

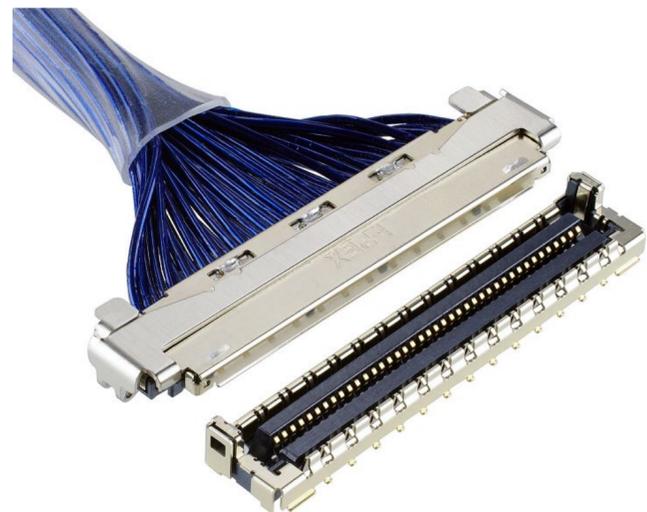
# CABLINE<sup>®</sup>-UM

0.4 mm pitch, Right Angle Vertical Mating Type  
Full Shield Micro-Coax Connector with Mechanical Lock Option

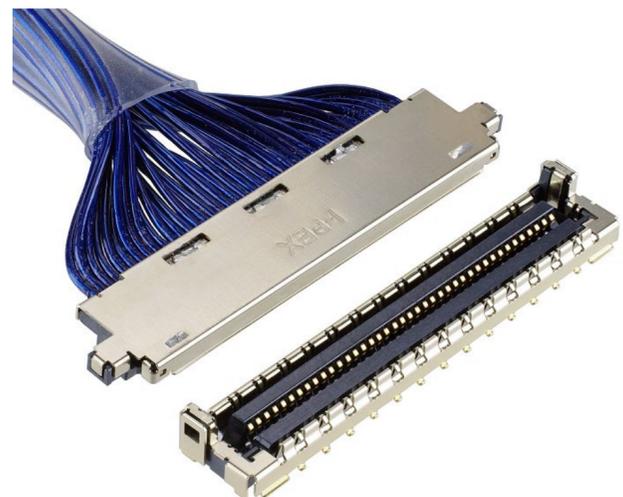
# CABLINE<sup>®</sup>-UM : Product summary

0.4 mm pitch, Right Angle Vertical mating type.

High speed micro-coax connector with Full Shielding and Mechanical Lock option.



CABLINE-UM (with Locking cover)

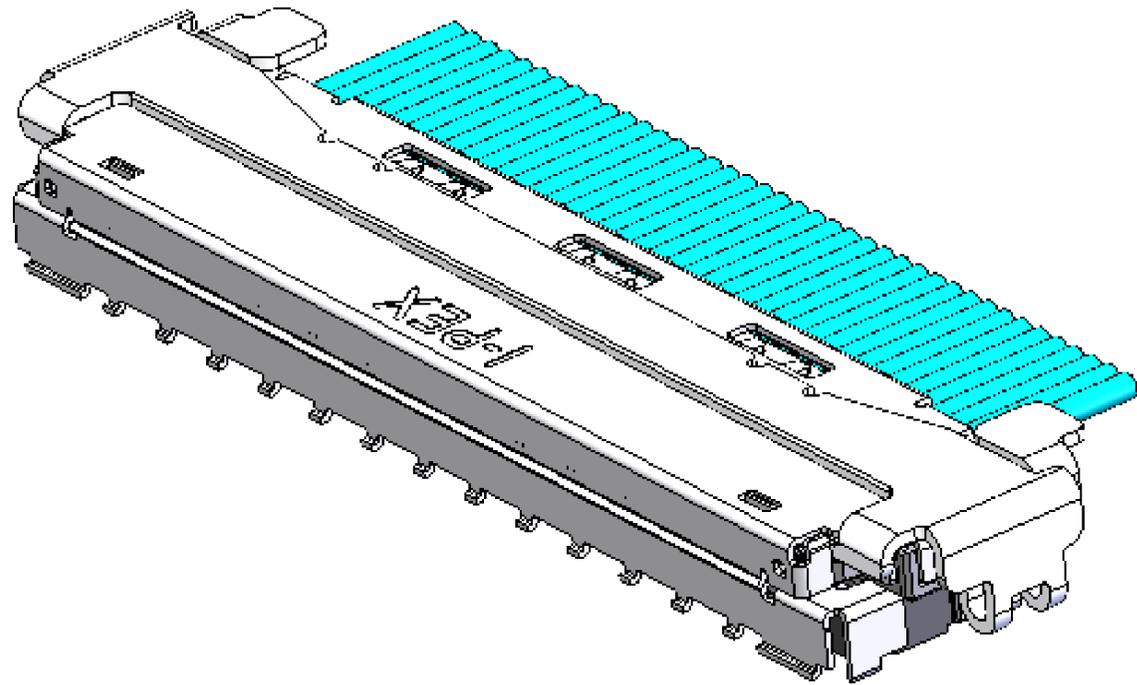


CABLINE-UM (without Locking cover)

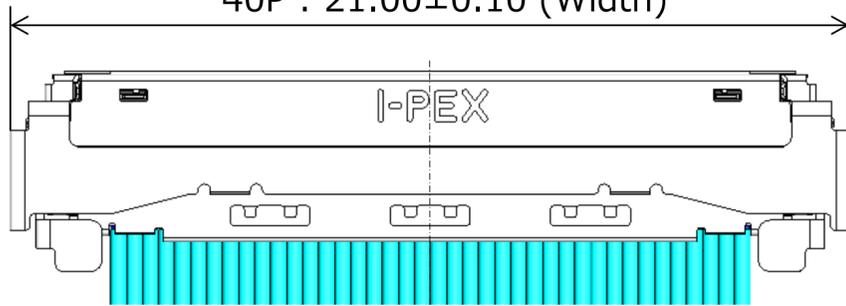
■ Name	CABLINE <sup>®</sup> -UM
■ Pitch	0.4 mm
■ Pin count range	10 – 60 pin
■ Target pin count	30, 40
■ Mating type	Right Angle Vertical mating type
■ Mated Height	2.20 +/- 0.15 mm (including locking cover)
■ Depth	5.0 mm (including locking cover)
■ Width formula	$5.0 + (0.4 * ?p)$ mm (including locking cover)
■ Wire	Micro-Coax 45Ω AWG #38 or smaller wire Micro-Coax 50Ω AWG #40 or smaller wire Twincoax AWG# 40 Discrete AWG# 34 or smaller wire

