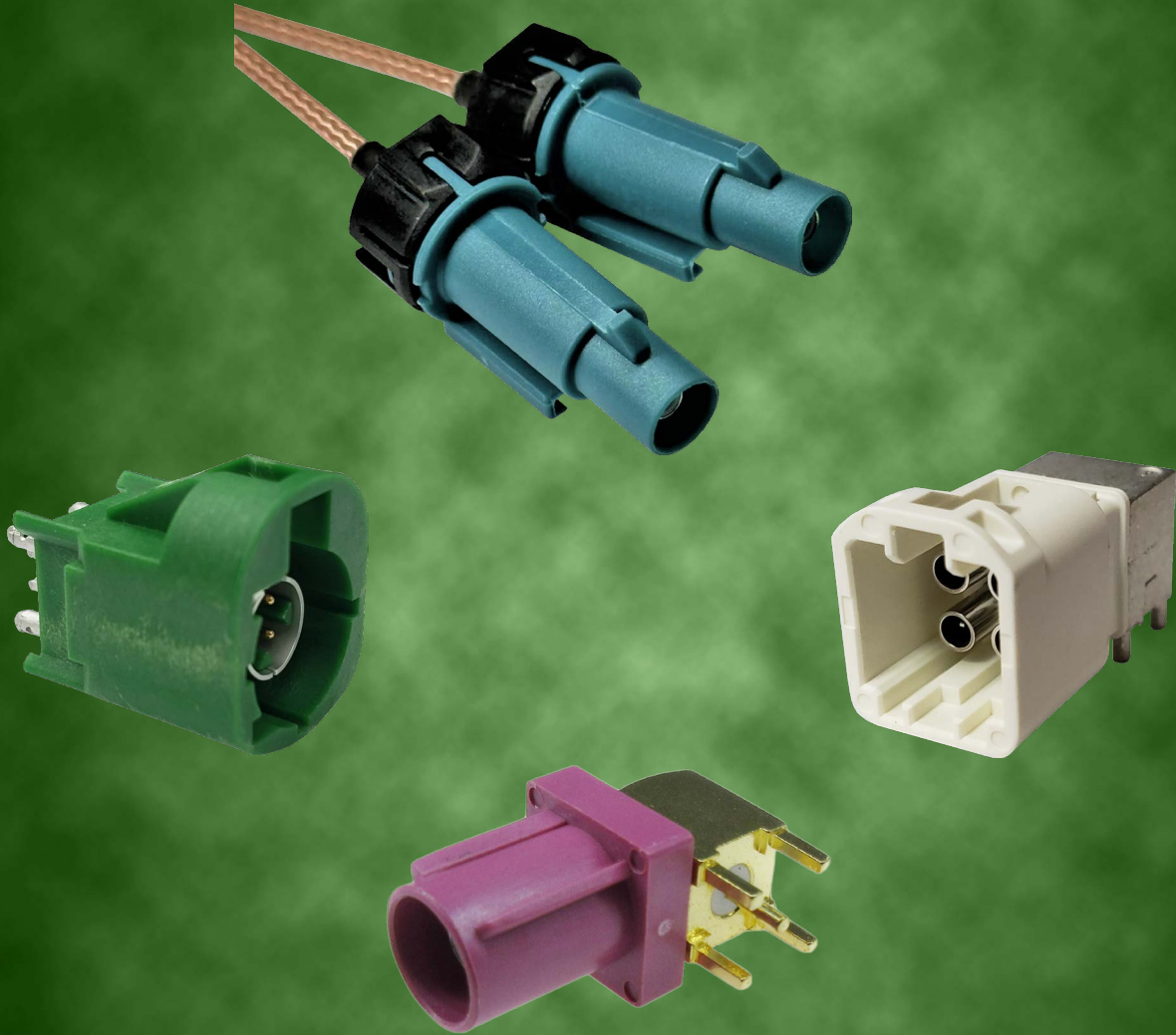
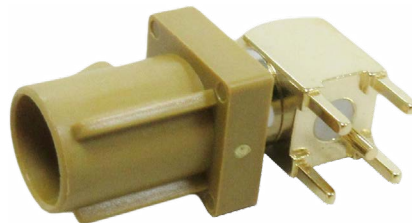


ADAME TECH



FAKRA SERIES



FAKRA Series

Adam Tech's FAKRA series is composed of various generations of the FAKRA (Fachkreis Automobile) standard, including High Speed Data and Mini FAKRA. Each FAKRA connector is embedded within a special color-code plastic housing that contains a locking feature with an audible clicking noise, which confirms the connection. These connectors are used for both board and cable mounting, with a variety of cable assemblies available. All Adam Tech FAKRA products are RoHS compliant.

