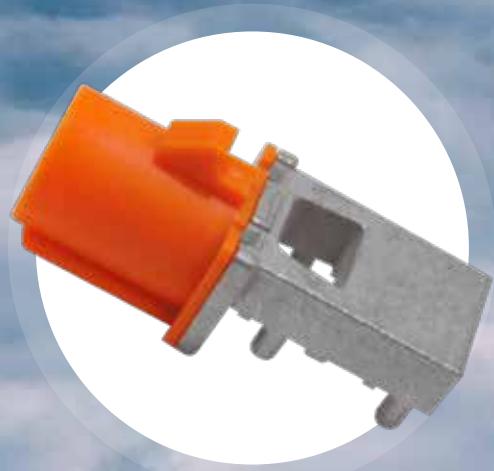




# FAKRA Connector Series Guide

Exceeds USCAR-17's  
performance requirements





## ■ **Introduction**

Yamaichi Electronics USA presents its FAKRA connector series with options of right angle mount, vertical mount, and stacked products. Broadly adopted for a wide variety of in-vehicle applications, FAKRA connectors need endure operating under vehicular environment. Compliant with USCAR18-3 standard, Yamaichi's FAKRA products include HF106P (right angle), HFU106P (vertical mount), and HF110 (stacked type) series. With broad selection of FAKRA designs, Yamaichi Electronics strives to offer reliable and durable products for the ever-growing Infotainment market.

## ■ **USCAR17 Compliant FAKRA Solutions**

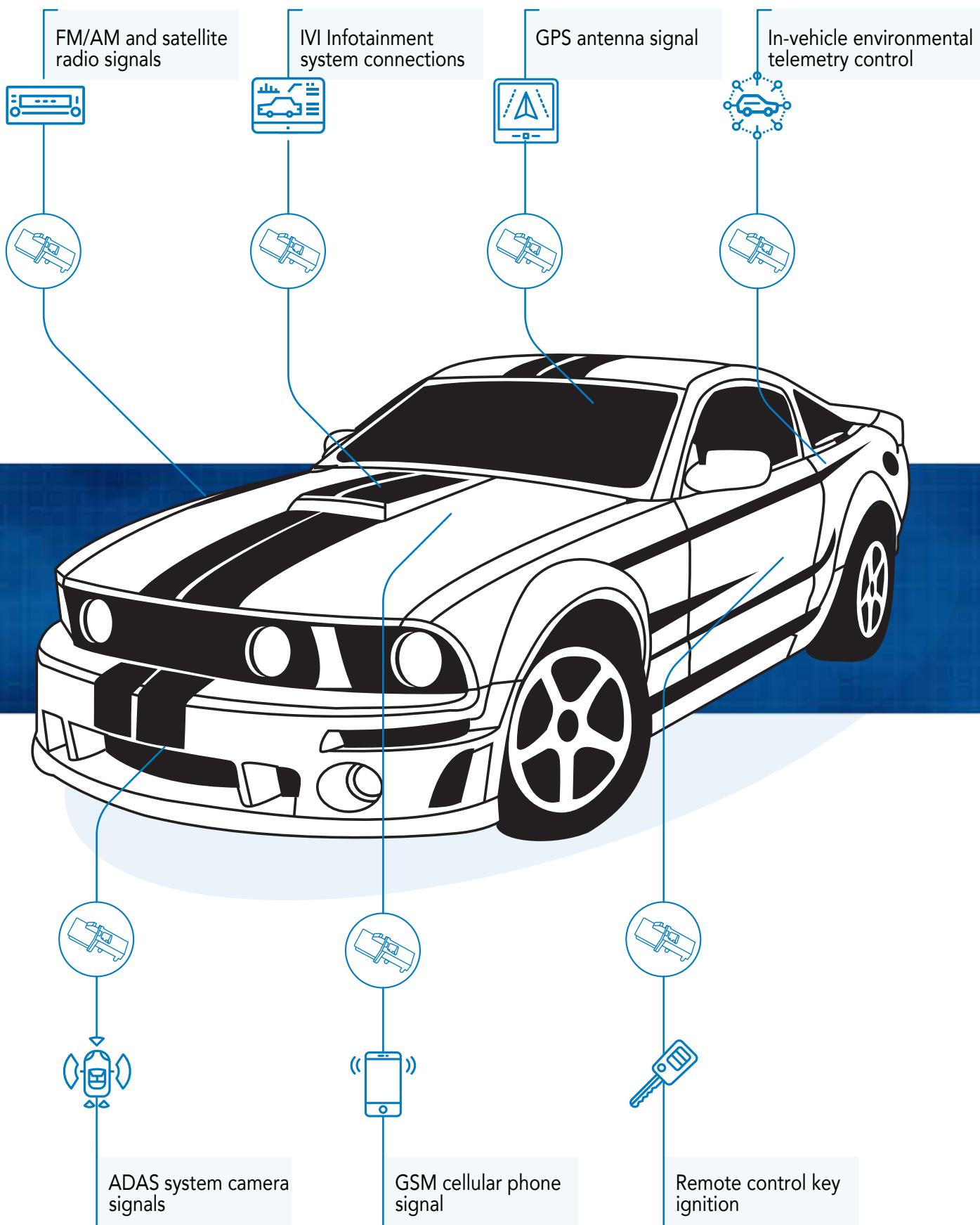
In addition to USCAR18's product design protocols, USCAR17 demands FAKRA connectors to be qualified under rigorous mechanical tests beyond normal parameters. While most market competition's products do not possess the capability of meeting the standard's requirements, Yamaichi provides FAKRA connector product lines designed to meet the standard's challenge.

