Gbps) HDMI 2.0 (6 Gbps)	Depends on FPC Impedance Controlled Design	Thunderbolt 3 (20 Gbps/lane) USB 3.1 Gen 2 (10 Gbps) eDP HBR 3 (8.1 Gbps) HDMI 2.0 (6 Gbps)	Thunderbolt 3 (20 Gbps/lane) USB 3.1 Gen 2 (10 Gbps) eDP HBR 3 (8.1 Gbps) HDMI 2.0 (6 Gbps)	USB 3.1 Gen 1 (5 Gbps) V-By-One HS 1.4 (4 Gbps) HDMI 1.3 (3.4 Gbps)

Note (\*): Wire outer diameter needs to be smaller than connector pitch. Note (\*\*): Non-impedance controlled wire MCX-AWG36 Ø0.39mm is available for control signals and power signals. Note (\*\*\*): Width formula and Depth dimensions are including lock bar.

# Micro-coaxial connectors / Right angle vertical mating type

Click the photos below to get more detailed product information.

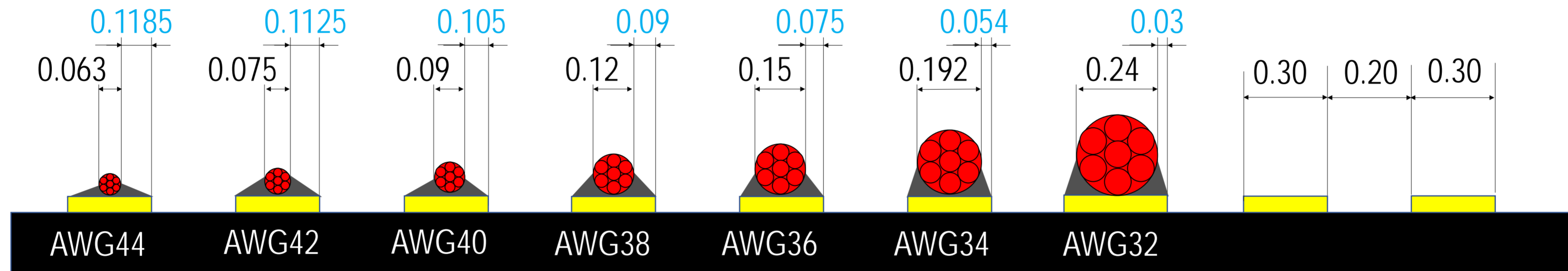
Product name		FPL II	CABLINE®-SS	CABLINE®-UA II & UA III	CABLINE®-UX II
Features					
		0.5 mm pitch High retention force	0.4 mm pitch High retention force	0.3 mm pitch Slim and small connector	0.25 mm pitch Slim and small connector
Plug Assembly P/N		20437	20380	UA II : 20496 / UA III : 20822	20531
Receptacle P/N		20439	20374	UA II : 20498 / UA III : 20823	20533
Mating Type		Right angle vertical	Right angle vertical	Right angle vertical	Right angle vertical
Wire Pitch (mm)		0.5	0.4	0.3	0.25
Board Pitch (mm)		0.5	0.4	0.6	0.5
Pin Count	Range	30 – 50	10 - 50	6 - 50	6 - 50
	Available	30, 40, 50	10, 14, 20, 30, 32, 35, 40, 50	UA II : 26, 32, 40, 50 UA III : 26	30, 34, 40, 50
Please inquire for pin counts not listed as available or outside of the pin count range.					
Mated Size (mm)	Height	2.0 +/- 0.2	1.65 +/- 0.2	1.27 +/- 0.1	1.0 +/- 0.1
	Width Formula	5.8 + (0.5*?p)	5.8 + (0.4*?p)	5.0 + (0.3*?p)	4.1 + (0.25*?p)
	Depth	6.10	3.00	2.90	2.40
Wiping Length (mm)		0.51	0.30	0.20	0.20
Applicable Wire (AWG#) (*)	Micro-coax for Signals (**)	45Ω : #36 or smaller wire	45Ω : #38 or smaller wire	45Ω : #44 or smaller wire	45Ω : #44 or smaller wire
		50Ω : #38 or smaller wire	50Ω : #40 or smaller wire	50Ω : #44 or smaller wire	50Ω : #46 or smaller wire
	Twincoax	#40	-	-	-
	Discrete	#32 or smaller wire	#34 or smaller wire	-	-
Compatibility		-	-	-	-
Performance (Reference Only)		USB® 3.1 Gen 2 (10 Gbps) eDP HBR 3 (8.1 Gbps) HDMI® 2.0 (6 Gbps) MiPi Gear 3 (5.8 Gbps)	USB 3.1 Gen 2 (10 Gbps) eDP HBR 3 (8.1 Gbps) HDMI 2.0 (6 Gbps) MiPi Gear 3 (5.8 Gbps)	USB 3.1 Gen 1 (5 Gbps) V-By-One HS 1.4 (4 Gbps) HDMI 1.3 (3.4 Gbps)	USB 3.1 Gen 1 (5 Gbps) V-By-One HS 1.4 (4 Gbps) HDMI 1.3 (3.4 Gbps)

Note (\*): Wire outer diameter needs to be smaller than connector pitch. Note (\*\*): Non-impedance controlled wire MCX-AWG36 Ø0.39mm is available for control signals and power signals.