# CABLINE<sup>®</sup>-UM with/without lock cover design difference

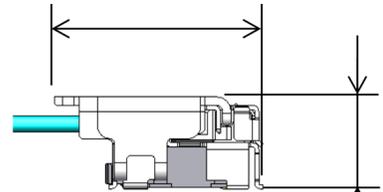
CABLINE-UM with locking cover



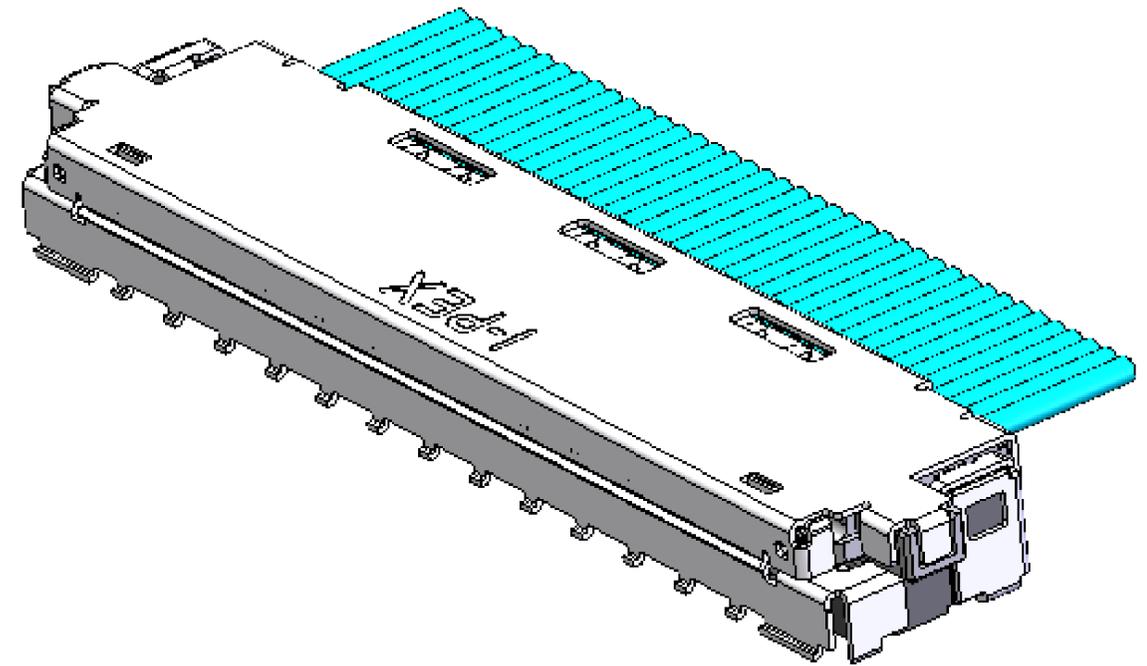
30P : 17.00±0.10 (Width)  
40P : 21.00±0.10 (Width)



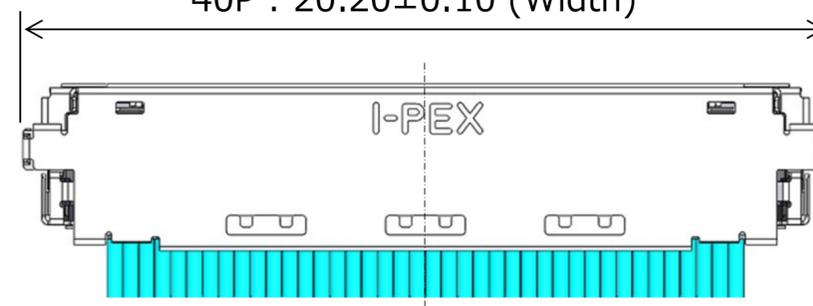
5.00 (Total Depth)  
2.20±0.15 (Height)



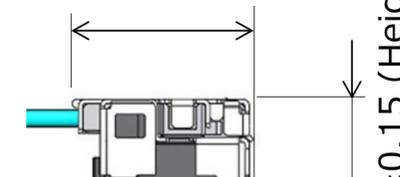
CABLINE-UM without locking cover



30P : 16.20±0.10 (Width)  
40P : 20.20±0.10 (Width)



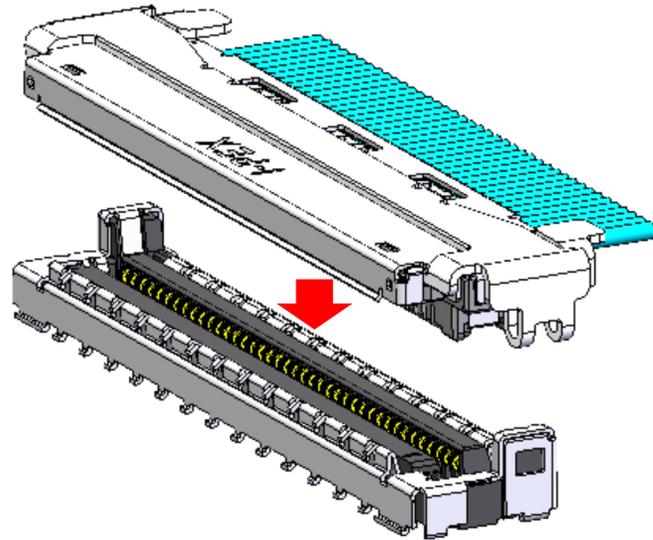
4.26 (Total Depth)  
2.00±0.15 (Height)



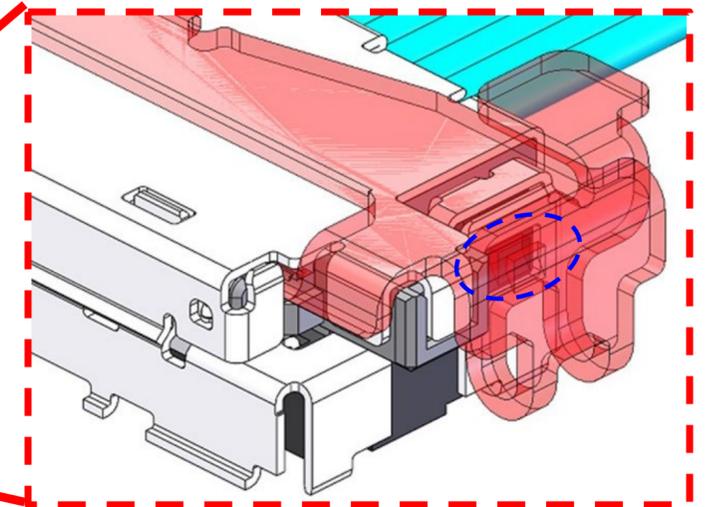
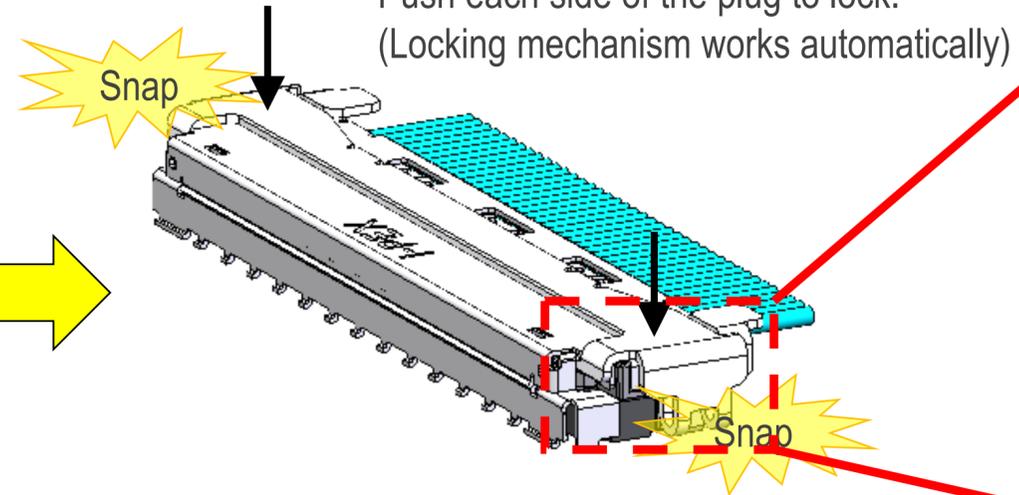
# Mechanical lock function

