



Automotive

- 、 HSD
- 、 FAKRA
- 、 Mini FAKRA
- 、 HMTD-N



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About Chant Sincere

Chant Sincere Co., Ltd. was set up in 1985, with the management concept of "Integrity, Innovative, Quality, Sustainability" to design and manufacture connector and cable. Keep developing new innovative products and integrating vertically from R&D, tooling, assembly and quality control to meet the demands (quality/cost/delivery) from customers. Chant Sincere Co., Ltd. has been constructing several of product families to provide a total solution to customers.

The connector and cable products are widely used in many different applications, such as Computing, Industrial & Automation, Telecommunication, Automotive, Waterproof, Consumer and Medical Industry.

Chant Sincere won the "National Bedrock Award" & "Small Giant Award" from Taiwan Connector maker competition and got many "Best Supplier Awards" from Global customers. We are focusing on improving our design and manufacture technology, and we have been applying for a lot of international patents for our products including I/O connector, Board to Board Connector, Waterproof Connector, Industrial Connector, Automotive Connector, Memory Card Connector and Adaptor, High Speed connector/cable (USB3.1), Audio & Video connector and cable (HDMI, DisplayPort)...etc.

Chant Sincere Co., Ltd. has been growing up as a global professional manufacturer for connector and cable.

The Core Competence of Chant Sincere Co.,Ltd. including.

- Over 38 Years Manufacture Experience
- National Awards Rising Sun Awards/Best Supplier Awards
- Vertical Integration (Design, Tooling, Manufacturing, Test)
- Automation Capability
- Precise Tooling Center
- Wide Range of Product Line
- ODM/OEM Capability
- Customized Capability
- Quality System (ISO, IATF)
- Systematic Testing Process



Quality Systems

COXOC Quality Assurance department meets our customers' quality requirements by practicing continual improvement in our quality assurance processes and increasing customers' satisfaction in the quality of our products.

The effectiveness of COXOC QA operation is certified by well-known organizations such as ISO9001 Quality Assurance Management System, ISO 14001 Environmental Management System, ISO/IATF 16949 for Automobile Industry Quality Management System, and ISO13485 Medical Devices Quality Management System, COXOC integrated supply chain and devoted staff has enabled us to build a solid foundation and core capability to better serve our customers. It is COXOC principal to always meet and exceed customer expectation by providing superior products and services. COXOC ultimate goal is to create value for our customers by building collaborative and mutually beneficial relationships.



ISO 14064-1 / ISO 9001 / ISO 14001 / IATF 16949 / ISO 13485



Competencies & Technology

The R&D Center at Chant Sincere leads the industry in research, design, and manufacturing of numerous key parts. This center has successfully developed for both wired and wireless solutions for computer peripherals, communication systems, and automobiles/industrial/medical equipment. Our solid R&D team formed a strong foundation in advance manufacturing technology and superior quality control that also enabled high value adding service for customers.

USB type C connector is an example of the fruits of our research. This miniature and unidirectional interface provides many useful functions such as lighting data transfer rate up to 10 Gbps, DP ALT Mode high-definition video signal support, and brilliant 100W charging capability. Chant Sincere advanced the research further into higher specs such as USB 3.2 and USB 4.0 and offers customized solution for several of industrial applications. We delivered comprehensive solutions in bridging the diverse need for new interface and solve on-going product design issues for customers.

QSFP-DD is an ultra-fast interface that transmits data at 400Gbps speed.

At this speed, stringent requirement for signal integrity and operating temperature is inevitable which imposed huge challenges for the industry. At Chant Sincere, we implemented comprehensive computational software, state of art measuring equipment and eminent R&D capability to aid the solution delivering process. The analysis process includes simulation under CST MSW (Time Domain Simulation), ANSYS HFSS (Frequency Domain Simulation) for signal integrity as well as real-time measurement using test boards and PNA (up to 43.5GHz) to deliver quality reports for signal integrity (S-parameter, Gain compression, conversion gain/loss, noise level). We further performed simulation of its operating temperature using Icepak (Heat transfer and fluid flow simulator). This enabled the performance optimization for heat dissipation solution. With the above R&D skills we successfully delivered the desired professional service within the shortest time frame for our customers.



FAKRA

FAKRA Product Overview

The FAKRA Connectors are specially designed for automotive applications. They are based on the SMB Connector interface and comply with the standard for a uniform connector system established by FAKRA (Automobile Expert Group). Due to their special standardized locking system FAKRA Connector fulfill the high functional and safety requirements of today's automotive industry. The Coaxial connectors meet the specification of USCAR-18 and ISO 20860-1.

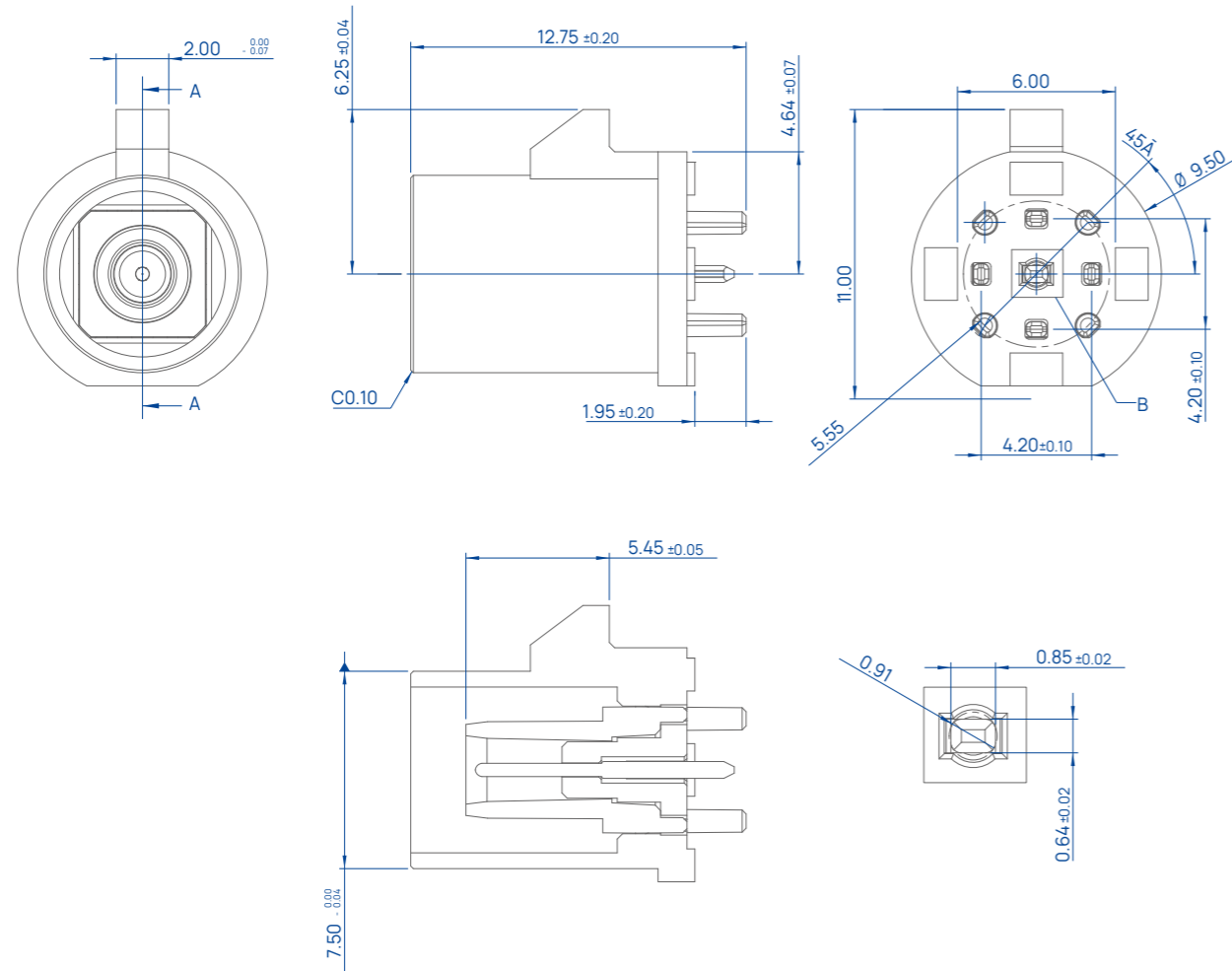
Application

- GPS antenna
- Engine management system
- Analog / Digital radio
- Auxiliary heating
- TV / Video-displays
- Antenna
- Distributor box
- Accident data analysis
- Cellular Phone
- Remote control keyless entry
- Distance control
- Amplifier
- Air pressure control
- Navigation system

Product Characteristics

- Mature mechanical and color coding system
- Highest possible mounting safety
- Efficient automated capabilities for further processing
- Rotating coaxial inert and cable in plastic housing