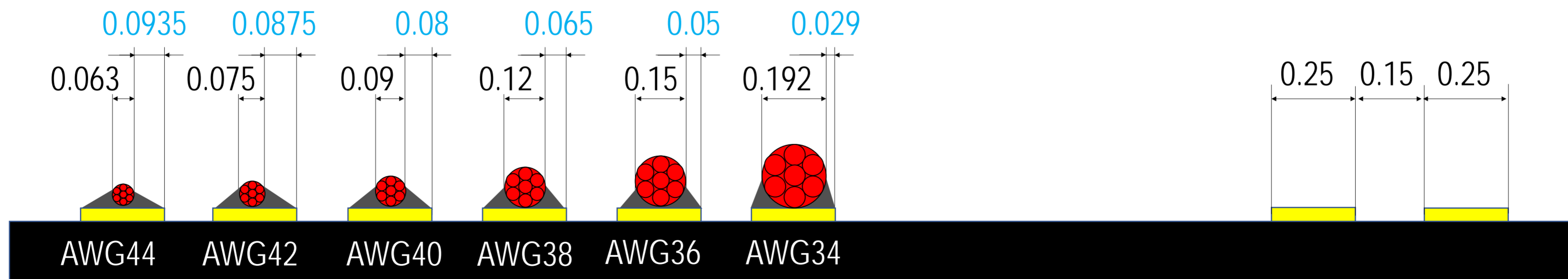
# Different AWG and pad size image

Blue letter: Solder pad width image  
Black letter: Conductor dimension

## 0.5 mm pitch, Micro-coaxial connector series



## 0.4 mm pitch, Micro-coaxial connector series (CAL, CA, CA II, CA II PLUS and SS)



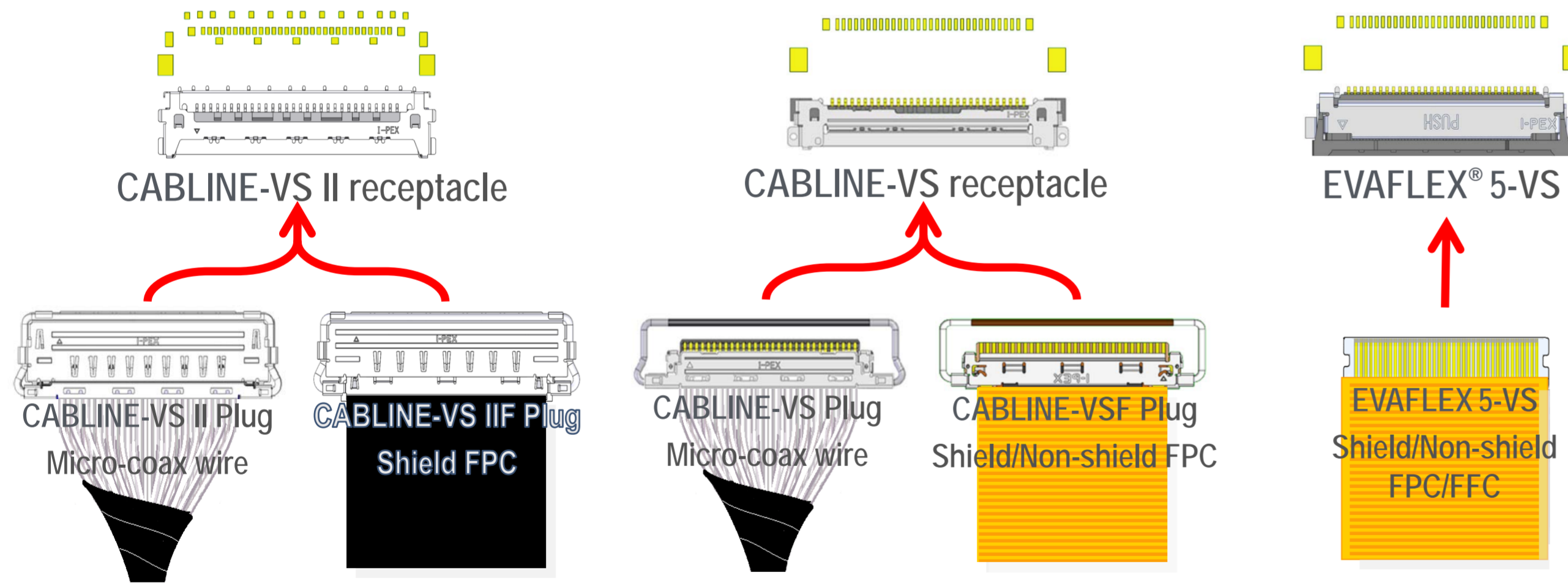
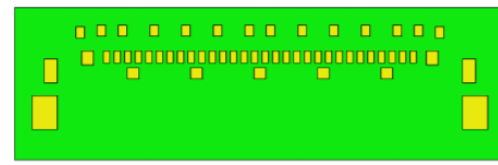
# I-PEX<sup>®</sup> VS series and CA series connector map

(0.5 mm pitch, Horizontal)                      (0.4 mm pitch, Horizontal)

CABLIN-VS, VS II receptacles and EVAFLEX 5-VS can be mounted to the same PCB layout.

