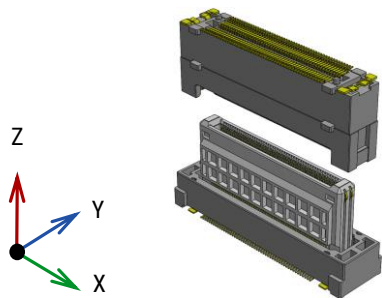


膨大な情報量を制御する自動運転用ECUでは、その内部接続も高速化が必要となります。

ここでは、イリソ電子工業が提供する25Gbpsの高速伝送と、大きい可動域でのフローティング機能両立を実現させた「ハイブリッド」コネクタ「10143シリーズ」が最適です。

お客様の設計に余裕と自由を

フローティングタイプBtoBコネクタはX-Y方向へ可動し、基板間の位置ズレを吸収する為、複数接続時のアライメント調整を容易にし、はんだ付け部に集中する応力を緩和します。また、適切な誘い込みと併せ、嵌合作業性の改善にも大きく貢献します。10143シリーズは、ピッチ幅を超えた可動量を実現。X-Y 方向に0.8mm可動します。



機能と情報を接続するという意義

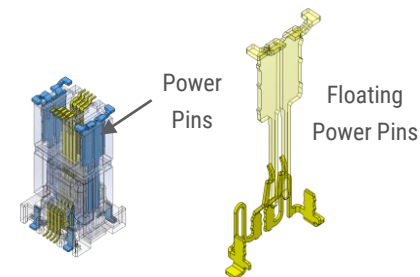
昨今の機器の高機能化と情報量の増加は、接続部品における高速伝送対応要求に拍車をかけています。また、信号の高周波成分の増加は、これまで問題にならなかったような微細な箇所にも気を配らなければいけない状況をもたらしています。イリソの高速伝送対応製品は、数多くの実地評価とシミュレーションを有機的に組み合わせる事で最適に設計されています。また、フローティング技術と高速伝送の融合で高信頼性や作業性を併せ持っている事も大きな特徴の一つです。10143シリーズは、フローティング BtoB コネクタ史上、最高クラスの25Gbps*の高速伝送を実現しています。

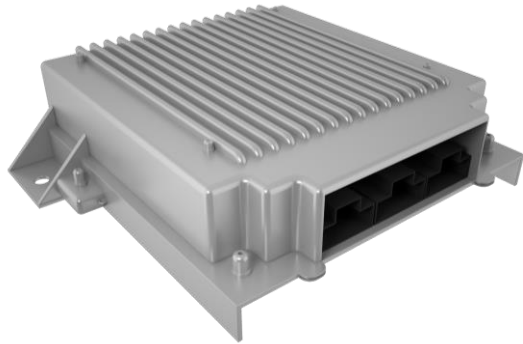
* 「OIF CEI 28 G SR」規格での測定時



小極化、小型化への挑戦

フローティング機能をもつ電源用端子を製品の両端部に配置することで、電源用に端子を割り当てる必要がなくなり、コネクタの小極化に貢献します。この電源用端子は、固定金具の役割も兼ねており、コネクタ全体の小型化を実現いたしました。これにより、コネクタの基板専有面積の縮減が可能となりました。



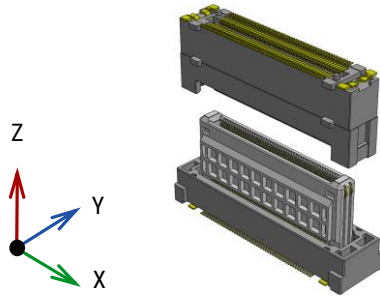


ADAS ECU need to manage enormous amount of data. Therefore, healthy high speed connection will be required for ECU inside.

IRISO is offering to use 10143 series for board to board connections in such case. It's having floating feature as mechanical benefit and great SI performance for high-speed data transmission at same time. It will be best choice for the purpose of internal connection of Autonomous ECU!!

"Floating" Capability Enables Design Flexibility and Reliability

IRISO's Board to Board Floating connector technology allows connectors to have a greater tolerance on misalignments, especially those with multiple connections. Another benefit of our Floating connectors is that they absorb movement which reduces stress on the board from the solder tails over time. Additionally, the tri directional floating technology helps in the connecting assembly process by allowing forgiveness in small misalignments of the mating guides. The 10143 series connector offers a range of movement that exceeds the pitch width. It moves 0.8 mm in the X-Y directions.



Taking Reliability at High Speed Transmission to the Next Level

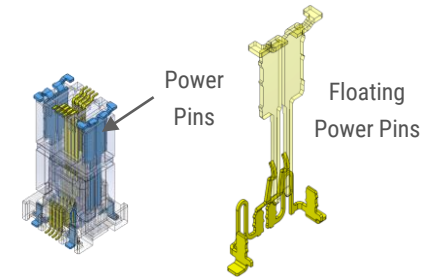
The demand for high frequency component signals is omnipresent. Ever advancing technology requires modern devices to have high speed and reliable transmission from its connected components. IRISO has met this challenge by combining our floating connectors with high speed transmissions technology. The 10143 series offers one of the highest transmission speeds of 25 Gbps in the floating BtoB connector industry.

* Based on "OIF CEI 28 G SR"



Challenge of Miniaturization

By placing floating power supply terminals at both ends of the connector, allocating a terminal for power supply is not necessary and the connector has been reduced to a smaller pin. This power supply terminal also serves as a lock and contributes to the miniaturization of the entire connector. This makes it possible to reduce the overall size of the board.



IMSA-10143S-XXX~~Y~~9XX

IMSA-10143B-XXX~~Y~~9XX

Product Spec

Item	Unit	Specification
Pitch	mm	0.5
Floating	mm	X:±0.8 Y:±0.8
Mating height	mm	10~30 (under planning)
Pin Counts	ckt	20~160 (under planning)
Connecting Type	—	Stacking
Operating Temperature Range	℃	-40~125
Rated Current	A	Signal : 0.5A/pin, Power : 3.0A/pin
Rated Voltage	V	Signal : 50V, Power : 50V
Withstand Voltage	V	Signal : AC150V, Power : 150V

Plug

Parts	Material	Plating
Housing	LCP	—
Retainer	LCP	—
Contact	Copper alloy	Gold
Metal Flange	Copper alloy	Tin

Socket

Parts	Material	Plating
Housing	LCP	—
Retainer	LCP	—
Contact	Copper alloy	Gold
Metal Flange	Copper alloy	Gold

* For packaging info, please refer to our packaging drawing.

* Contents are subject to change without prior notice, due to our quest for improving product performance. Dimensions and specifications described herein are limited to major items. For more details on how to use this connector, please request a drawing and specification sheet. *Specifications may be subject to changes without prior notice, due to our quest for improving product performance.

