AiM InfoTech

Ferrari
488 Challenge EVO
296 Challenge
From 2019

Release 1.02



ECU

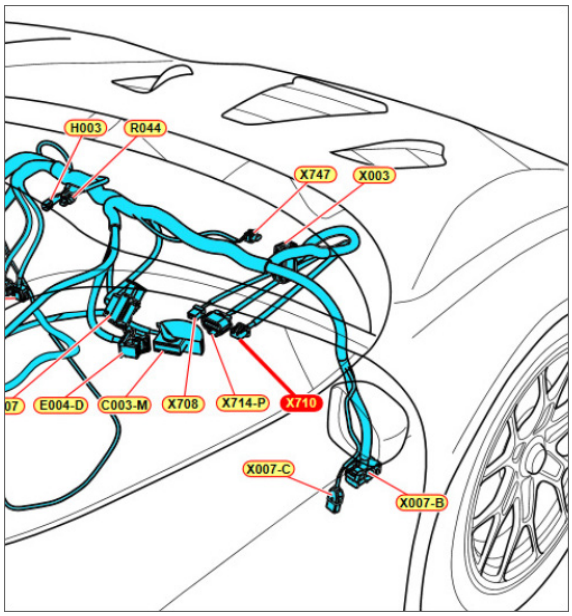
1
Models and years

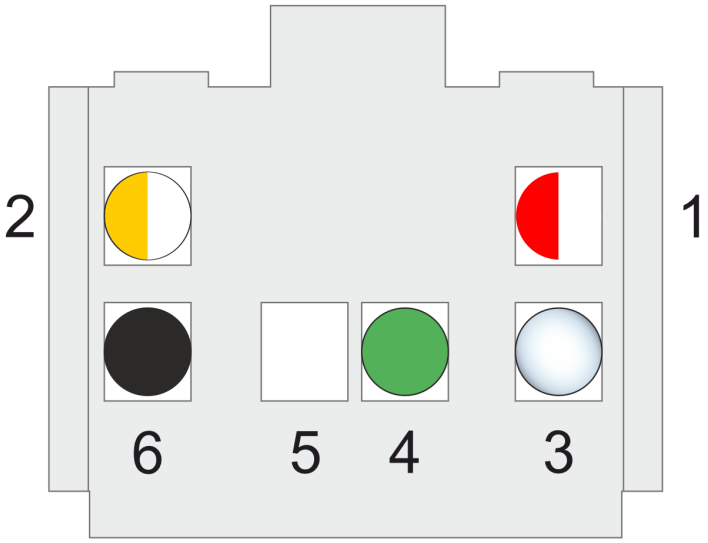
This document explains how to connect AiM devices to the vehicle Engine Control Unit (ECU) data stream. Supported models and years are:

- Ferrari 488 Challenge EVO 2019 – 2023
- Ferrari 296 Challenge from 2024

2
Connection

These models feature a CAN data bus accessible through the 6 pins AMP Multilock white connector labelled "X710 – VDL" placed in front of the passenger seat (red labelled in the left image below). **AiM strongly recommends to refer to a skilled technician to perform this installation**. Here below on the right is connection pinout and connection table of the car connector (vehicle side – rear view).





"X710 – VDL" connector pin	Function	Cable colour	AiM cable
2	12V switched	Yellow/white	9-15VDC
3	CAN H	White	CAN +
4	CAN L	Green	CAN -
6	GND	Black	GND

N.B.: to enable the CAN data output through the "X70 – VDL" connector, **the vehicle ECU firmware must be updated to the latest version available.**

3
RaceStudio 3 configuration

Before connecting the AiM device to the ECU, set all functions using AiM RaceStudio 3 software.
The parameters to set in the device configuration are:

- ECU manufacturer: **FERRARI**
- ECU Model:
    - **488 Challenge** (RaceStudio 3 only)
    - **296 Challenge** (RaceStudio 3 only)

4
FERRARI Challenge CAN protocols

There are two possible selections available, in particular for 296 Challenge cars. One protocol is shared with 488 Challenge cars and provides the same parameters, a second protocol brings some additional parameters introduced with a channel update released on June 2025. In this second case cars should be updated by Ferrari engineers, in accordance to the specific championship regulations.

4.1
"FERRARI – 488 Challenge" protocol

Channels received by AiM devices configured with " FERRARI – 488 Challenge" protocol are:

CHANNEL NAME	FUNCTION
RPM	RPM
GEAR	Active gear
VEH SPEED	Vehicle speed
STEER ANG	Steering position
PPS	Throttle pedal position
P BRAKE	Brake pressure
ACCY	Lateral accelerometer
ACCX	Inline accelerometer
TC1	Traction control 1
TC2	Traction control 2
ABS	ABS

Technical note: not all data channels outlined in the ECU template are validated for each manufacture's model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.

4.2
“FERRARI – 296 Challenge” protocol

Channels received by AiM devices configured with " FERRARI – 296 Challenge” protocol are:

CHANNEL NAME	FUNCTION
EngineSpeed	RPM
VehicleSpeed	Vehicle speed
GasPedal	Throttle pedal position
BrakePressure	Brake pressure
BrakeStroke	Brake pedal position
SteeringAngle	Steering position
Gear	Active gear
TempFL	Tire temperature front left
TempFR	Tire temperature front right
TempRL	Tire temperature rear left
TempRR	Tire temperature rear right
PressFL	Tire pressure front left
PressFR	Tire pressure front right
PressRL	Tire pressure rear left
PressRR	Tire pressure rear right
CoolantTemp	Engine coolant temperature
OilTemp	Engine oil temperature
OilPressure	Engine oil pressure
ABS Gr	
VDL F1TCS Gr	
MSR	
VDC	
ASR	
ABS	
ManTC1	Traction control 1 selector

ManTC2	Traction control 2 selector
ManABS	ABS selector
AX G	Inline accelerometer
AY G	Lateral accelerometer
AZ G	Vertical accelerometer
YawRate	Yaw rate gyroscope
Odometer	Odometer

Technical note: not all data channels outlined in the ECU template are validated for each manufacture's model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.