Series Outline:

- High Speed Mini FAKRA (AM and BM)
- High Speed Data FAKRA
- Waterproof FAKRA Cable Assemblies
- Standard FAKRA

Code (X)	Applications	Color/RAL	
A	Radio without phantom supply	Jet Black / 9005	
B	Radio with phantom supply	Cream White / 9001	
C	GPS: telematics or navigation	Signal Blue / 5005	
D	GSM	Claret Violet / 4004	
E	TV1 / SDARS	Leaf Green / 6002	
F	TV2 / SDARS	Nut Brown / 8011	
G	Remote keyless entry	Blue Gray / 7031	
H	GPS: telematics and navigation	Heather Violet / 4003	
J	Bluetooth / controlled parking / heating	Beige / 1001	
K	Radio with IF	Curry / 1027	
L	Not defined	Yellow Green / 6018	
M	Not defined	Pastel Orange / 2003	
O	Not defined	Light Green / 6027	
Z	Neutral coding	Water Blue / 5021	



High Speed Mini FAKRA



Adam Tech's FAKRA series is headlined by High Speed Mini FAKRA Connectors and Cable Assemblies. These products support data transmission rates up to 20 Gbps, and frequencies up to 9 GHz. Designed with space saving in mind, they require 80% less installation space than standard FAKRAs. Adam Tech's offering is composed of two styles: AM and BM. Between the two styles a variety of color-coded connectors and cable assemblies are available, including board side plugs, double-ended mini FAKRA jack cable assemblies, and mini FAKRA to SMA cable assemblies. Mini FAKRA to standard FAKRA cable assemblies are also available, bridging the gap between the two generations.

APPLICATIONS:

- Automotive
- Autonomous driving (ADAS)
- 4k 360° surround cameras
- 4k high resolution displays
- Sensors
- Remote start and keyless entry
- Infotainment systems
- 3D instrument clusters
- GPS
- Satellite radios



FEATURES AND BENEFITS:

- High speed data transmission rates up to 20 Gbps
- Frequency: DC up to 9.0 GHz
- 1x1 and 2x2 plugs and jacks
- Color coded mechanical layouts
- Space saving design
- Mini FAKRA cable to board connection system
- Mini FAKRA to SMA capabilities
- Mini FAKRA to standard FAKRA capabilities

SPECIFICATIONS:

Material:

Insulator: Thermoplastic
Contacts: Brass
Shell: Zamak, tin plated

Contact Plating:

Contact area: 80 - 160u" silver plated
Solder tails: 80 - 160u" tin plated
Underplate: 40 - 160u" nickel underplate overall

Electrical:

Impedance: 50 Ohm
Frequency: DC to 9 GHz
Return loss: ≥ 17 dB to 6 GHz or ≥ 12 dB to 9 GHz
Insertion loss: ≤ 0.75 dB @ 9 GHz
Insulation resistance: 1000 M Ω

Mechanical:

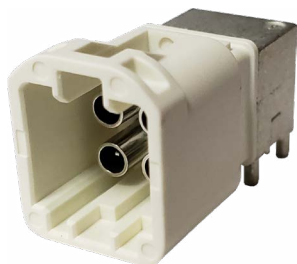
Mating cycles: ≥ 25 cycles
Engagement force: ≤ 30 N
Disengagement force: ≥ 60 N

Temperature Rating:

Operating temperature range: -40°C to +105°C



MHSD-04X-BM-PRX-TR



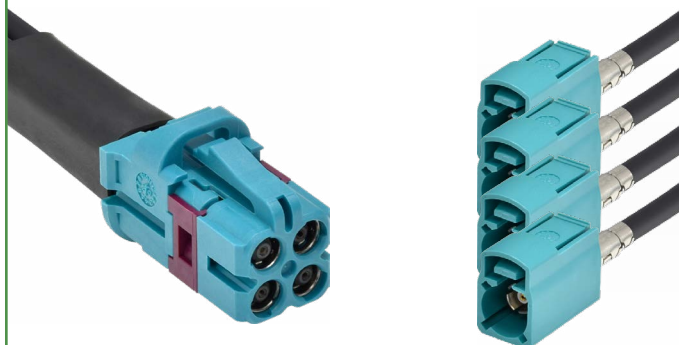
Right Angle PCB Plug

CA-BM04XJ-BM04XJ-X



Double Ended Mini FAKRA
Straight Jack Cable

CA-BM04XJ-4FJX-X



Mini FAKRA Straight Jack to 4
Standard FAKRA Straight Jacks Cable

CA-BM04XJ-4FPX-0.3



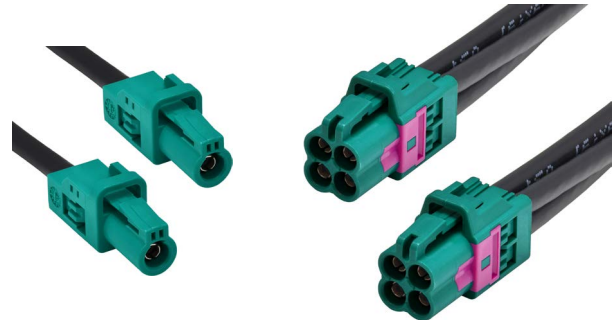
Mini FAKRA Straight Jack to 4
Standard FAKRA Straight Plugs Cable

MHSD-04X-AM-PRX-TR MHSD-01X-AM-PRX-TR



Right Angle PCB Plug
1x1 and 2x2

CA-AM01XJ-AM01XJ-XM CA-AM04XJ-AM04XJ-XM



Double Ended Mini FAKRA
Straight Jack Cable
1x1 and 2x2

CA-AM01XJ-1FJX-XM



1x1 Mini FAKRA Straight Jack to
Standard FAKRA Straight Jack Cable

CA-AM04XJ-SMAJ4-XM



2x2 Mini FAKRA Straight Jack to
4 SMA Straight Jacks Cable

CA-AM04XJ-SMAP4-XM



2x2 Mini FAKRA Straight Jack to
4 SMA Straight Plugs Cable

High Speed Data FAKRA



Adam Tech's High Speed Data FAKRA series is composed of four pin connectors equipped with a 100 ohm impedance controlled system, offering high speeds and top-quality signal transmission. Designed to satisfy RF requirements in various telematic and multimedia applications, these connectors provide high performance, cost effective RF interface to FAKRA and USCAR standards. Their SMB based design includes multiple color-coded plastic housings to ensure accurate connections, as well as to meet automotive specifications. Adam Tech's HSD FAKRA connectors are ideal for automotive applications, meeting the operational and environmental requirements of Satellite Digital Audio Radio Service (SDARS), Global System for Mobile Communications (GSM), and Global Positioning System (GPS).

FEATURES AND BENEFITS:

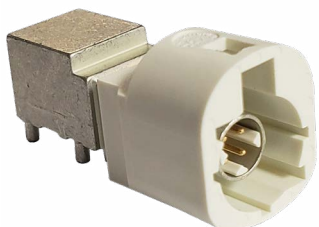
- High speed data transmission rates up to 6 Gbps
- Frequency: DC up to 2.0 GHz
- 100 ohm differential impedance
- 4 pins
- Color-coded mechanical layouts
- Locking feature
- Selective gold plating
- Shielded for EMI/RFI protection
- Multiple connector configurations including straight, right angle, and cable mount

APPLICATIONS:

- Automotive
- GPS
- Bluetooth
- Keyless entry
- Telematics
- Outdoor routers
- Satellite radios
- Infotainment systems
- Medical devices
- Machines with RF interfacing
- High tech applications
- Harsh environment



HSD-04X-S-PRA-SG-C1-TR



Right Angle PCB Plug

HSD-04X-S-PRB-SG-C1-TR



Right Angle PCB Plug (Reverse)

HSD-04X-S-PT-SG-C1-TR



Straight PCB Plug

HSD-04X-S-SD-SG-C4



Solder Cable Socket

SPECIFICATIONS:

Material:

Plugs:

Insulator: PA

Contacts: Brass

Outer contacts: Zinc alloy

Sockets:

Insulator: PBT, rated UL 94V-0

Contacts: Phosphor bronze

Contact sleeve: Phosphor bronze

Outer contacts: Brass

Contact Plating:

Contact area: Selective gold plated

Solder tails area: Tin plated

Electrical:

Impedance, differential mode: 100 Ω differential signaling, for one pair or quad cable shielded

Frequency: DC to 2.0 GHz

Return loss: ≥ 20 dB to 1.0 GHz or ≥ 17 dB to 2.0 GHz

Insertion loss: ≤ 0.1 dB @ 1.0 GHz

Insulation resistance: 1000 M Ω

Signal contact resistance: 10 m Ω

Mechanical:

Mating cycles: ≥ 25 cycles

Engagement force: ≤ 30 N

Disengagement force: ≥ 5 N

Retention force latch: ≥ 110 N

Coding efficiency: ≥ 80 N

Temperature Rating:

Operating temperature range: -40°C to +105°C

Waterproof FAKRA Cable Assemblies

Adam Tech's Waterproof FAKRA Cable Assemblies are available in ratings of IP69K, IP67, and IPX7. The double-ended FAKRA cables are offered as jack to jack, plug to plug, and jack to plug configurations. FAKRA plug to IPEX cable assemblies are also available. These assemblies are offered in a variety of cable types, and lengths ranging from 0.1m to 5m. The series includes a line of non-waterproof options, ranging in cable configuration, type, and length.

FEATURES AND BENEFITS:

- Waterproof ratings: IP69K, IP67, and IPX7
- Various cable assembly configurations including double-ended FAKRA and FAKRA to IPEX
- Cable types: RTK-031, RG-174, RG-316U, and O.D. 1.37mm coaxial
- Cable lengths: 0.1m, 0.3m, 0.6m, 1m, 2m, 3m, 4m, and 5m
- Straight and right angle connectors
- Non-waterproof options available
- Color coded mechanical layouts

APPLICATIONS:

- Automotive
- Bluetooth
- Remote start and keyless entry
- Infotainment systems
- GPS
- Climate controls
- Satellite radios
- Vehicle cameras

SPECIFICATIONS:

Connector:

Insulator: Thermoplastic

Contacts: Brass, gold plated

Cable:

Wire spec: RTK-031, RG-174, RG-316U

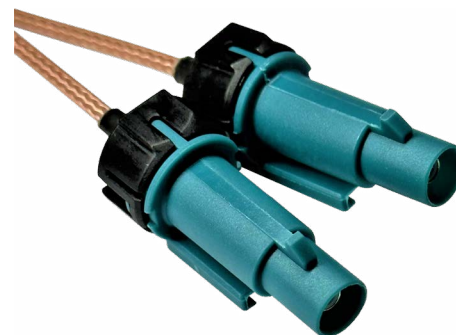
Wire gauge: 22-30 AWG

Electrical:

Impedance: 50 Ohm

Temperature Rating:

Operating temperature range: -40°C to +105°C



CA-FJFJR-XX001XWP



Straight FAKRA Jack to Right Angle FAKRA Jack – IP69K

CA-FJFJ-XX003XWP



Double Ended Straight FAKRA Jacks – IP69K

CA-FJFJ-XX004XWP



Double Ended Straight FAKRA Jacks – IPX7

CA-FJFM-XX002XWP



Straight FAKRA Jack to Straight FAKRA Plug – IPX7

CA-FMFJ-XX001XWP



Straight FAKRA Plug to Straight FAKRA Jack – IP69K

CA-FMFM-XX001XWP



Double Ended Straight FAKRA Plugs – IPX7

CA-FMP1-XX001XWP



Straight FAKRA Plug (IP67)
to I-PEX Gen 1

CA-FMP4-XX001XWP



Straight FAKRA Plug (IP67)
to I-PEX Gen 4

CA-FJFJR-XX002X



Straight FAKRA Jack to Right Angle
FAKRA Jack - CNC Parts

CA-FJFJ-XX001X



Double Ended Straight
FAKRA Jacks

CA-FJFJ-XX002X



Double Ended Straight
FAKRA Jacks

CA-FJFM-XX001X



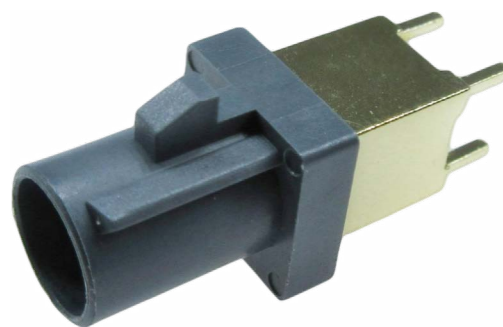
Straight FAKRA Jack to Straight
FAKRA Plug

Standard FAKRA

Adam Tech's Standard FAKRA series is composed of SMA and SMB automotive-grade connectors that can operate up to 6 GHz. These board and cable mount connectors, are offered in both vertical and right angle orientations. Waterproof FAKRAS are also available, with an IP67 rating.