## Mating process

<Step 1>

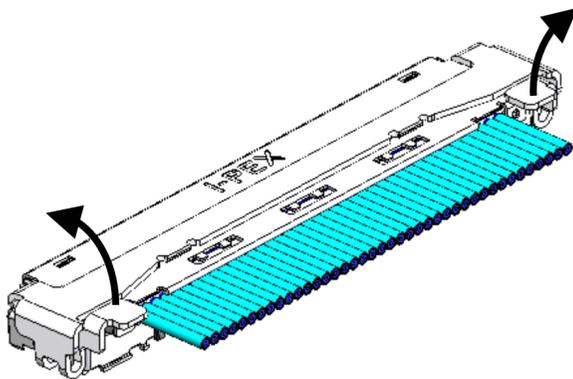


<Step 2>



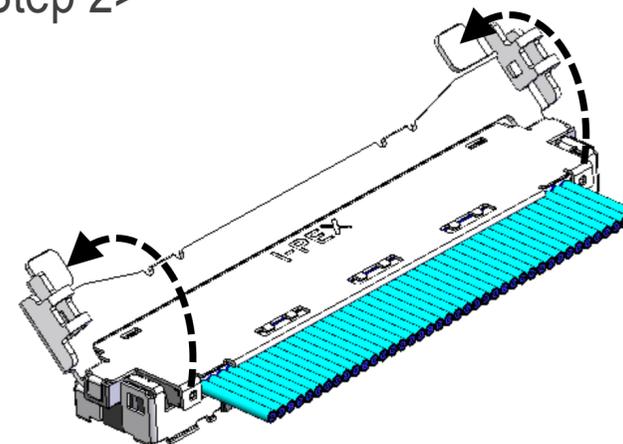
## Unmating process

<Step 1>



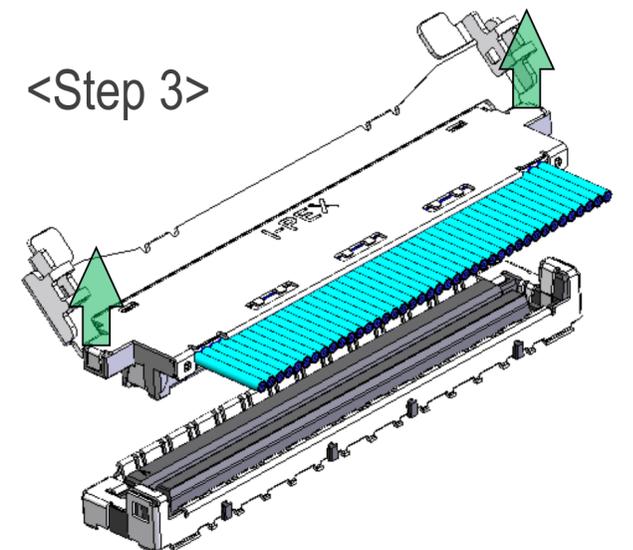
Pull up the hook upwards one by one to release the lock cover.

<Step 2>



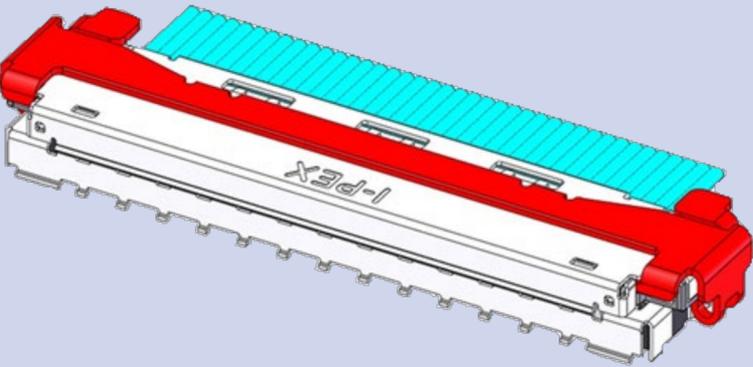
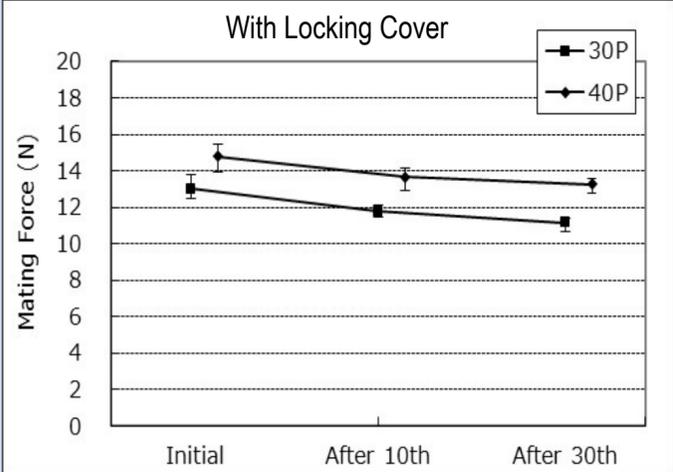
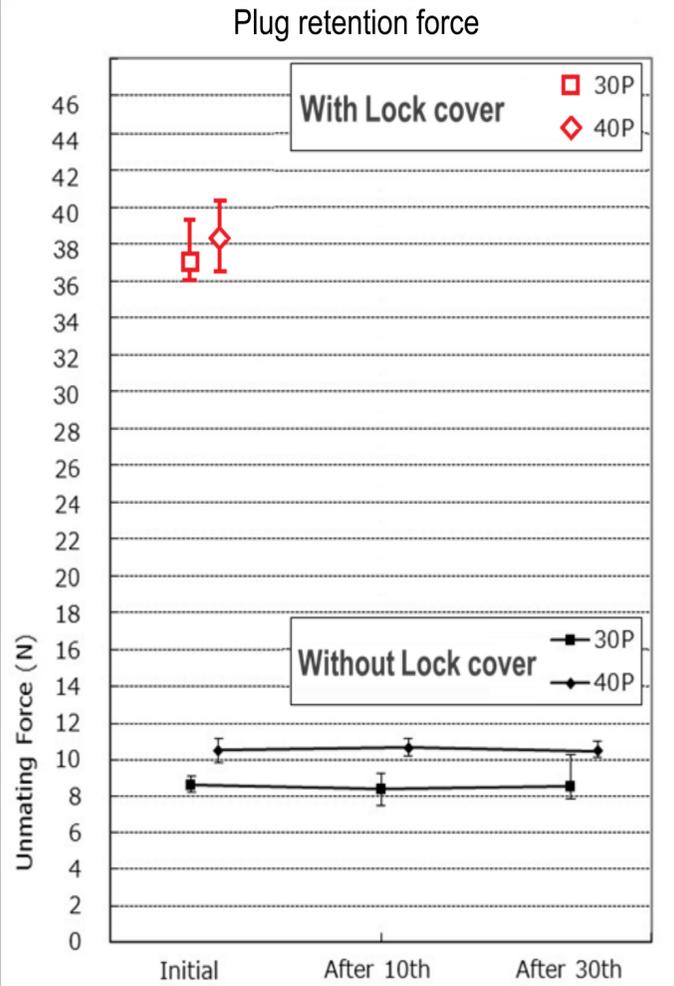
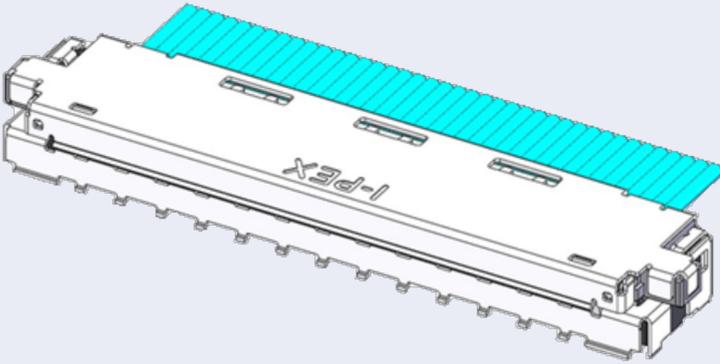
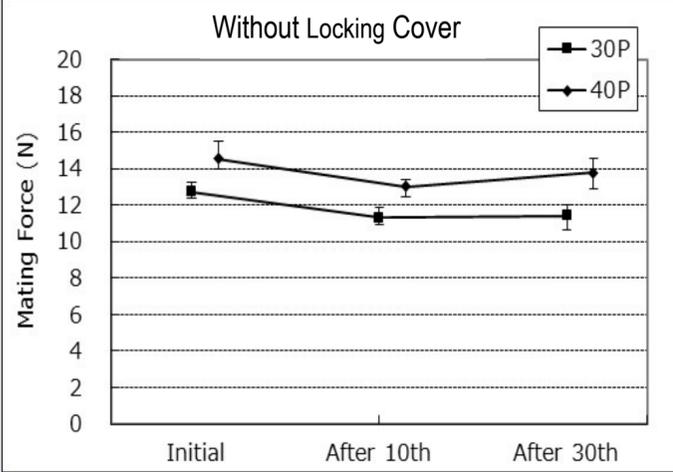
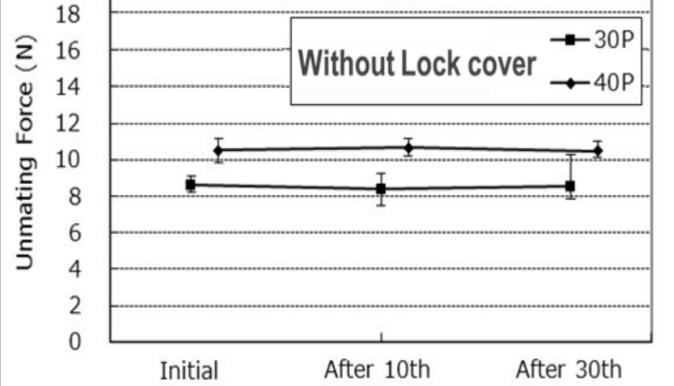
Open the lock cover.