FAKRA Vertical Type



Specification

Part No.	5410101001X
Contacts	1
Material	
Housing	Thermoplastic, Black
Contact	Copper Alloy
Shell	Zinc Alloy
Contact Plating	
Under Plating	80 ~ 160u" Nickel
Contact Area	6u" Selective Gold
Solder Tails Area	100 ~ 200u" Tin(Lead Free)
Electrical	
Impedance	50 Ohm
Operating Frequency	Up to 6 GHz
Return Loss (typical)	≥ 18 dB typ.
Insertion Loss	≤ 0.1 dB
RF Leakage	> 55 dB
Insulation Resistance	1000 MΩ Min. @100 VDC
Center Contact Resistance	≤ 5 mΩ
Outer Contact Resistance	≤ 2.5 mΩ
Contact Current Max. (DC)	≤ 1.0 ADC
Withstanding Voltage	Min. 750 V
Operating Voltage	≤ 335 V Max.
Machanical Characteristics	
Engagement Force (typical)	≤ 25 N
Separating Force (typical)	Min. 2 N Max. 25 N
Mating Cycles	≥ 50
Retention Force Locked System	≥ 100 N
Environmental	
Operating Temp. Range	IEC 682-2, -40 up to +105 Degree
Temperature Change	IEC 68-2-14
Vibration	IEC 68-2-64
Shock	IEC 68-2-29
Humidity (Cyclic)	IEC 68-8-30

FAKRA Plug Series

Product List	Description	Part No.	
	FAKRA, Vertical Type Coding:A,B,C,D,G,I,L,Z	5410101001X	
	FAKRA, Vertical Type Coding:A,B,C,D,E,F,G,H,I,K,L,M,N,Z	5410102001X	
	FAKRA Twin, Right Angle Type Center Height=0.33mm Coding:A,B,C,D,H,I,N	Key Up	5410302XXXX
		Key Down	5410302XXXX
 Mated Waterproof	SMB-CM to FAKRA Plug Adapter Coding:A,F,Z	7014101001X	
 IP67 / IP69K	SMB-CM to FAKRA Plug Adapter Coding:A,F,Z	7014102001X	
	SMB-CM Board Mount FAKRA Connector	51802010010	

FAKRA Plug Coding

Product List	Description	Part No.	
	FAKRA, Right Angle Type Center Height=0.24mm Coding:A,B,C,D,E,F,G,H,I,K,M,N,Z	Key Up	5410201001X
		Key Down	5410201002X
	FAKRA, Right Angle Type Center Height=0.24mm Coding:A,B,C,D,E,F,G,I,K,Z	Key Left	5410201003X
		Key Right	5410201004X
	FAKRA, Right Angle Type Center Height=0.33mm Coding:A,B,C,D,E,F,G,H,I,K,L,M,N,Z	Key Up	5410301001X
		Key Down	5410301002X
		Key Left	5410301003X
		Key Right	5410301004X

X : Coding option refer to page 15-18


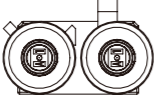

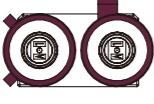



FAKRA Plug Coding

Coding	Vertical Plug	Right Angle Plug	Color	RAL
A			Black	sim.9005
B			White	sim.9001
C			Blue	sim.5005
D			Bordeaux Violet	sim.4004
E			Green	sim.6002
F			Brown	sim.8011
G			Grey	sim.7031


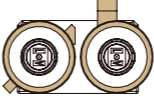





FAKRA Plug Coding

Coding	Vertical Plug	Right Angle Plug	Color	RAL
H			Violet	sim.4003
I			Beige	sim.1001
K			Curry	sim.1027
L			Camine Red	sim.3002
M			Pastel Orange	sim.2003
N			Pastel Green	sim.6019
Z			Water Blue	sim.5021

FAKRA Plug Coding

Coding	Twin Right Angle Plug	Color	RAL
A		Black	sim.9005
B		White	sim.9010
C		Blue	sim.5012
D		Claret Violet	sim.4004
E		Green	sim.6002
F		Brown	sim.8011
G		Grey	sim.7031

FAKRA Plug Coding

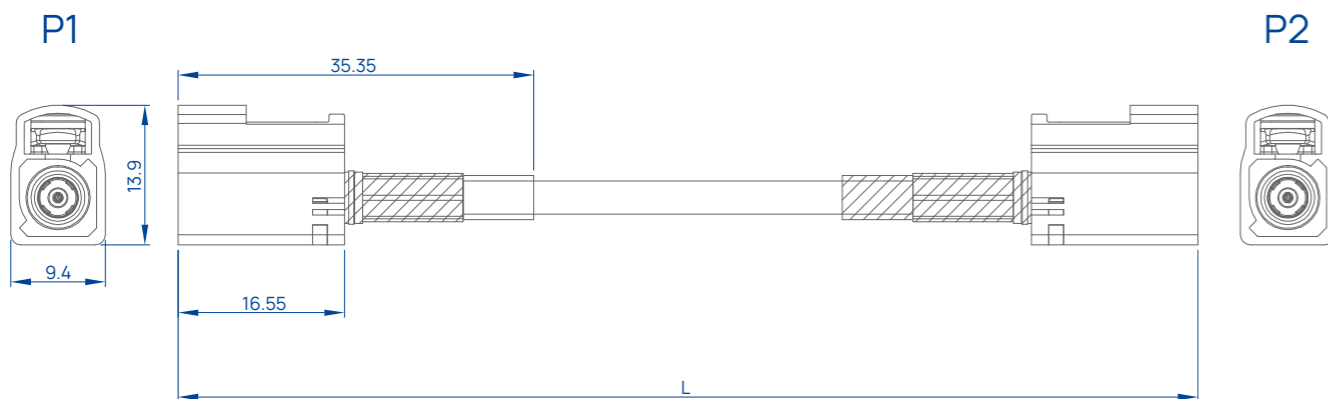
Coding	Twin Right Angle Plug	Color	RAL
H		Violet	sim.4003
I		Beige	sim.1001
K		Curry	sim.1027
L		Carmine Red	sim.3002
M		Pastel Orange	sim.2003
N		Pastel Green	sim.6019
Z		Water Blue	sim.5021

FAKRA Jack to Jack Cable



Specification

Part No.	1410102XXXX
Contacts	1
Material	
Insulator	PBT
Contact	Cu-Ni-Si Alloy
Outer Contacts	Ziue Alloy / SUS
Contact Plating	
Contact Area	30u" Selective Gold
Electrical	
Impedance	50 Ω
Frequency	DC to 3 GHz
Insertion Loss	≤ -2 dB @ 3.0 GHz (Depence on Cable Type)
Insulation Resistance	≥ 100 MΩ
Resistance	≤ 10 MΩ
Machanical	
Mating Cycles	≥ 25 Cycles
Engagement Force	≤ 25 N
Disengagement Force	≥ 2 N
Retention Force Latch	≥ 110 N
Coding Efficiency	≥ 80 N
Temperature Range	-40°C to +150°C



FAKRA Cable Series


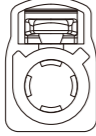





Product List	Description	Part No.
	FAKRA, Jack to Jack Cable Straight Type Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1410301XXXX
	FAKRA, Jack to Jack Cable Straight Type Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1410303XXXX
	FAKRA, Jack to Jack Cable Right Angle Type Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1410801XXXX
	FAKRA, Jack to Jack Cable Straight to Right Angle Type Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1410201XXXX
	FAKRA, Jack to Plug Cable Straight Type Jack Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z Plug Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1410503XXXX
	FAKRA, Jack 1x2 to Jack Cable Jack 1x2 Coding: A,B,C,D,H,I,N,Z Jack Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1410304XXXX
	FAKRA, Jack to Plug Cable Straight Type Jack 1x2 Coding: A,B,C,D,H,I,N,Z Plug Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1410507XXXX

FAKRA Cable Series (IP67 / IP69K)





Product List	Description	Part No.
	FAKRA, Jack to Jack Cable Straight Type Coding: A,B,C,D,E,F,Z	1410102XXXX
	FAKRA, Jack to Jack Cable Right Angle Type Coding: A,B,C,D,E,F,Z	1413501XXXX
	FAKRA, Jack to Jack Cable Straight to Right Angle Type Coding: A,B,C,D,E,F,Z	1413301XXXX
	FAKRA, Jack to Plug Cable Straight Type Plug Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z Jack Coding: A,B,C,D,E,F,Z	1413201XXXX
	FAKRA, Plug to I-Pex MHF Cable Straight Type Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1413101XXXX
	FAKRA, Plug to I-Pex MHF 4L Cable Straight Type Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1413102XXXX

X : Coding option refer to page 23-24

FAKRA Jack Coding

Coding	Jack Cable	Color	RAL
A		Black	sim.9005
B		White	sim.9001
C		Blue	sim.5005
D		Claret Violet	sim.4004
E		Green	sim.6002
F		Brown	sim.8011
G		Grey	sim.7031

FAKRA Jack Coding

Coding	Jack Cable	Color	RAL
H		Violet	sim.4003
I		Beige	sim.1001
K		Curry	sim.1027
L		Camine Red	sim.3002
M		Pastel Orange	sim.2003
N		Pastel Green	sim.6019
Z		Water Blue	sim.5021



Mini FAKRA

Mini FAKRA Product Overview

Mini FAKRA is the High Performing System of Coaxial interface for the automotive industry. For frequencies up to 9 GHz (20 Gbps) per lane , Its innovative design addresses the growing requirement for cost savings as well as reduced weight and size.

The space savings of up to 80 % compared to conventional FAKRA connectors, the Mini FAKRA connector system allows various modules to be accommodated in the smallest possible footprint.

Best cost is based on fully stamped and formed manufacturing processes and automated connector mounting and cable assembly. With Mini FAKRA the customer can count on an interface that accommodates future vehicle networks, applications and protocols.

The priority of autonomous driving and driver assistance systems is to ensure safety. It is required to determine exact positions, to continuously calculate routes and to detect and classify objects. High data volumes from several cameras, diverse sensors and navigation sources must be combined and transported for this purpose—in real time.