## I-PEX<sup>®</sup> VS series

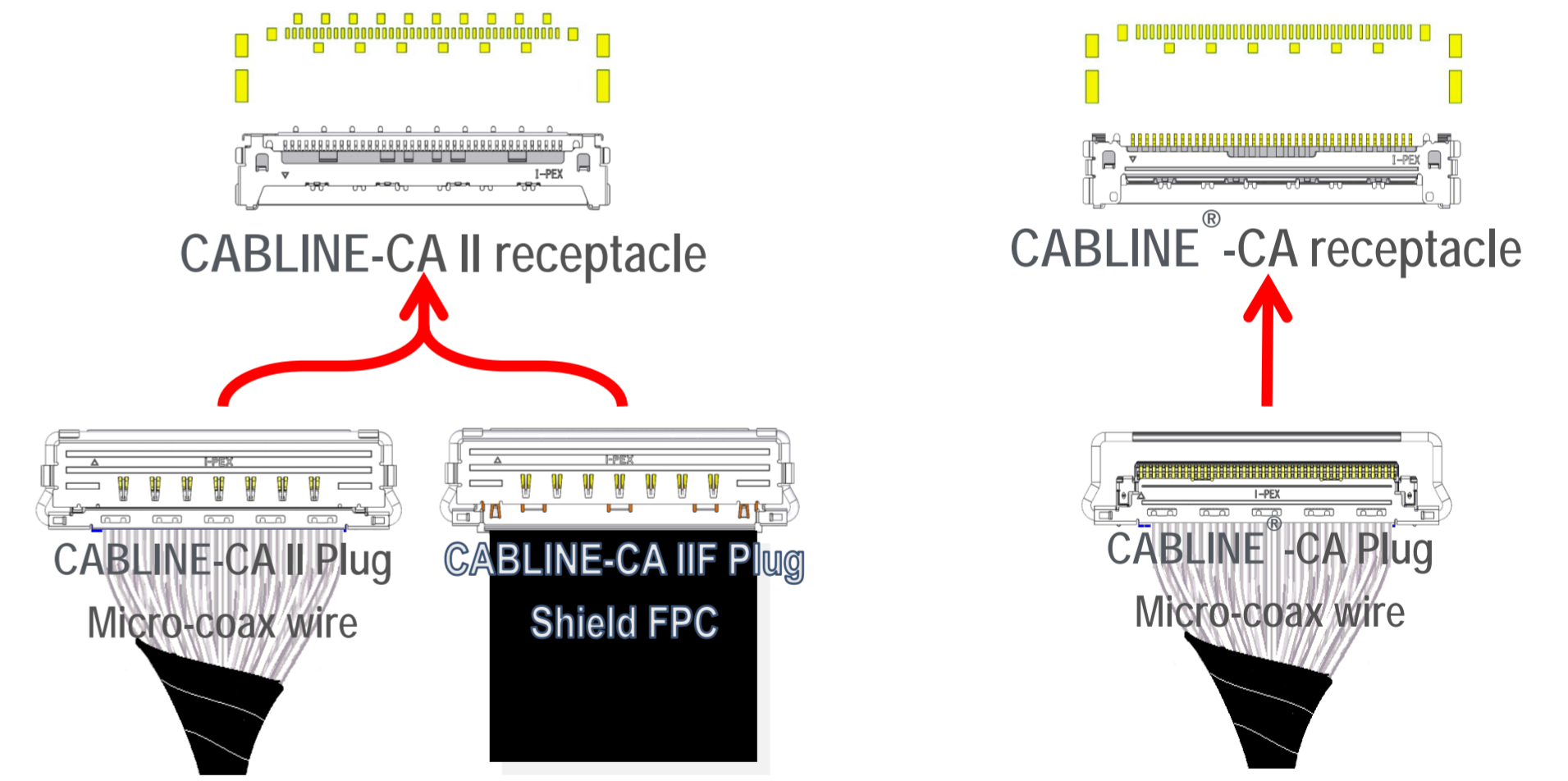
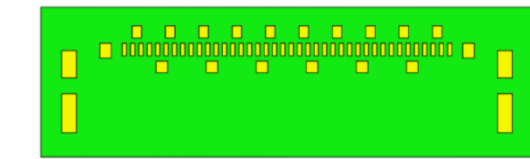
0.5 mm pitch, Horizontal connectors



CABLIN-CA and CA II receptacles can be mounted to the same PCB layout.

## CABLIN-CA series

0.4 mm pitch, Horizontal connectors





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