<Step 3>



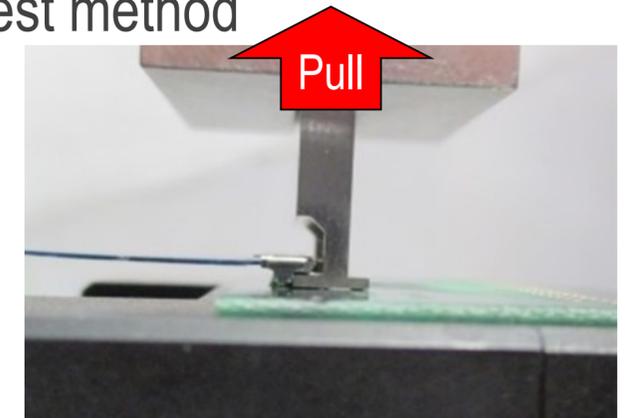
Unmate the plug from receptacle by pulling the each end.

# With/Without Mechanical Lock comparison

Type	Product image	Mating force	Plug retention force
With Locking Cover			
Without Locking Cover			

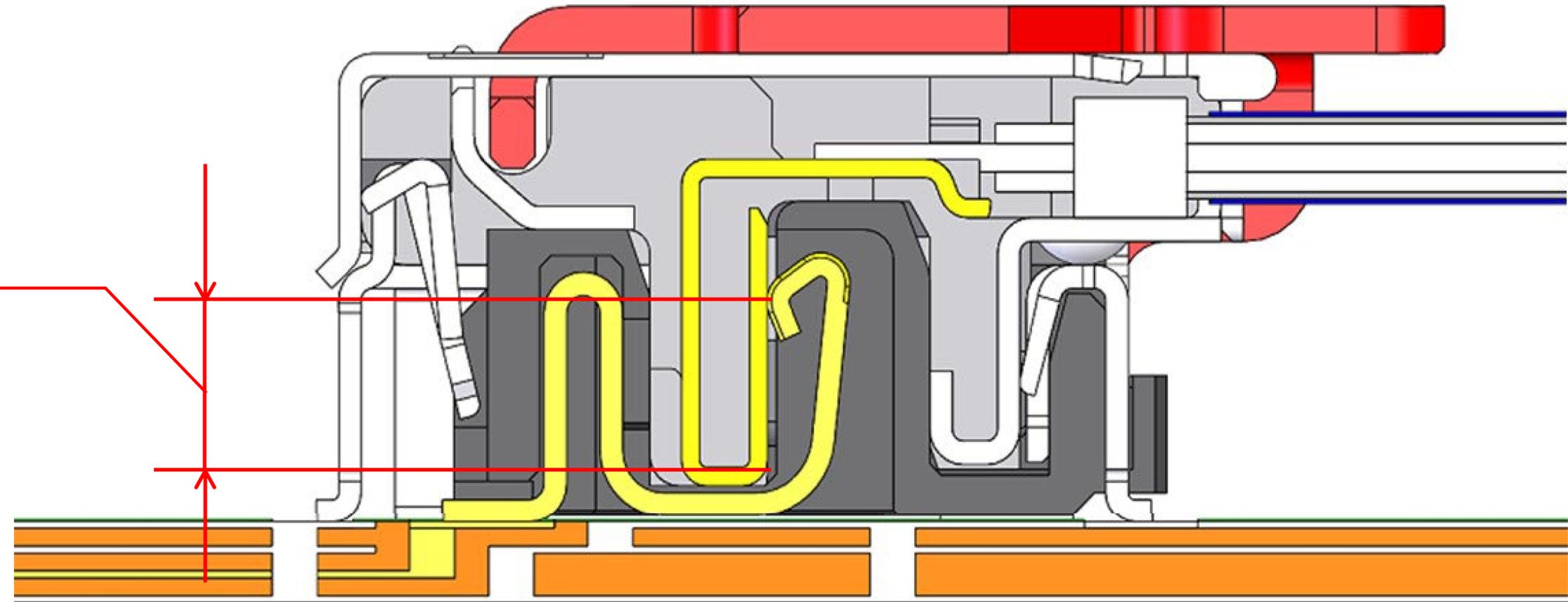
Plug retention force:  
**About 4 times increase**  
 with locking cover.

Test method

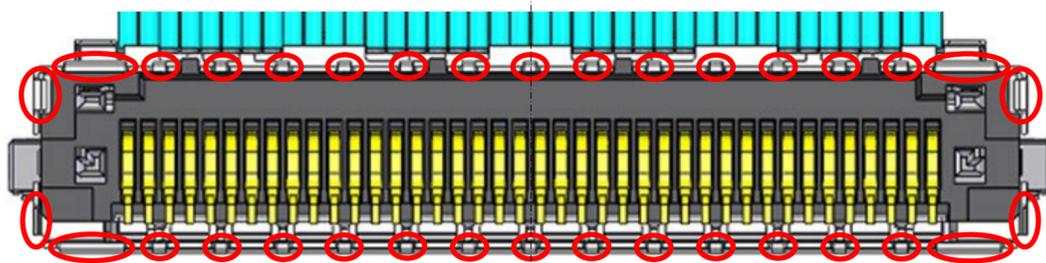


# High contact reliability

Wiping length : 0.65 mm Min.