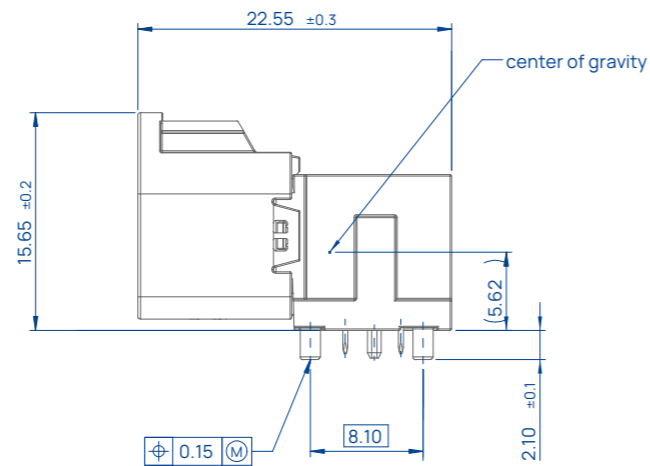
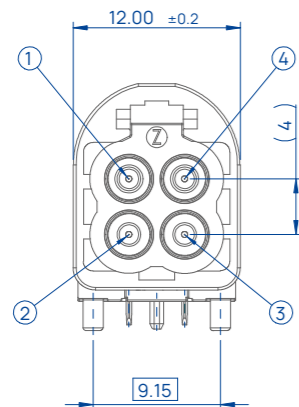
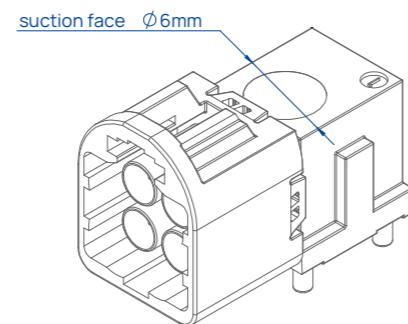
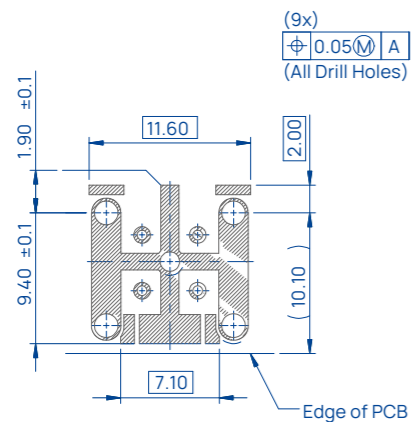
Application

- Autonomous driving
- Driver assistance systems
- Navigation
- Infotainment
- Rear seat entertainment
- Wireless Gigabit

Product Characteristics

- High frequency data transfer
- Small dimensions—optimized used of space
- Highest mechanical robustness
- Modular system—saving installation space by as much as 80%
- Cost optimized
- Real-time data transmission

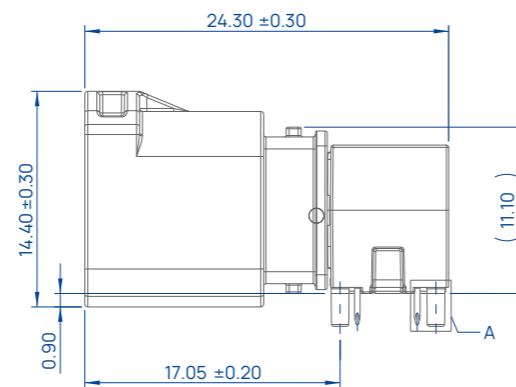
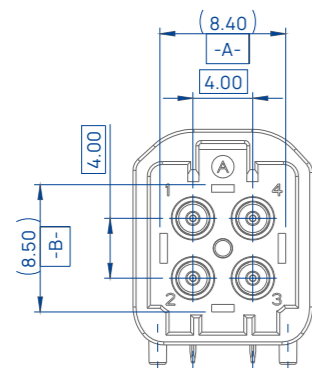
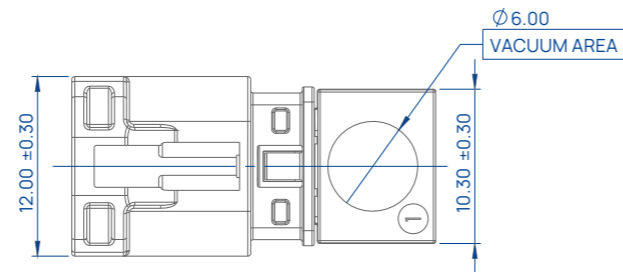
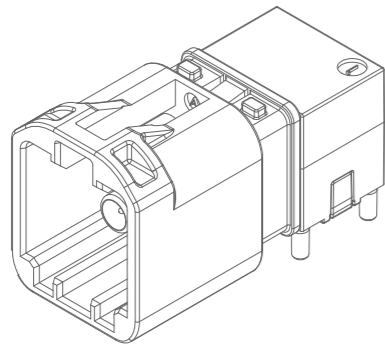
Mini FAKRA Right Angle A Type



Specification

Part No.	5420102XXXX
Contacts	1-4
Material	
Insulator	Thermo Plastic
Contacts	Copper Alloy
Outer Contacts	SUS / Zinc Alloy
Contact Plating	
Contact Area	6u" Selective Gold
Solder Tails Area	80 ~ 160u" Tin (Matte)
Electrical	
Impedance	50 Ω
Frequency	DC to 9 GHz
Return Loss	$\geq 25 \text{ dB}$, DC to $\leq 3\text{GHz}$; $\geq 20 \text{ dB}$, $> 3\text{GHz}$ to $\leq 6\text{GHz}$; $\geq 12 \text{ dB}$, $> 6\text{GHz}$ to $\leq 9\text{GHz}$
Insertion Loss	$\leq 0.1 \times \sqrt{f(\text{GHz})} \text{ dB}$
Insulation Resistance	$\geq 1000 \text{ M}\Omega$
Signal Contact Resistance	$\leq 10 \text{ M}\Omega$
Machanical Characteristics	
Mating Cycles	$\geq 25 \text{ Cycles}$
Engagement Force	$\leq 45 \text{ N}$
Disengagement Force	$\geq 5 \text{ N}$
Retention Force Latch	$\geq 110 \text{ N}$
Coding Efficiency	$\geq 150 \text{ N}$
Temperature Range	-40°C to +105°C

Mini FAKRA Right Angle B Type



Specification

Part No.	5422601XXXX
Contacts	1-4
Material	
Insulator	Thermoplastic, rated UL94V-0
Contacts	Brass
Outer Contacts	Zamak
Contact Plating	
Underplate	80u" ~160u" Nickel
Contact Area	80u" ~160u" Ag
Solder Tails Area	80u" ~160u" Tin (Matte)
Electrical	
Impedance	50 Ω
Frequency	DC to 9 GHz
Return Loss	≥ 17dB to 6GHz ; ≥ 12dB to 9GHz
Insertion Loss	≤ 0.75dB to 9GHz
Insulation Resistance	1000 MΩ
Machanical Characteristics	
Mating Cycles	≥ 25 Cycles
Engagement Force	≤ 75 N
Disengagement Force	≥ 60 N
Temperature Range	-40°C to +105°C

Mini FAKRA Plug Series A Type

Product List	Description	Part No.	
	Mini FAKRA Right Angle, 1x1, A Type Coding:A,B,C,D,E,F,G,H,J,K,N,Z	Key Up	5420101001X
		Key Left	5420101002X
		Key Down	5420101003X
		Key Right	5420101004X
	Mini FAKRA Right Angle, 2x2, A Type Coding:A,B,C,D,E,F,G,Z	Key Up	5420102001X
		Key Left	5420102002X
		Key Down	5420102003X
		Key Right	5420102004X

Mini FAKRA Plug Series A Type

Product List	Description	Part No.
	Mini FAKRA AM Plug, 1x1, A Type, Vertical Coding:A,B,C,D,E,F,G,H,J,K,N,Z	5420203001X
	Mini FAKRA AM Plug, 1x2, A Type, Vertical Coding:A,B,C,D,E,F,G,H,J,K,N,Z	5420204001X
	Mini FAKRA AM Plug, 2x2, A Type, Vertical Coding:A,B,C,D,E,F,G,Z	5420201001X
	Mini FAKRA AM Plug, 2x2, A Type, Vertical Coding:A,B,C,D,E,F,G,Z	5420205001X
	Mini FAKRA AM Plug, 1x1 + MQS, Vertical Coding:A,B,C,D,E,F,G,H,J,K,N,Z	5420501001X
	Mini FAKRA A Type 2x2, Straight Plug Coding:A,B,C,D,E,F,G,H,J,K,N,Z	5420202001X

X : Coding option refer to page 35-42







Mini FAKRA Plug Series B Type

Product List	Description	Part No.	
	Mini FAKRA Right Angle, 1x2, B Type, Coding:A,B,C,D,E,F,Z	Key Up, With Metal Plate	5422603001X
		Key Down, With Metal Plate	5422603002X
Key Up, W/O Metal Plate		5422603003X	
Key Down, W/O Metal Plate		5422603004X	
	Mini FAKRA Right Angle, 2x2, B Type Coding:A,B,C,D,E,F,Z	Key Up	5422601001X
		Key Down	5422601002X

X : Coding option refer to page 43



Mini FAKRA Plug Coding

Coding	Right Angle A Type 1x1	Color	RAL
A		Black	sim.9005
B		White	sim.9010
C		Blue	sim.5012
D		Claret Violet	sim.4004
E		Green	sim.6017
F		Brown	sim.8011