Tested under USCAR17 guideline, Yamaichi's HF106P-0012 and HFU106P series pass all required mechanical pull test and side-loading tests described by the standard. Each series also comes with various colored Key coding to support customer's applications and designs. Performing beyond expectations, HF106P-0012 and HFU106P are ideal candidates for customers searching FAKRA solutions capable of surviving extreme operating environment.



**SAMPLES ARE AVAILABLE!**

## I Applications:





## Product Portfolio

Connector Series	Connector Type	Product Image
HF106P series	Right angle mount	
HFU106P series	Vertical mount type	
HF110 series	Low profile right angle mount stacked type	

## Product Features

### USCAR Compliant FAKRA

Connector Series	Connector Type	Key Code	USCAR-17 Compliance / USCAR-18 Compliance
HF106P series	Right angle mount	A, B, C, D, E, F, G, H, I, J, K, L, M, N, Z	<ul style="list-style-type: none"> <li>Compliant with USCAR-18 ver. 3.0 Design Guidelines</li> <li>Compliant with USCAR-17 Ver.4.0 Mechanical Test Guidelines (USCAR-17 ver. 4.0 Section 4.2.1 Mechanical Pull Test &amp; Sideload Test).</li> </ul>
HFU106P	Vertical mount		
HF110 series	Low profile right angle mount stacked		USCAR18-3 design guidelines compliant, Achieves 6Ghz signal performance for both top & bottom port, Achieves low profile design through reversed top & bottom key latch positioning

\* Please check for key availability with a sales representative at [www.yeu.com](http://www.yeu.com)

FAKRA (HF106P) connectors have exceeded the USCAR17 requirements in performance tests



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## Electrical Performance:

- Voltage: 335 V DC
- Rated Current: 1.0A MAX
- Dielectric Withstanding Voltage: Apply 750 Vrms. for 1 min. Leakage current: 1 mA
- Contact Resistance: 10 ~ 20 mV Max.
- Max Frequency: DC to 6.0 Ghz
- Impedance: 50Ω

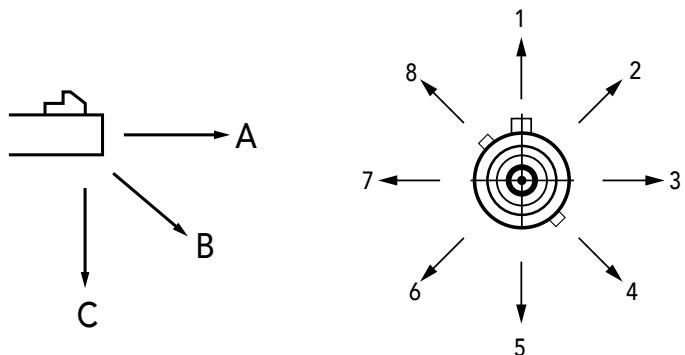
## Environmental Performance:

- Operating Temperature: -40°C ~ +105°C
- Operating Humidity Range: 95% RH Max

## USCAR 17 Compliance Test Results

### Mechanical Performance (for HF106P & HFU106P series):

- Mating Cycle: 25 times
- Insertion Force: 25N Max
- Extraction Force: Without lock: 2 N min/With lock: 110 N min.
- Pull Test/Sideload Test: (See below index)
  - Direction A: 200N min.
  - Other directions: No damage at 75 N duration 5 sec
  - Connector is measured with loading force applied to the following directions: 1C, 3C, 5B, 7B, and 8C.



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04



**Better Connection**

Yamaichi Electronics is a world class supplier of connectors, interconnect systems and test solutions. Year after year, Yamaichi has led the way in the manufacture of high quality and reliable components for telecom, datacom, automotive, industrial, medical, and instrumentation applications.

Yamaichi Electronics USA Inc. was established in 1985 and headquartered in San Jose, CA.

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