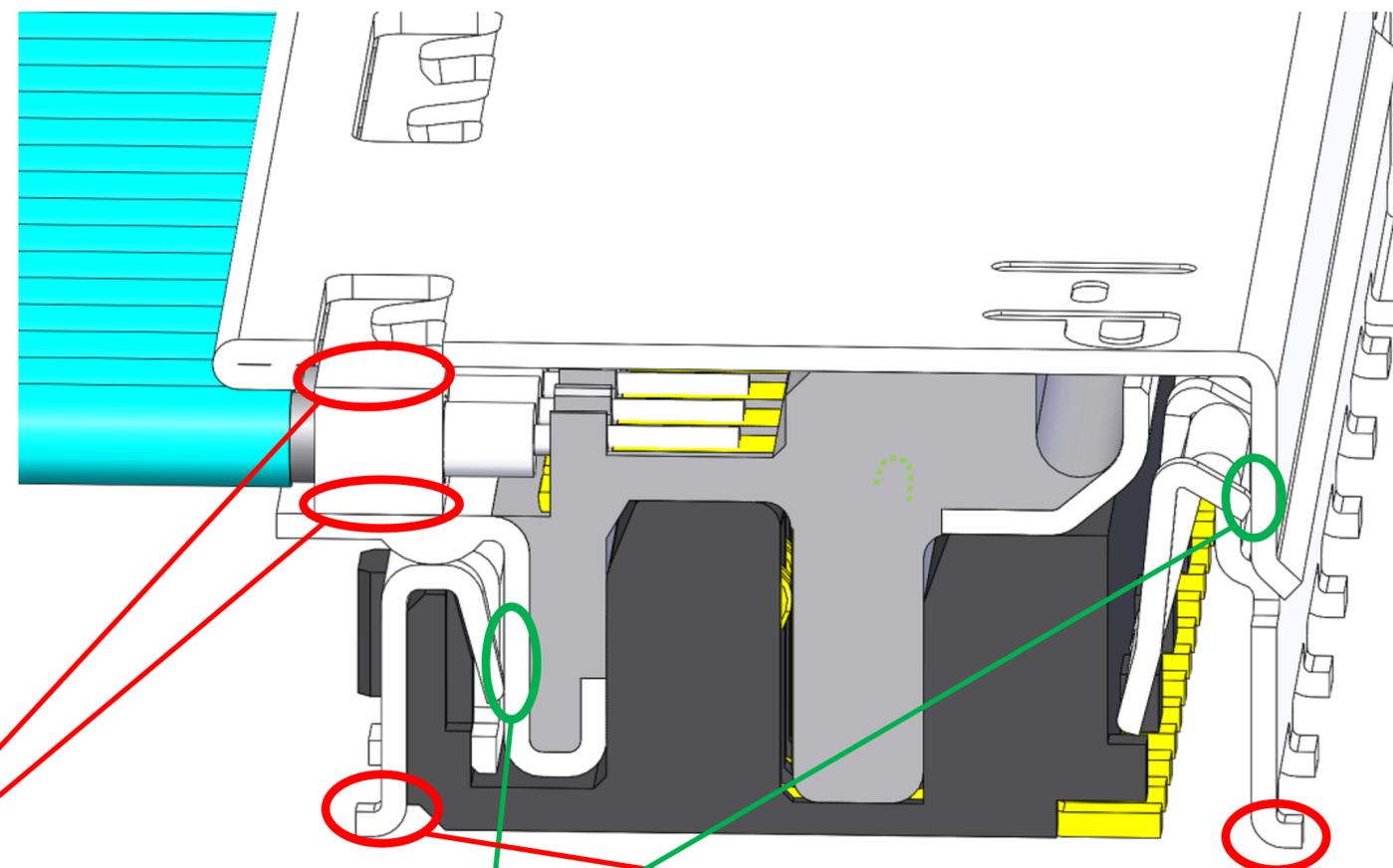
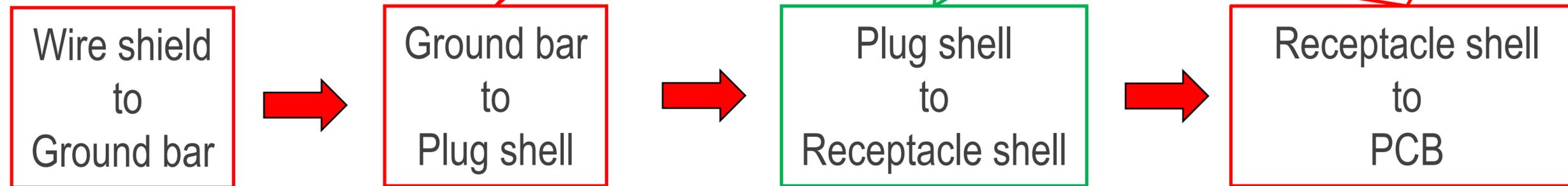
# Ground structure



CABLINE-UM 40p

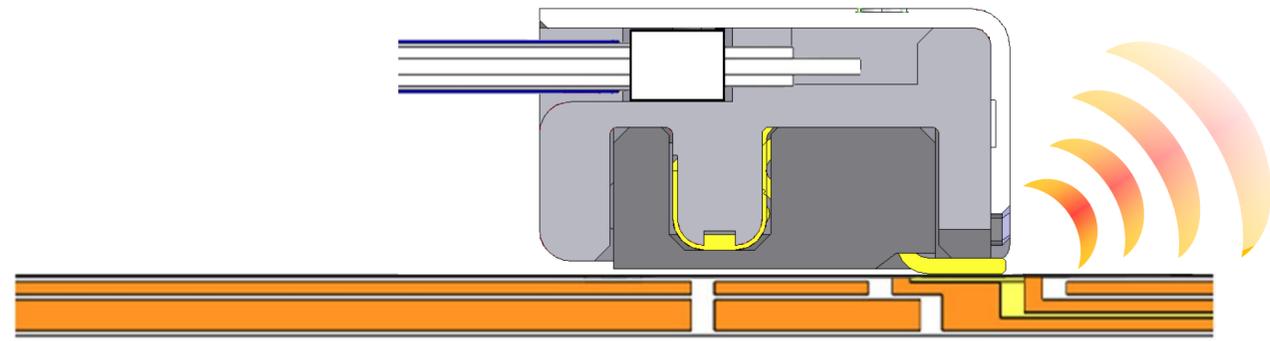
- Soldered contacts
- Mechanical contacts

Ground path

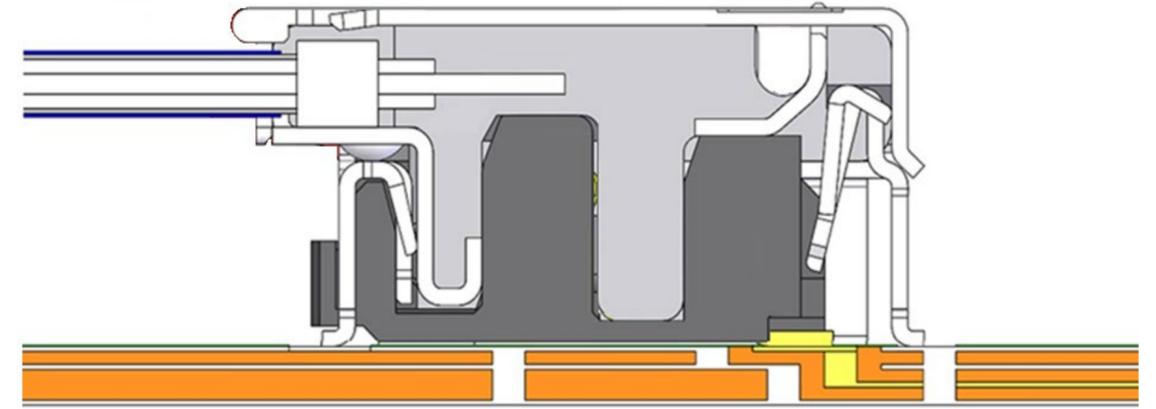


# Full EMI shielding

Prevent EMI leakage from contact tails

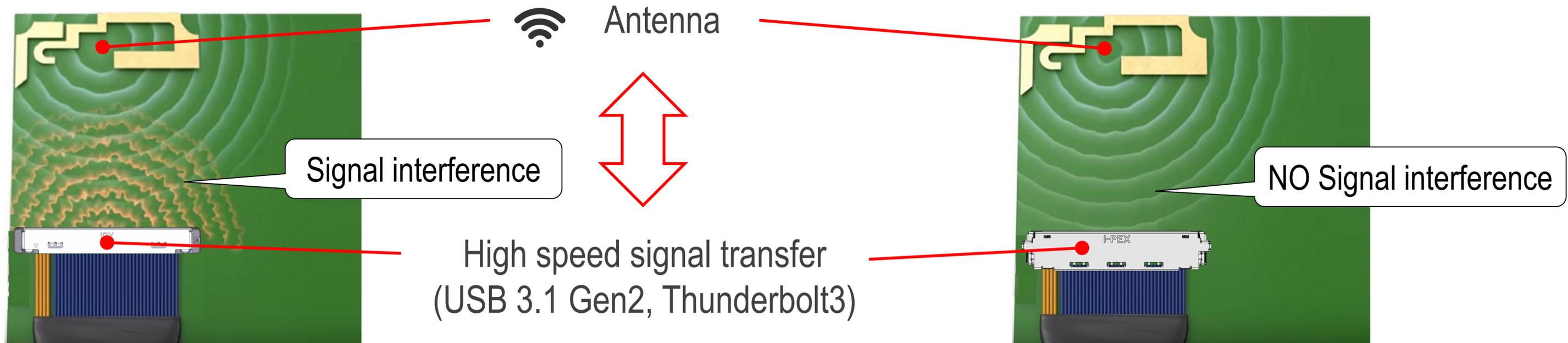


CABLINE-SS



CABLINE-UM  
(Full shielded connector)