Mini FAKRA Plug Coding

Coding	Right Angle A Type 1x1	Color	RAL
G		Grey	sim.7036
H		Light Pink	sim.3015
J		Beige	sim.1001
K		Curry	sim.1027
N		Pastel Green	sim.6019
Z		Water Blue	sim.5021

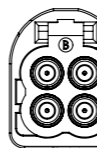


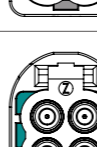
Supported Protocols

- GMSL / GMSL2 / GMSL3
- MIPI
- FPD-Link
- APIX3

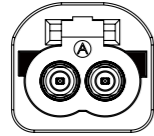
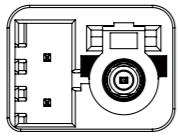
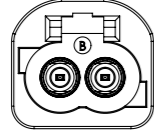
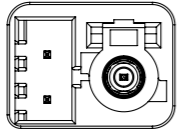
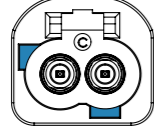
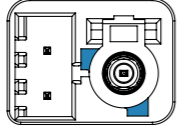
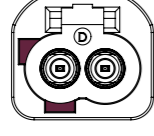
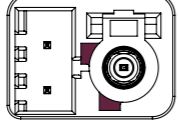
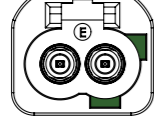
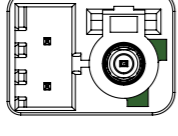
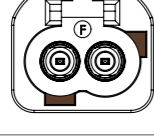
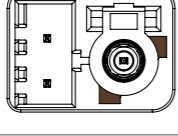
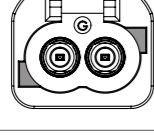
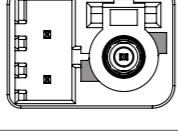
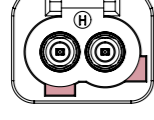
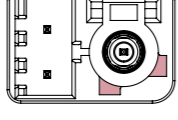
Mini FAKRA Plug Coding

Coding	Right Angle A Type 2x2	Color	RAL
A		Black	sim.9005
B		White	sim.9010
C		Blue	sim.5012
D		Claret Violet	sim.4004
E		Green	sim.6017
F		Brown	sim.8011
G		Platinum Grey	sim.7036
Z		Water Blue	sim.5021

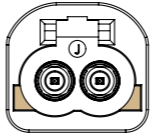
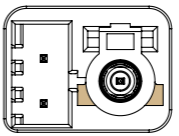

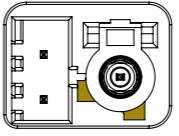
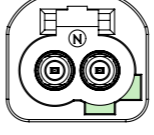
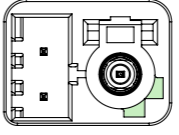
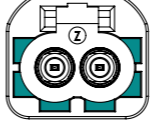
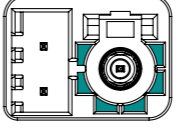
Mini FAKRA Plug Coding

Coding	Vertical A Type 2x2	Color	RAL
A		Black	sim.9005
B		White	sim.9010
C		Blue	sim.5012
D		Bordeaux Violet	sim.4004
E		Green	sim.6017
F		Brown	sim.8011
G		Grey	sim.7036
Z		Water Blue	sim.5021

Mini FAKRA Plug Coding

Coding	Vertical, A Type 1x2	Vertical A Type 1x1 +MQS 2Pin	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Bordeaux Violet	sim.4004
E			Green	sim.6017
F			Brown	sim.8011
G			Grey	sim.7036
H			Light Pink	sim.3015

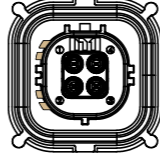
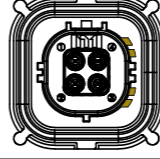
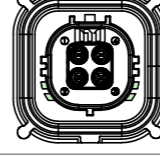
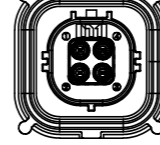
Mini FAKRA Plug Coding

Coding	Vertical, A Type 1x2	Vertical A Type 1x1 +MQS 2Pin	Color	RAL
J			Beige	sim.1001
K			Curry	sim.1027
N			Pastel Green	sim.6027
Z			Water Blue	sim.5021

Mini FAKRA Plug Coding

Coding	A Type 2x2, Straight Plug	Color	RAL
A		Black	sim.9005
B		White	sim.9010
C		Blue	sim.5012
D		Bordeaux Violet	sim.4004
E		Green	sim.6017
F		Brown	sim.8011
G		Grey	sim.7036
H		Light Pink	sim.3015

Mini FAKRA Plug Coding

Coding	A Type 2x2, Straight Plug	Color	RAL
J		Beige	sim.1001
K		Curry	sim.1027
N		Pastel Green	sim.6027
Z		Water Blue	sim.5021

Mini FAKRA Plug Coding

Coding	Right Angle B Type 1x2	Right Angle B Type 2x2	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Bordeaux Violet	sim.4004
E			Green	sim.6017
F			Brown	sim.8011
Z			Water Blue	sim.5021

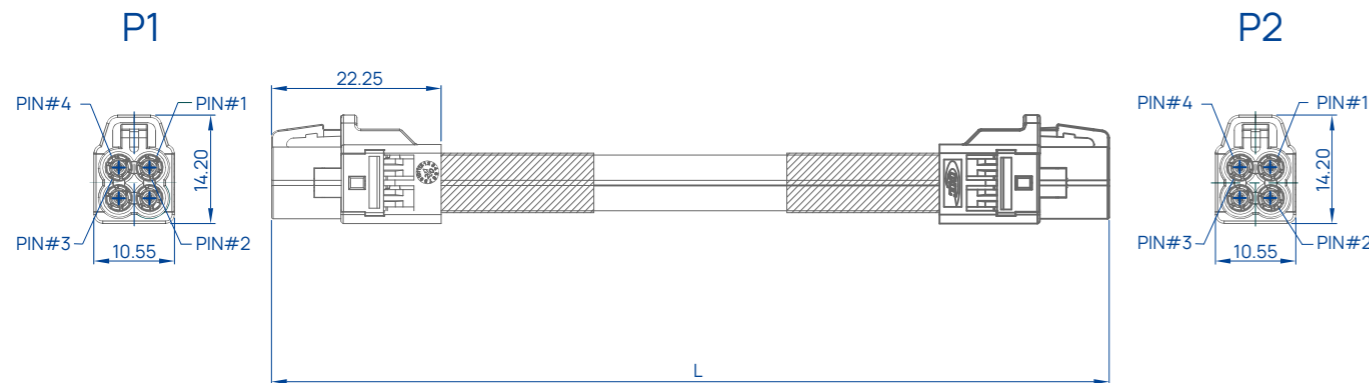


Mini FAKRA Jack to Jack Cable



Specification




Part No.	1420102XXXX
Contacts	4
Material	
Insulator	PA / PBT
Contacts	Cu-Ni-Si Alloy
Outer Contacts	Cu-Ni-Si Alloy
Contact Plating	
Contact Area	30u" Selective Gold
Electrical	
Impedance	50 Ω
Frequency	DC to 9.0 GHz
Insertion Loss	Depence On Customer Define
Insulation Resistance	≥ 100 MΩ
Resistance	≤ 10 MΩ
Machanical	
Mating Cycles	≥ 25 Cycles
Engagement Force	≤ 25 N
Disengagement Force	≥ 2 N
Retention Force Latch	≥ 110 N
Coding Efficiency	≥ 40 N
Temperature Range	-40°C to +150°C



Mini FAKRA Cable A Type

Product List	Description	Part No.
	Mini FAKRA, Jack to Jack Cable Straight Type, 2x2 Coding: A,B,C,D,E,F,Z	1420104XXXX
	Mini FAKRA Jack to FAKRA Jack x4 Cable Straight Type Mini FAKRA Coding: A,B,C,D,E,F,Z FAKRA Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1420401XXXX
	Mini FAKRA Jack to FAKRA Plug x4 Cable Straight Type Mini FAKRA Coding: A,B,C,D,E,F,Z FAKRA Coding: A,B,C,D,E,F,Z	1420501XXXX
	Mini FAKRA Jack to SMA Male Plug x4 Cable Straight Type Mini FAKRA Coding: A,B,C,D,E,F,Z	1420201XXXX
	Mini FAKRA Jack to SMA Female Plug x4 Cable Straight Type Mini FAKRA Coding: A,B,C,D,E,F,Z	1420301XXXX
	Mini FAKRA, Jack to Jack Cable Straight Type, 1x1 Coding: A,B,C,D,E,F,G,H,J,K,Z	1420102XXXX
	Mini FAKRA Jack to FAKRA Jack Cable Straight Type, 1x1 Mini FAKRA Coding: A,B,C,D,E,F,G,H,J,K,Z FAKRA Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1420405XXXX

Mini FAKRA Cable A Type

Product List	Description	Part No.
	Mini FAKRA Double A Type Jack to FAKRA Jack x2 Cable Mini FAKRA Double Coding: A,B,C,D,E,H,I,N,Z FAKRA Coding: A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1420404XXXX
	Mini FAKRA + MGS 2Pin Plug Coding: A,B,C,D,E,F,G,H,J,K,Z	1420801XXXX
	Mini FAKRA A Type 2x2 Plug + Clip Slot Coding: A,B,C,D,E,F,G,Z	1422101XXXX