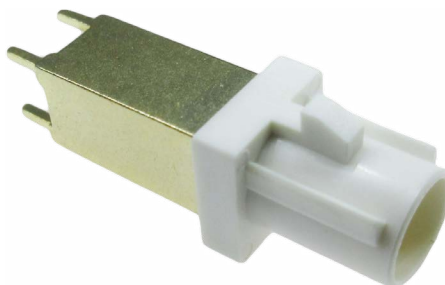
FEATURES AND BENEFITS:

- Frequency: DC up to 4.0 GHz
- Color coded mechanical layouts
- SMA and SMB
- Board and cable mount
- Vertical and right angle
- Body options



APPLICATIONS:

- Automotive
- Bluetooth
- Remote start and keyless entry
- Infotainment systems
- GPS
- Climate controls
- Satellite radios
- Vehicle cameras



SPECIFICATIONS:

Material:

Insulator: Thermoplastic (PTFE)
Pin contact and body: Brass, gold plated
Shell: PA66

Electrical:

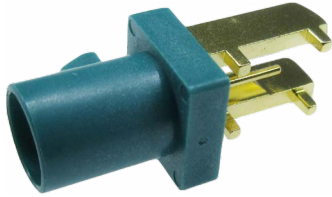
Impedance: 50 Ohm
Frequency: DC~4 GHz
Withstanding voltage: 335 V
Insulation resistance: 1000 MΩ
Contact resistance: 6 mΩ max. (center contact)
1 mΩ max. (outerr contact)

Temperature Rating:

Operating temperature range: -40°C to +85°C



RF55-23X-T-00-50-G-X-SH



SMB FAKRA Plug
Right Angle Board Mount

RF55-24X-T-09-50-X-SH



SMB Bulkhead FAKRA Plug
Straight Cable Mount – IP54

RF55-25X-T-00-50-G-SH



SMB FAKRA Plug (Tall Body)
Straight Board Mount

RF55-26X-T-09-50-X-SH



SMB Bulkhead FAKRA Plug
Straight Cable Mount – IP67

RF55-27X-T-02-50-X-SH



SMB FAKRA Plug
Straight Cable Mount for Panel

RF55-28X-T-00-50-G-SH



SMB FAKRA Plug
Straight DIP Board Mount

RF55-29X-T-00-50-G-SH



SMB FAKRA Plug
Straight DIP Board Mount

RF55-30X-T-00-50-G-SH



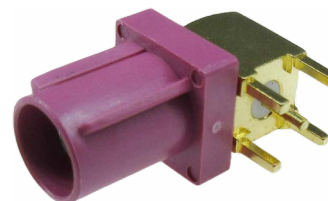
SMB FAKRA Plug
Straight DIP Board Mount

RF55-31X-T-02-50-X-SH



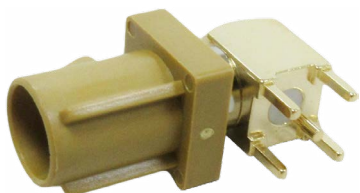
SMB FAKRA Plug
Straight Cable Mount

RF55-32X-T-00-50-X-SH



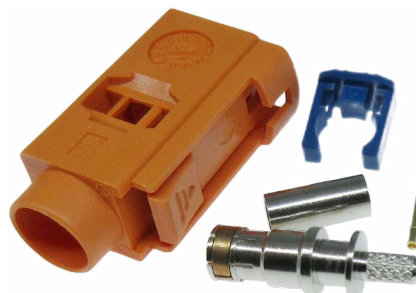
SMB FAKRA Plug (Short Body)
Right Angle Board Mount

RF55-33X-T-00-50-X-SH



SMB FAKRA Plug
Right Angle Board Mount

RF55-34X-T-02-50-SH



SMB FAKRA Jack
Straight Cable Mount for Panel



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