Example

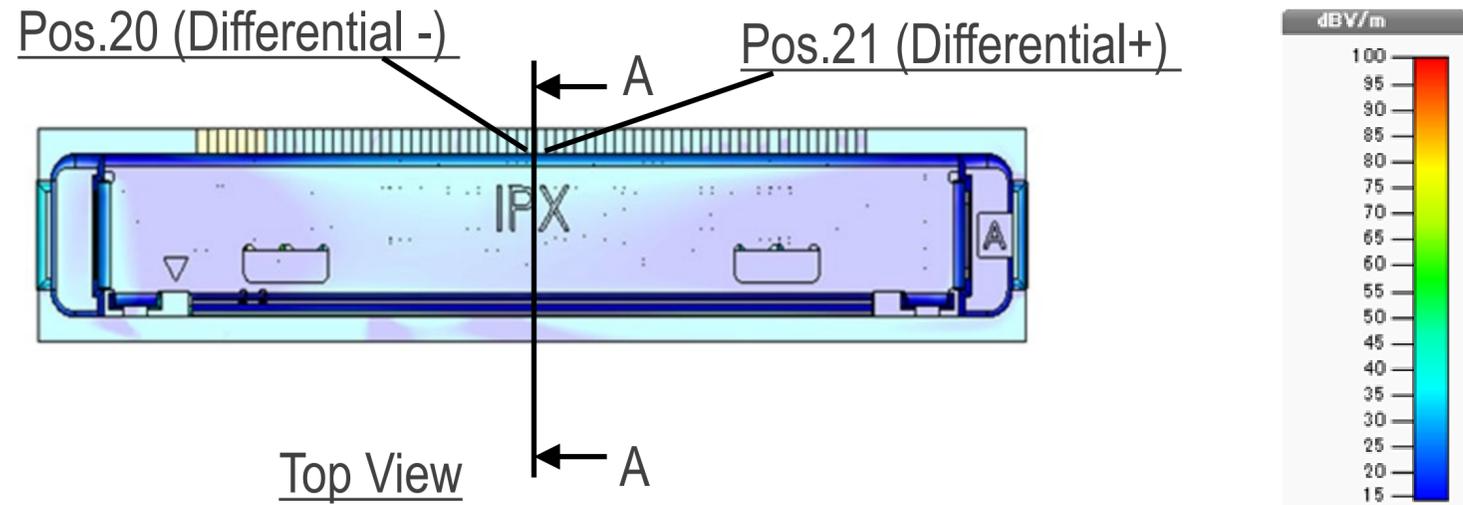


Comparison image between CABLINE-SS & CABLINE-UM

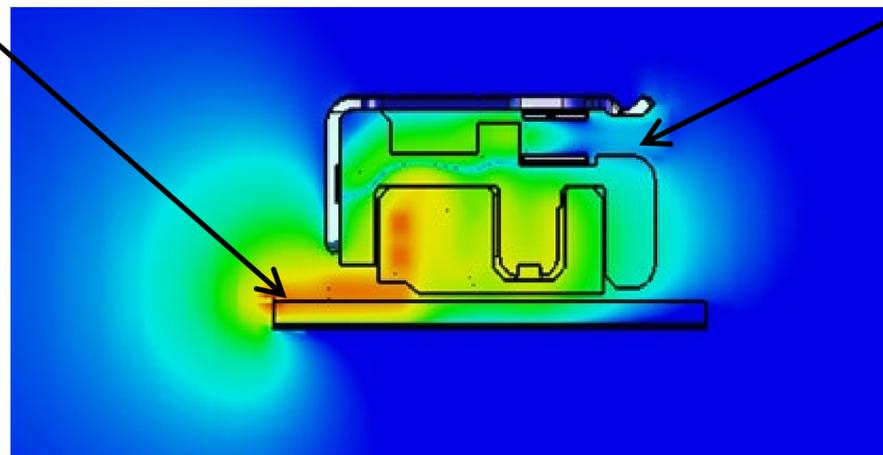
# EMI simulation of CABLINE-SS & CABLINE-UM

EMI Simulation (10GHz)