X : Coding option refer to page 51-55

Mini FAKRA Cable B Type

Product List	Description	Part No.
	Mini FAKRA, Jack to Jack Cable Straight Type, 2x2 Coding:A,B,C,D,E,F,Z	1424104XXXX
	Mini FAKRA Jack to FAKRA Jack x4 Cable Straight Type Mini FAKRA Coding:A,B,C,D,E,F,Z FAKRA Coding:A,B,C,D,E,F,G,H,I,K,L,M,N,Z	1424502XXXX
	Mini FAKRA Jack to FAKRA Plug x4 Cable Straight Type Mini FAKRA Coding:A,B,C,D,E,F,Z FAKRA Coding:A,B,C,D,E,F,Z	1424402XXXX
	Mini FAKRA Jack to SMA Male Plug x4 Cable Straight Type Mini FAKRA Coding:A,B,C,D,E,F,Z	1424601XXXX
	Mini FAKRA Jack to SMA Female Plug x4 Cable Straight Type Mini FAKRA Coding:A,B,C,D,E,F,Z	1424302XXXX

Mini FAKRA Cable B Type

Product List	Description	Part No.
 IP67 / IP69K	Mini FAKRA Quad B Type Jack Cable Straight Type Coding:A,B,C,D,E,F,G,H,Z	1423301XXXX
 IP67 / IP69K	Mini FAKRA Quad B Type Plug Cable Straight Type Coding:A,B,C,D,E,F,G,H,Z	1423201XXXX
 IP67 / IP69K	Mini FAKRA Quad B Type Jack to Plug Cable Mini FAKRA Jack Coding:A,B,C,D,E,F,G,H,Z Mini FAKRA Plug Coding:A,B,C,D,E,F,G,H,Z	1423101XXXX
 IP67 / IP69K	Mini FAKRA Sealed Plug 2x2 For Panel Cable Straight Type Coding:A,B,C,D,E,F,G,H,Z	1422801XXXX

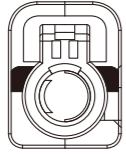
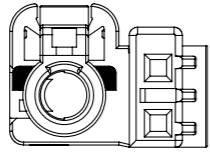
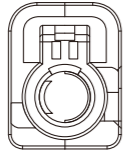
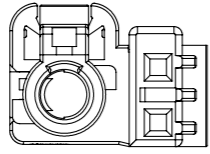
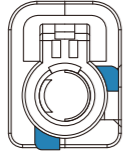
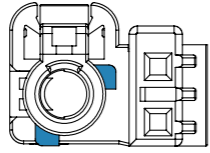

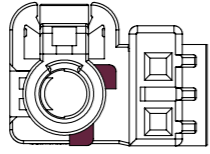
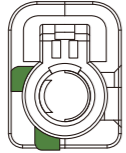
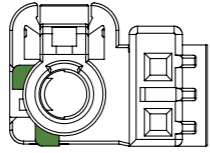
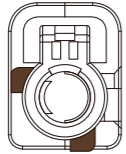
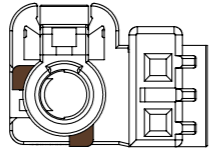
X: Coding option refer to page 56-60

Mini FAKRA Jack Coding

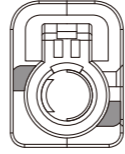
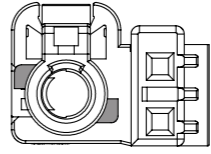
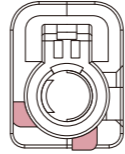
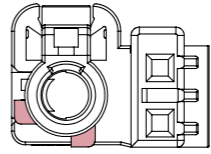
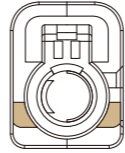
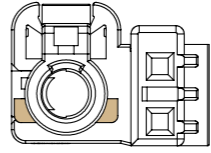
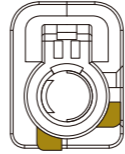
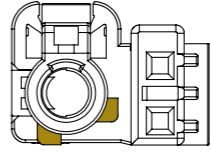
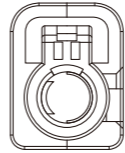
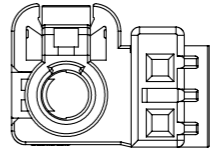
Coding	Jack A Type 2x2	Color	RAL
A		Black	sim.9005
B		Pure White	sim.9010
C		Light Blue	sim.5012
D		Claret Violet	sim.4004
E		May Green	sim.6017
F		Nut Brown	sim.8011
Z		Water Blue	sim.5021



Mini FAKRA Jack Coding

Coding	Jack A Type 1x1	A Type + MQS 2Pin Plug	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Claret Violet	sim.4004
E			Green	sim.6017
F			Nut Brown	sim.8011

Mini FAKRA Jack Coding

Coding	Jack A Type 1x1	A Type + MQS 2Pin Plug	Color	RAL
G			Grey	sim.7036
H			Light Pink	sim.3015
J			Beige	sim.1001
K			Curry	sim.1027
Z			Water Blue	sim.5021

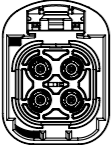
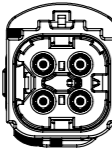
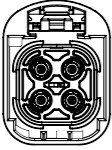
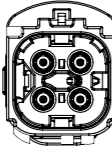
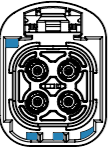
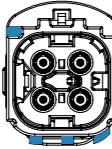
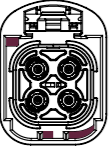
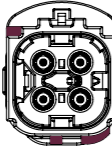
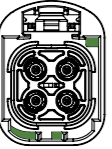
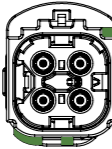
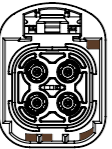
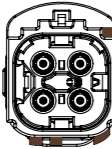
Mini FAKRA Plug Coding

Coding	Plug A Type 2X2	Color	RAL
A		Black	sim.9005
B		White	sim.9001
C		Blue	sim.5005
D		Claret Violet	sim.4004
E		Green	sim.6002
F		Brown	sim.8011
G		Grey	sim.7031
G		Water Blue	sim.5021

Mini FAKRA Jack Coding

Coding	Jack B Type 2x2	Color	RAL
A		Black	sim.9005
B		Pure White	sim.9010
C		Light Blue	sim.5012
D		Claret Violet	sim.4004
E		May Green	sim.6017
F		Nut Brown	sim.8011
Z		Water Blue	sim.5021

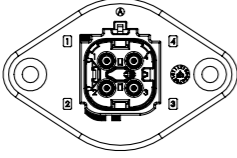
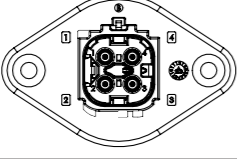
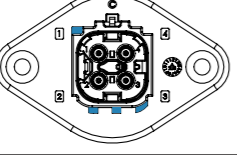
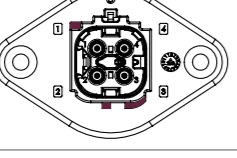
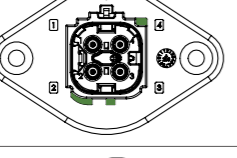
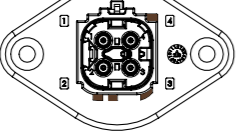
Mini FAKRA Jack & Plug Coding

Coding	Sealed B Type 2x2 Jack	Sealed B Type 2x2 Plug	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Claret Violet	sim.4004
E			Green	sim.6017
F			Nut Brown	sim.8011

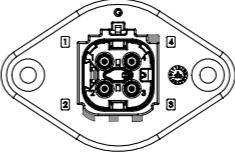
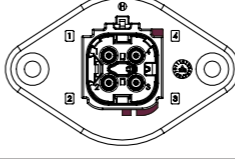
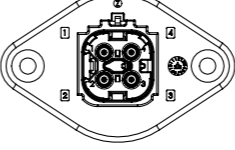
Mini FAKRA Jack & Plug Coding

Coding	Sealed B Type 2x2 Jack	Sealed B Type 2x2 Plug	Color	RAL
G			Grey	sim.7036
H			Light Pink	sim.3015
Z			Water Blue	sim.5021

Mini FAKRA Plug Coding

Coding	Sealed Plug 2x2 For Panel	Color	RAL
A		Black	sim.9005
B		Pure White	sim.9010
C		Light Blue	sim.5012
D		Claret Violet	sim.4004
E		May Green	sim.6017
F		Nut Brown	sim.8011

Mini FAKRA Plug Coding

Coding	Sealed Plug 2x2 For Panel	Color	RAL
G		Blue Grey	sim.7031
H		Heather Violet	sim.4003
Z		Water Blue	sim.5021



HMTD-N

HMTD-N Characteristic

HMTD-N is a full shielded differential solution designed for high speed automotive Ethernet. This new interface is capable of transmitting high speed data up to 15GHz (20Gbps) in a robust automotive grade connection. The high performance modular design of the system enables more flexibility in the quest of providing next generation devices.

Application

- Autonomous driving
- Camera system 4K
- High-resolution display 4K
- Lidar
- Radar
- Rear seat entertainment

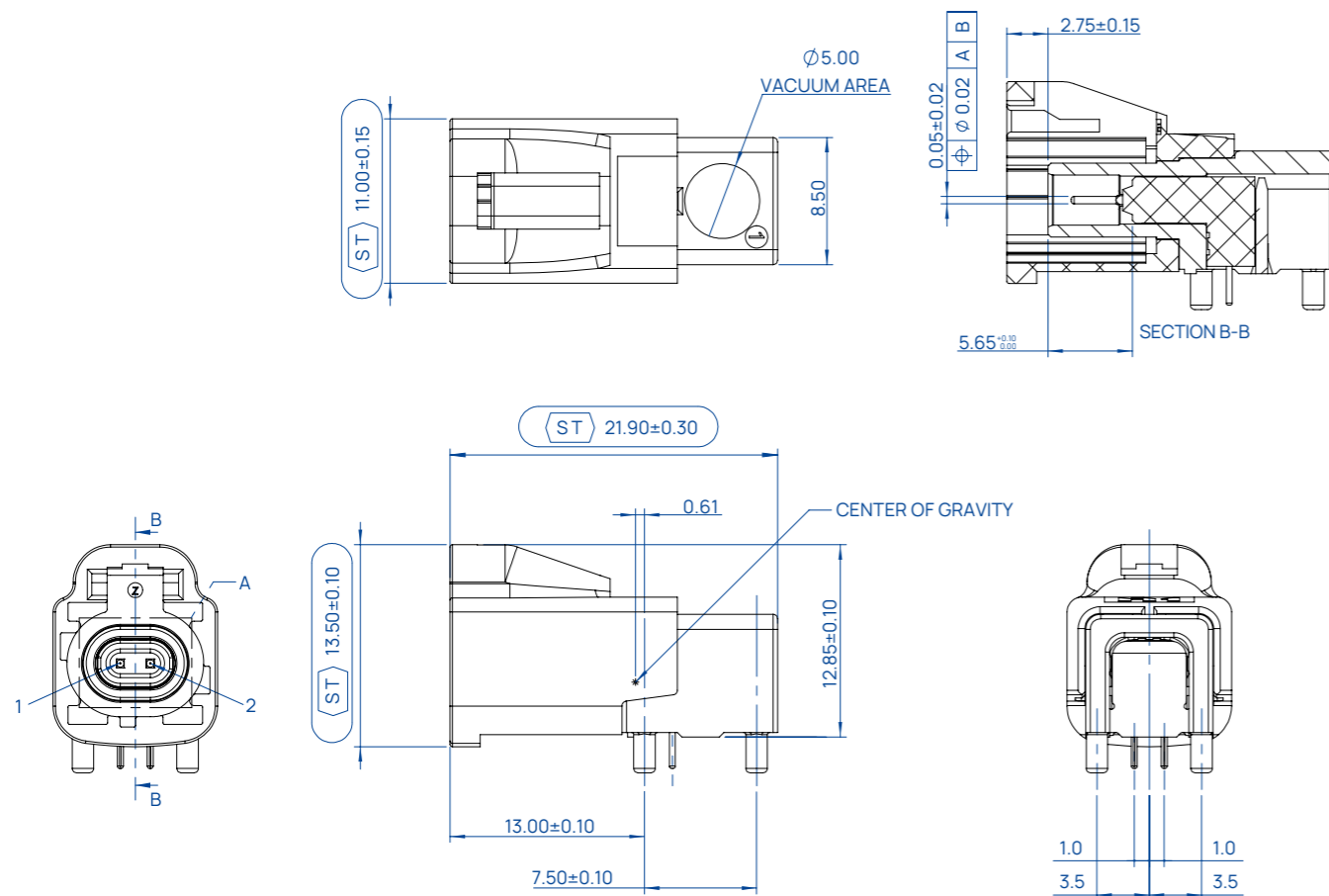
Protocols

- 100 BASE-T1
- 1000 BASE-T1
- Multi-Gigabit (up to 20Gbps)
- PCIe 4.0
- USB 3.1 Gen 2
- HDBase-T
- APIX 3
- FPD Link 4

Product Feature

- Automotive grade ethernet solution complied with LV214 / USCAR
- Modular package
- High performance up to 15GHz / 20Gbps
- Waterproof versions
- Power over Ethernet (POE) feature
- STP / UTP / SPP cable possible
- Small and robust package

HMTD-N Right Angle Type



Specification

Part No.	5440101001X
Contacts	2-8
Material	
Housing	Thermoplastic
Contact	Copper Alloy
Shell	Zinc Alloy
Contact Plating	
Under Plating	80 ~ 160u" Nickel
Contact Area	6u" Gold
Solder Tails Area	Tin Plating
Electrical	
Impedance	100 Ohm
Operating Frequency	Up to 15 GHz
Return Loss (typical)	≥ 25dB up to 1.5GHz , ≥20dB up to 4GHz , ≥TBD up to 9 GHz
Insertion Loss	TBD
Insulation Resistance	1000 MΩ Min. @100 VDC
RF Leakage	> 55 dB
Center Contact Resistance	≤ 15 mΩ
Outer Contact Resistance	≤ 25 mΩ
Contact Current Max. (DC)	≤ 1.5 ADC
Withstanding Voltage	Min. 250 V rms
Operating Voltage	≤ 60 VDC
Machanical Characteristics	
Mating Cycles	≥ 25 Cycles
Engagement Force(typical)	≤ 20 N
Separating Force(typical)	Min. 5 N Max. 25 N
Coding Retention Force	≥ 110 N
Environmental	
Operating Temp. Range	IEC 682-2, -40 up to +105 Degree
Temperature Change	DIN EN 60068-2-14
Vibration	DIN EN 60068-2-64
Shock	DIN EN 60068-2-27
Humidity (Cyclic)	DIN EN 60068-2-30


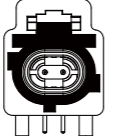

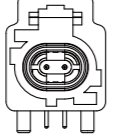
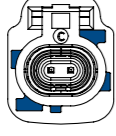
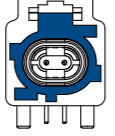
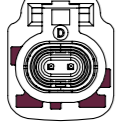
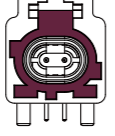
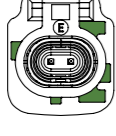
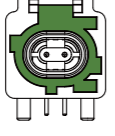
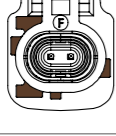
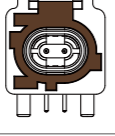
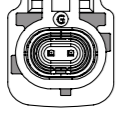
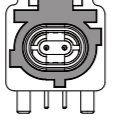
HMTD-N Plug Series

Product List	Description	Part No.
	HMTD-N, Straight Type, 1x1 Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	5440201001AX
	HMTD-N, Right Angle Type, 1x1 Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	5440101001X
	HMTD-N, Right Angle Type, 1x2 Coding: A,B,C,D,E,F,G,H,J,K,L,M,Z	5440102001X
	HMTD-N, Right Angle Type, 2x2 Coding: A,B,C,D,E,F,G,H,J,K,L,M,Z	5440103001X
	HMTD-N, Right Angle Type, 2x3 Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	5440104001X
	HMTD-N, Right Angle Type, 1x1 +MQS 6Pin Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	5440301001X
 IP67 / IP69K	HMTD-N, Right Angle Type, 2x2 Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	5440104001X

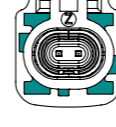
X : Coding option refer to page 67-74



HMTD-N Plug Coding

Coding	Vertical 1x1	Right Angle 1x1	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Bordeaux Violet	sim.4004
E			Green	sim.6017
F			Brown	sim.8011
G			Grey	sim.7036

HMTD-N Plug Coding

Coding	Vertical 1x1	Right Angle 1x1	Color	RAL
H			Light Pink	sim.3015
J			Beige	sim.1001
K			Curry	sim.1027
L			Yellow Green	sim.6018
M			Pastel Orange	sim.2003
O			Light Green	sim.6027
Z			Water Blue	sim.5021

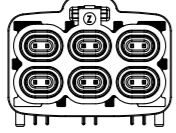
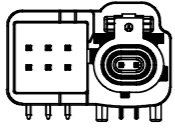
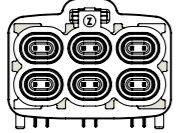
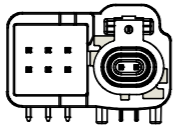
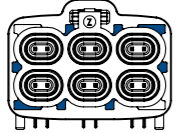
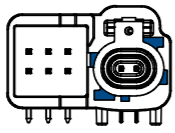
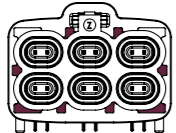
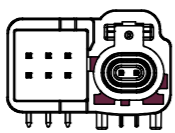
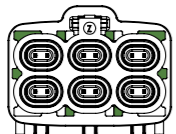
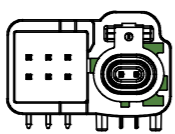
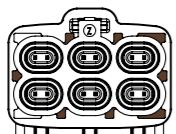
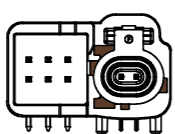
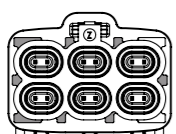
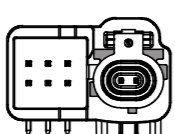
HMTD-N Plug Coding

Coding	Right Angle 1x2	Right Angle 2x2	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Bordeaux Violet	sim.4004
E			Green	sim.6017
F			Brown	sim.8011
G			Grey	sim.7036

HMTD-N Plug Coding

Coding	Right Angle 1x2	Right Angle 2x2	Color	RAL
H			Light Pink	sim.3015
J			Beige	sim.1001
K			Curry	sim.1027
L			Yellow Green	sim.6018
M			Pastel Orange	sim.2003
O			Light Green	sim.6027
Z			Water Blue	sim.5021

HMTD-N Plug Coding

Coding	Right Angle 2x3	Right Angle 1x1 +MQS 6Pin	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Bordeaux Violet	sim.4004
E			Green	sim.6017
F			Brown	sim.8011
G			Grey	sim.7036