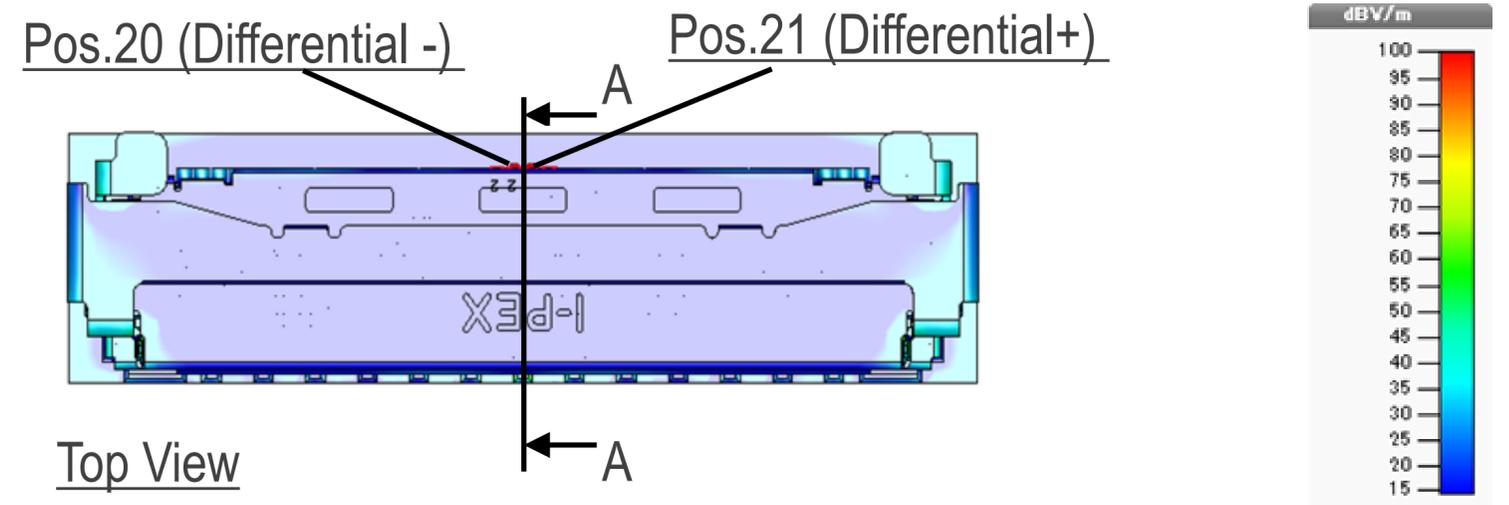
## CABLINE-SS



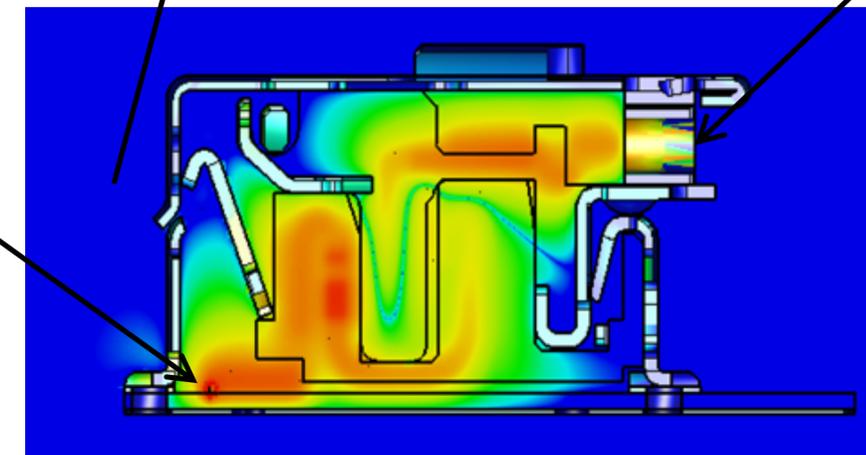
Pos.20-21 (Differential) Signal INPUT      Pos.20-21 (Differential) Signal OUTPUT



## CABLINE-UM



20-21PIN(Differential) Signal INPUT      No field emission      20-21PIN(Differential) Signal OUTPUT



# CABLINE-UM Receptacle types (-01 & -02)

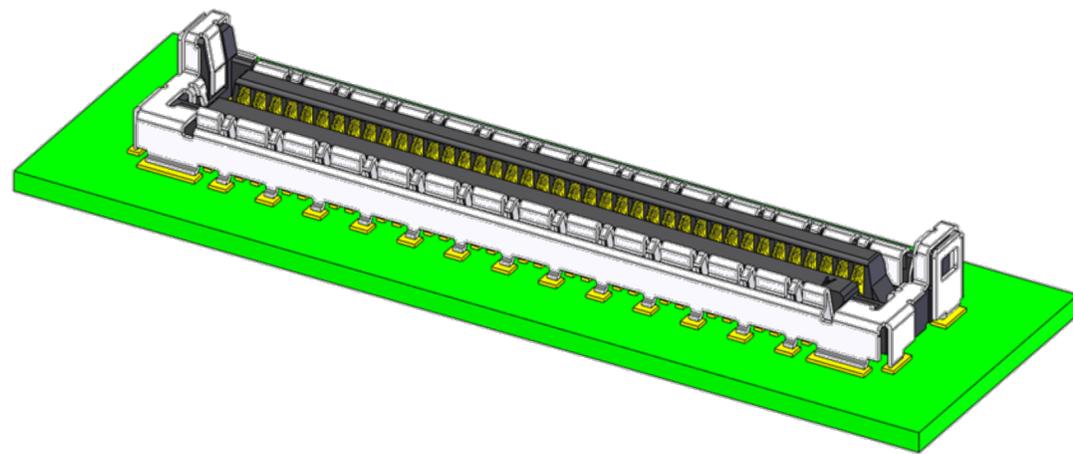
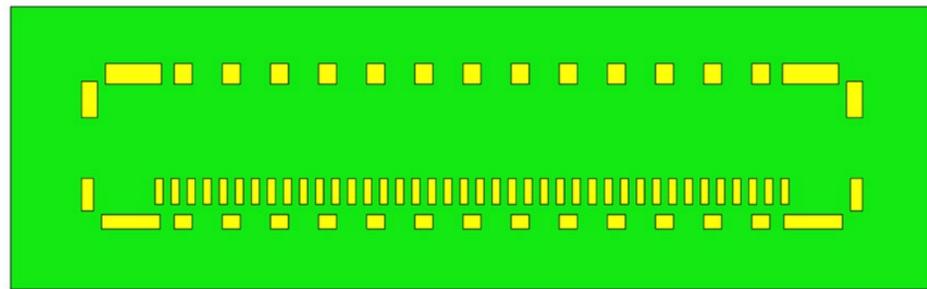
P/N : 20879-0\*\*E-0#

- 1 : NARROW GROUND PIN TYPE
- 2 : WIDER GROUND PIN TYPE

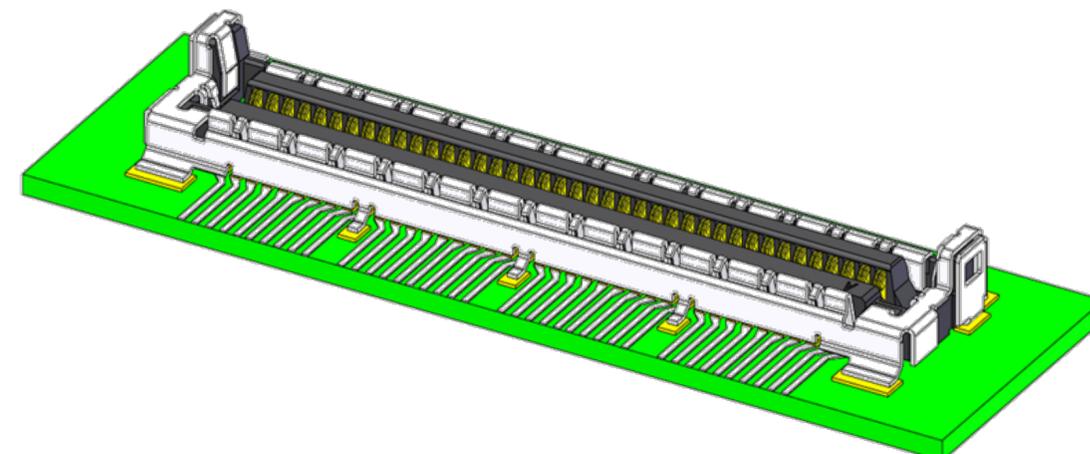
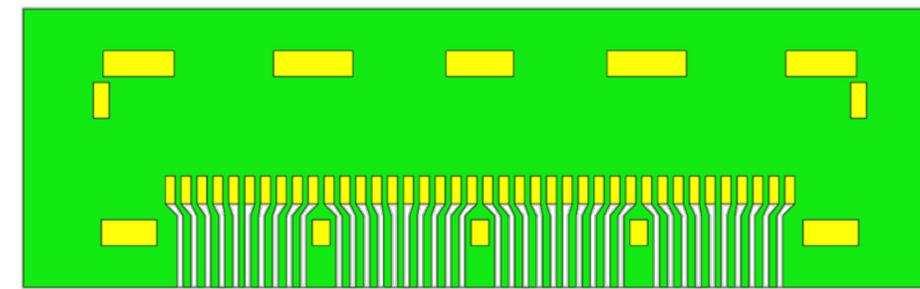
Multiple ground contacts on the PCB may limit the signal trace design on the PCB.

CABLINE-UM receptacle has a wider ground pin type (-02), allowing for flexible signal trace design on PCB surface.