HMTD-N Plug Coding

Coding	Right Angle 2x3	Right Angle 1x1 +MQS 6Pin	Color	RAL
H			Light Pink	sim.3015
J			Beige	sim.1001
K			Curry	sim.1027
L			Yellow Green	sim.6018
M			Pastel Orange	sim.2003
O			Light Green	sim.6027
Z			Water Blue	sim.5021

HMTD-N Plug Coding

Coding	STR Plug 2x2	Color	RAL
A		Black	sim.9005
B		White	sim.9010
C		Light Blue	sim.5012
D		Claret Violet	sim.4004
E		Green	sim.6017
F		Brown	sim.8011
G		Grey	sim.7036
H		Light Pink	sim.3015

HMTD-N Plug Coding

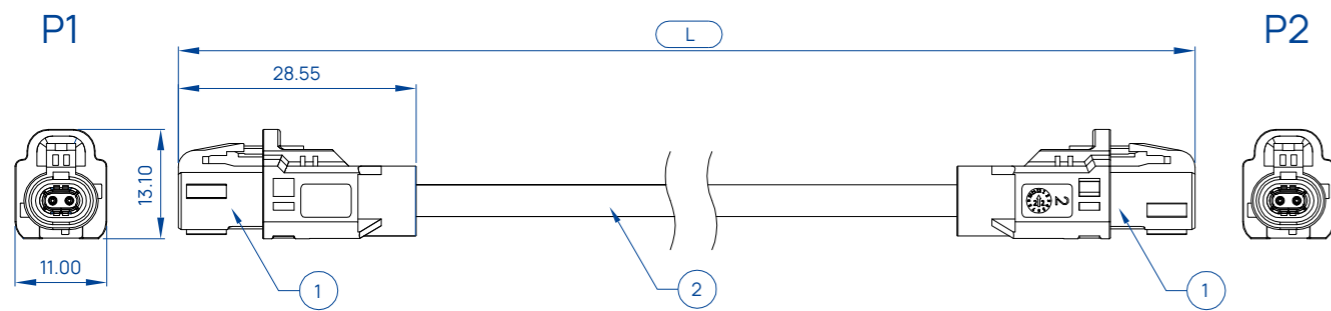
Coding	STR Plug 2x2	Color	RAL
J		Beige	sim.1001
K		Curry	sim.1027
L		Yellow Green	sim.6018
M		Pastel Orange	sim.2003
N		Pastel Green	sim.6019
P		Carmine Red	sim.3002
R		Signal Blue	sim.5005
Z		Water Blue	sim.5021

HMTD-N Jack Cable



Specification

Part No.	1440101XXXX
Contacts	1
Material	
Insulator	PBT
Contact	Cu-Ni-Si Alloy
Outer Contacts	Phosphor Bronze
Contact Plating	
Contact Area	30u" Selective Gold
Electrical	
Impedance	100 Ω
Frequency	DC to 4 GHz (10 G BASE-T1)
Insulation Resistance	≥ 100 MΩ
Resistance	≤ 5 Ω
Machanical	
Mating Cycles	≥ 25 Cycles
Engagement Force	≤ 75 N
Disengagement Force	≥ 5 N
Retention Force Latch	≥ 110 N
Coding Efficiency	≥ 80 N
Temperature Range	-40°C to +105°C



HMTD-N Cable


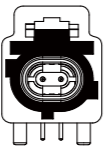
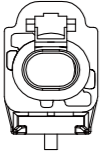
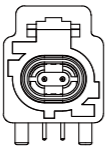
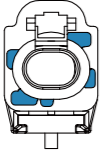
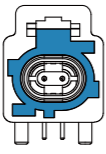
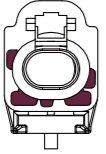
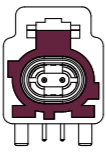
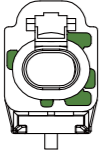
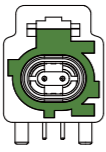
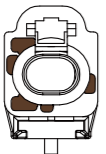
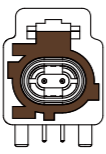

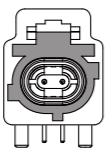
Product List	Description	Part No.
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	HMTD-N 1X1 Plug to Jack Cable Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	1445101XXXX
	HMTD-N 1X1 Plug to Plug Cable Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	1442601XXXX
	HMTD-N 1X2 Jack Cable Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	1440201XXXX
	HMTD-N 2X2 Jack Cable Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	1440301XXXX
	HMTD-N 2X3 Jack Cable Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	1440401XXXX

HMTD-N Cable

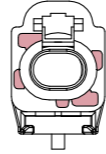
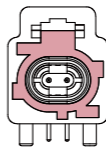
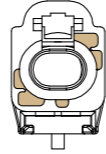
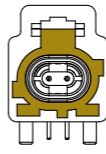
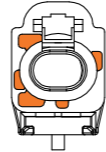
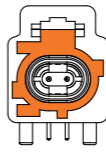
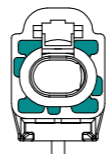
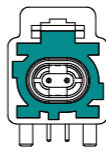
Product List	Description	Part No.
	HMTD-N Jack to Jack 1x1 + MQS 6Pin Plug Coding: A,B,C,D,E,F,G,H,J,K,L,M,O,Z	1447601XXXX
 IP67 / IP69K	HMTD-N Jack to Jack 2x2 Cable Coding: A,B,C,D,E,F,G,H,J,K,L,M,N,P,R,Z	1442001XXXX

X : Coding option refer to page 79-86

HMTD-N Cable Coding

Coding	Plug 1x1	Jack 1x1	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Bordeaux Violet	sim.4004
E			Green	sim.6017
F			Brown	sim.8011
G			Grey	sim.7036

HMTD-N Cable Coding

Coding	Plug 1x1	Jack 1x1	Color	RAL
H			Light Pink	sim.3015
J			Beige	sim.1001
K			Curry	sim.1027
L			Yellow Green	sim.6018
M			Pastel Orange	sim.2003
O			Light Green	sim.6027
Z			Water Blue	sim.5021

HMTD-N Cable Coding

Coding	Jack 1x2	Jack 2x2	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Bordeaux Violet	sim.4004
E			Green	sim.6017
F			Brown	sim.8011
G			Grey	sim.7036

HMTD-N Cable Coding

Coding	Jack 1x2	Jack 2x2	Color	RAL
H			Light Pink	sim.3015
J			Beige	sim.1001
K			Curry	sim.1027
L			Yellow Green	sim.6018
M			Pastel Orange	sim.2003
O			Light Green	sim.6027
Z			Water Blue	sim.5021

HMTD-N Cable Coding

Coding	Jack 2x3	Jack 1x1 + MQS 6Pin Plug	Color	RAL
A			Black	sim.9005
B			White	sim.9010
C			Blue	sim.5012
D			Bordeaux Violet	sim.4004
E			Green	sim.6017
F			Brown	sim.8011
G			Grey	sim.7036

HMTD-N Cable Coding

Coding	Jack 2x3	Jack 1x1 + MQS 6Pin Plug	Color	RAL
H			Light Pink	sim.3015
J			Beige	sim.1001
K			Curry	sim.1027
L			Yellow Green	sim.6018
M			Pastel Orange	sim.2003
O			Light Green	sim.6027
Z			Water Blue	sim.5021

HMTD-N Cable Coding

Coding	Jack 2x2, IP Rating	Color	RAL
A		Black	sim.9005
B		White	sim.9010
C		Blue	sim.5012
D		Bordeaux Violet	sim.4004
E		Green	sim.6017
F		Brown	sim.8011
G		Grey	sim.7036
H		Light Pink	sim.3015

HMTD-N Cable Coding

Coding	Jack 2x2, IP Rating	Color	RAL
J		Beige	sim.1001
K		Curry	sim.1027
L		Yellow Green	sim.6018
M		Pastel Orange	sim.2003
N		Pastel Green	sim.6019
P		Carmine Red	sim.3002
R		Signal Blue	sim.5005
Z		Water Blue	sim.5021



HSD

HSD Application

The digital HSD Connector system enables excellent data transfer through LVDS (Low Voltage Differential Signaling) / MHL / Flexray / USB2.0 / USB 3.0 / IEEE1394 / Ethernet / APIX / CAN. The optimized impedance connector system offers a first-class transfer quality ; external source of interference and crosstalk are prevented. The main product characteristic S.S.R. (Smart Strain Relief) , an intelligent strain relief unit , leaves the soldering points free of stain in circuit board connections.