-01 type (Good EMI shielding performance)



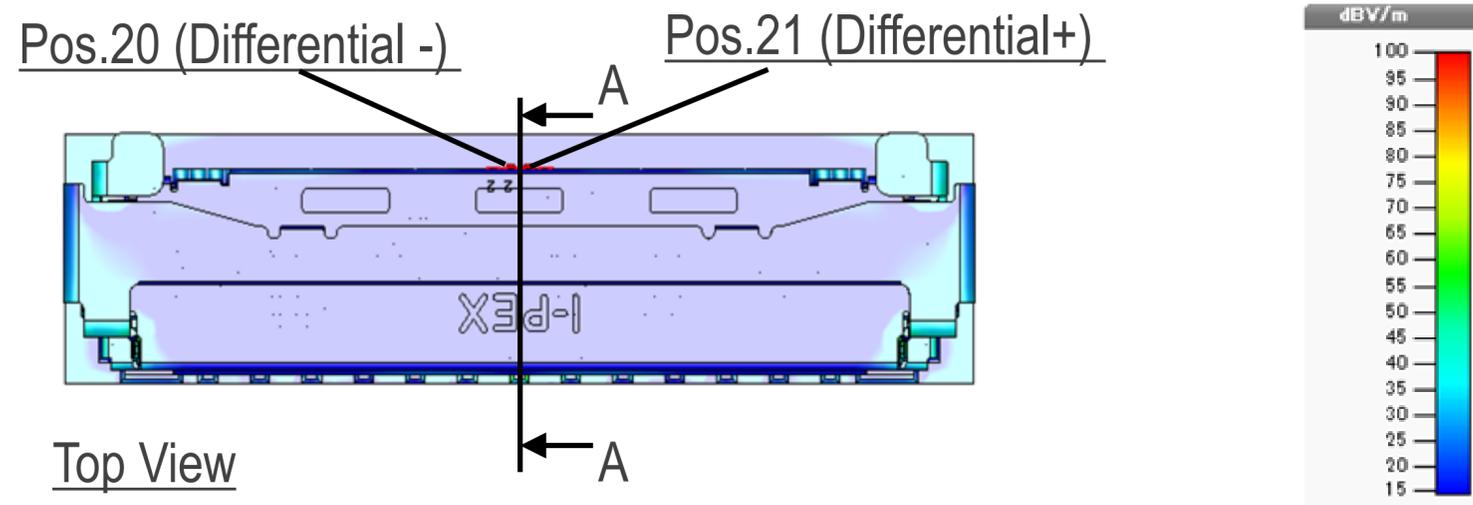
-02 type (Good for PCB surface signal trace design)



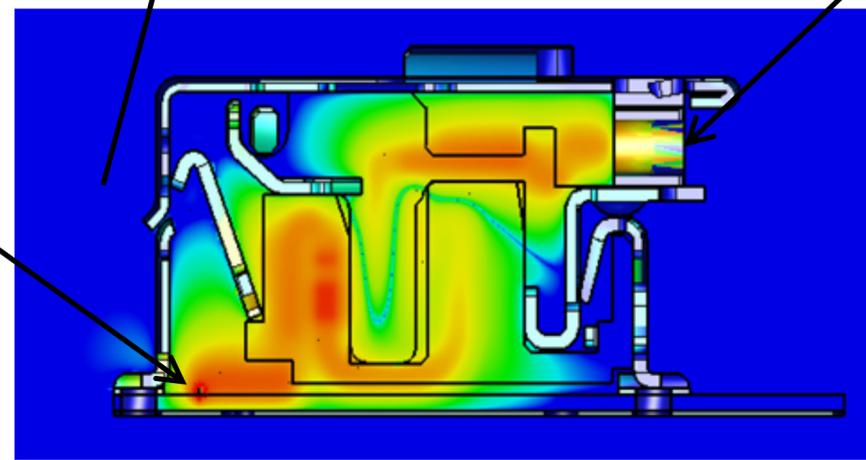
# EMI simulation of CABLINE-UM Receptacle types

EMI Simulation (10GHz)

-01 type (Good EMI shielding performance)

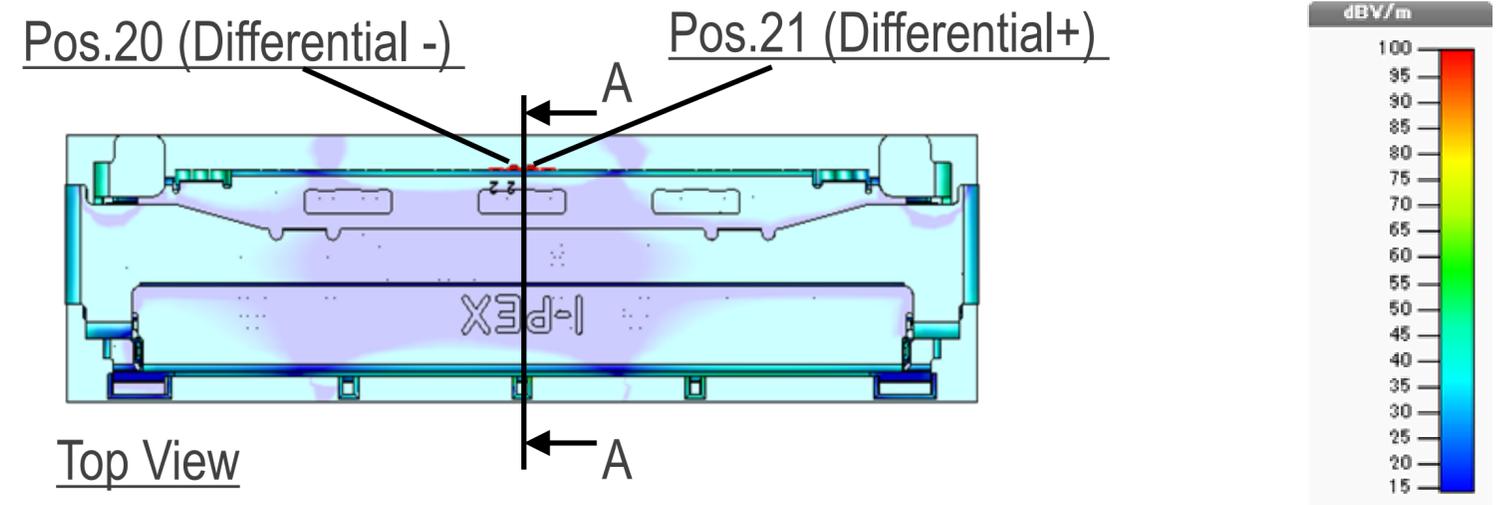


20-21PIN(Differential) Signal INPUT **No field emission** 20-21PIN(Differential) Signal OUTPUT

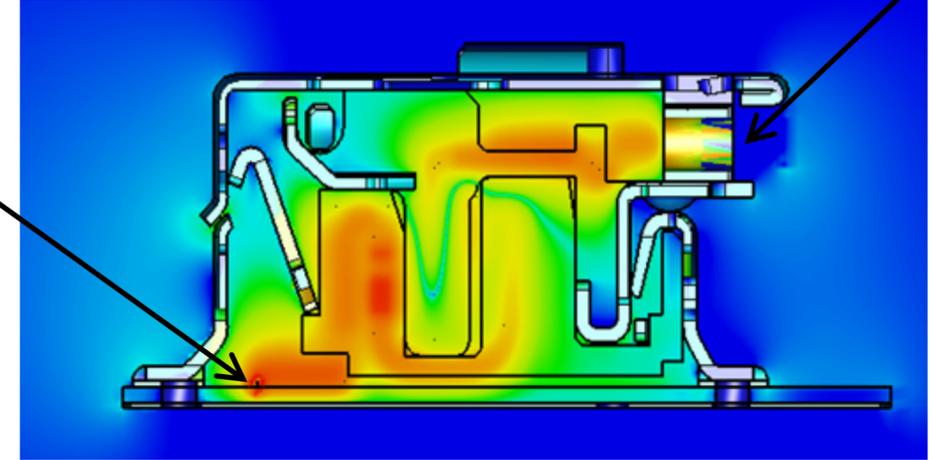


Section A-A

-02 type (Good for PCB surface signal trace design)



20-21PIN(Differential) Signal INPUT 20-21PIN(Differential) Signal OUTPUT



Section A-A



I-PEX is a trademark of DAI-ICHI SEIKO Co., Ltd. All other trademarks are owned by their respective companies.  
All specifications of the products shown here are subject to change without notice. DAI-ICHI SEIKO Co., Ltd., assumes no responsibility for any inaccuracies or obligation to update Information on these documents.

[www.i-pex.com](http://www.i-pex.com)