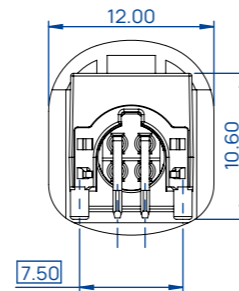
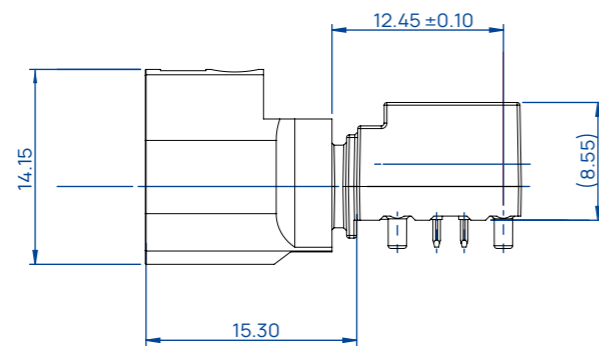
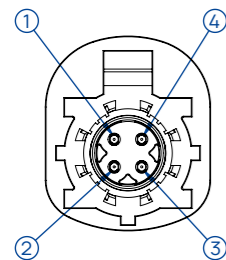
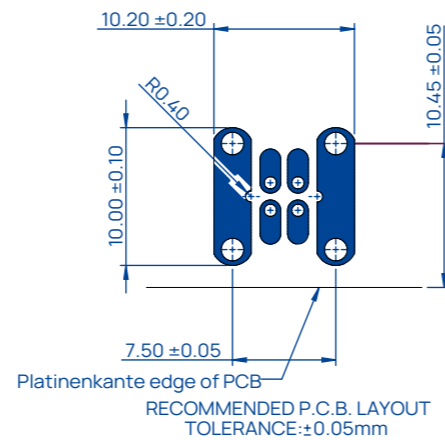
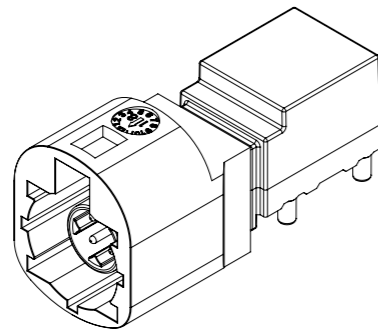
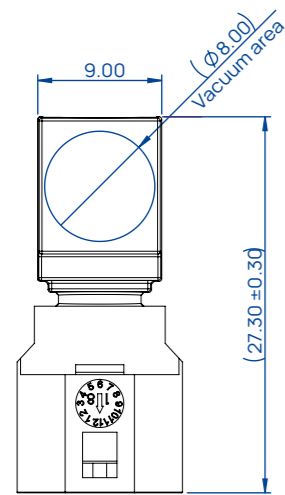
Application

- Infotainment
- HD-entertainment
- Driver assistance
- Telematics
- LVDS-camera
- GVIF-video transmission
- IEEE 1394, USB2.0, USB3.0, Ethernet-data
- More 100 ohm high speed data Connectors

Product Characteristics

- S.S.R. enables unstressed solder joints for PCB types
- Tilt safety
- High data bit rate up to 6 Gbps
- Excellent resistance against cross-talk and RF EMC
- Mechanical robustness according to automotive requirements
- THR and THT capable for automated assemblies
- Mechanical and color coding prevents mismatching
- Primary and secondary locking mechanism ensures highest interconnection security

HSD (High Speed Data) Right Angle Type



Specification








Part No.	5430104001X
Contacts	4
Material	
Insulator	PA9T
Contact	Brass
Shell	Zinc Alloy
Contact Plating	
Outer Contact	120~240u" Tin(Matte) over 120~240u" Nickel over 600u"~800u" Cu
Contact Area	6u" Selective Gold
Solder Tails Area	120 ~ 240u" Tin(Lead Free)
Electrical	
Impedance	100 Ω differential signalling, for one pair or quad cable shielded
Operating Frequency	Up to 2 GHz
Return Loss (typical)	≥ 20 dB to 1.0 GHz ; ≥ 17 dB to 2.0 GHz
Insertion Loss	≤ 0.1 dB
Insulation Resistance	≥ 1000 MΩ
Center Contact Resistance	≤ 10 mΩ
Machanical Characteristics	
Engagement Force (typical)	≤ 30 N
Disengagement force	≥ 5 N
Mating Cycles	≥ 25
Cording Efficiency	≥ 80 N
Retention Force Latch	≥ 110 N
Environmental	
Operating Temp. Range	-40 up to +105 Degree
Thermal Shock	USCAR-17
Temp. and Humidity	USCAR-17 ; SAE/USCAR-2
Mechanical Shock	DIN IEC 60068-2-27

HSD Plug Series






Product List	Description	Part no.
	HSD, Vertical Type Coding:A,B,C,D,E,F,Z	5430201001X
 Standard	HSD, Right Angle Type Shell Height=8.55mm Key Up Coding:A,B,C,D,E,F,Z	5430104001X
 Standard	HSD, Right Angle Type Shell Height=8.55mm Key down Coding:G,H,J,K,L,M,O	
 Reverse	HSD, Right Angle Type Shell Height=8.55mm Key Up Reverse Coding:A,B,C,D	5430104002X

X : Coding option refer to page 92-93

HSD Plug Coding

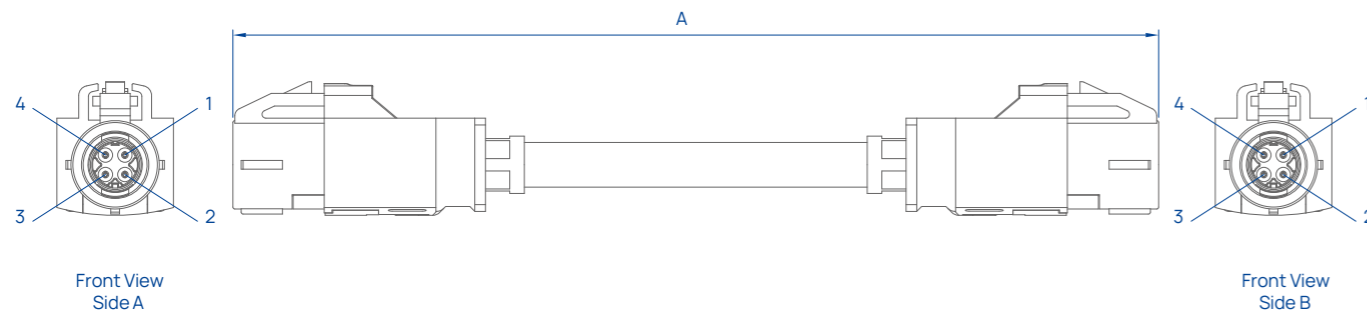
Coding	Plug	Color	RAL
A		Black	sim.9005
B		White	sim.9001
C		Blue	sim.5005
D		Bordeaux	sim.4004
E		Green	sim.6002
F		Brown	sim.8001
Z		Water Blue	sim.5021

HSD Plug Coding

Coding	Plug	Color	RAL
G		Blue Grey	sim.7301
H		Heather Violet	sim.4003
J		Beige	sim.1001
K		Curry	sim.1027
L		Yellow Green	sim.6018
M		Pastel Orange	sim.2003
O		Light Green	sim.6027



HSD (High Speed Data) Vertical



PIN OUT

Side A		Side B
1	BLUE	4
2	ORANGE	3
3	GREEN	2
4	BROWN	1
Shield		Shield

Dimensions(mm)	
Range(length "A")	Tolerance(mm)
200 to 1000	±10
1001 to 5000	±15
5001 to 20000	±20

Specification




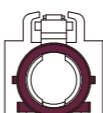

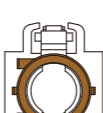
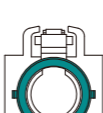
Part No.	1431101XXXX
Contacts	4
Material	
Insulator	PA / PBT
Contacts	Phosphor Bronze
Contact Sleeve	Phosphor Bronze
Outer Contacts	Brass
Contact Plating	
Contact Area	6u" Selective Gold
Solder Tails Area	40u" ~ 150u" Tin (Lead Free)
Electrical	
Impedance	100 Ω
Frequency	DC to 2.0 GHz
Return Loss	≥ 20 dB to 1.0 GHz; ≥ 17 dB to 2.0 GHz
Insertion Loss	≤ 0.1 dB @1.0 GHz
Insulation Resistance	≥ 1000 MΩ
Signal Contact Resistance	≤ 10 MΩ
Machanical Characteristics	
Mating Cycles	≥ 25 Cycles
Engagement Force	≤ 30 N
Disengagement Force	≥ 5 N
Retention Force Latch	≥ 110 N
Coding Efficiency	≥ 80 N
Temperature Range	-40°C to +105°C
Terminal Engagement Force	Min. 30 N

HSD Jack Cable

Product List	Description	Part No.
	HSD Jack Cable Straight Type Coding:A,B,C,D,E,F,Z	1431101XXXX
	HSD Jack to USB 2.0 AM Cable Straight Type Coding:A,B,C,D,E,F,Z	1430101XXXX
	HSD Jack to USB 2.0 AF Cable Straight Type Coding:A,B,C,D,E,F,Z	1430203XXXX

X : Coding option refer to page 98

HSD Jack Coding

Coding	Plug	Color	RAL
A		Black	sim.9005
B		White	sim.9001
C		Blue	sim.5005
D		Bordeaux	sim.4004
E		Green	sim.6002
F		Brown	sim.8001
Z		Water Blue	sim.5021



USB Type C

Automotive Type-C Application

Automotive USB Type-C Connectors compliant to USCAR-30 and are performance tested according to USCAR-2 & USB-IF Specification.

High bandwidth (data rate) up to 40Gbps (40Gbps/20Gbps/5Gbps/480Mbps) support advanced Infotainment, Telematics, LVDS Camera in Automotive industries.



Application

- Infotainment
- Entertainment
- Driver Assistance
- Telematics
- LVDS-Camera
- USB2.0/ USB3.1 / USB4

Product Characteristics

- Data Rate Up to 40Gbps/ Power Up to 5 Amps
- Follow USB-IF Type-C Specification
- Mechanical/Environmental robustness meet USCAR-2
- Mechanical and color coding prevents mismatching

USB Type C

Product List	Description	Part No.
	Automotive Type C Receptacle 40G/20G/480M Coding:A,B	5335101XXX
	Automotive Type C Cable 40G/20G/480M Coding:A,B	1334007XXX





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