

AiM InfoTech

Yamaha  
YZF-R1 (Euro) from 2020

Release 1.00

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ECU



# 1

## Models and years

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This document explains how to connect AiM devices to the vehicle Engine Control Unit (ECU) data stream.

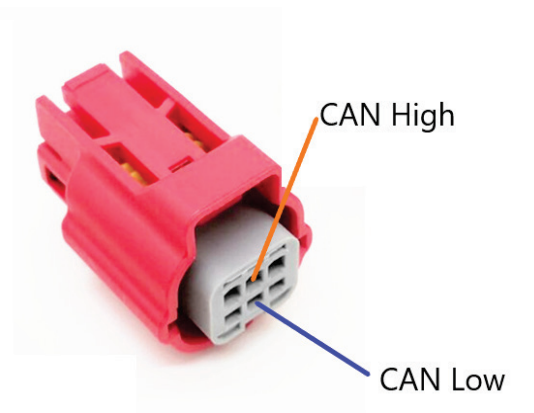
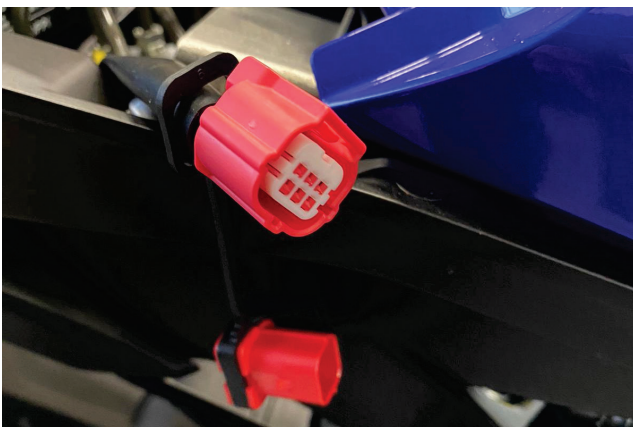
Supported models and years are:

- Yamaha YZF-R1 from 2020

**Warning:** for this model/year AiM recommends not to remove the stock dash. Doing so will disable some of the bike functions or safety controls. AiM Tech srl will not be held responsible for any consequence that may result from the replacement of the original instrumentation cluster.

## 2 Wiring connection

Yamaha bikes from MY2020 feature a communication bus based on CAN on the red connector placed under the bike seat ("Diagnostic connector OBD Euro5 – ISO19689). For this installation refer to the following pinout and connection table.



OBD Euro5 conn.	Function	AiM cable	AiM color cable
2	CAN High	CAN +	White
3	Ground	GND	Black
4	Unswitched V Battery	V Battery	Red
5	CAN Low	CAN -	Blue

**AiM supplies the following dedicated cables:**

Solo 2DL	Cable length 1600 mm – CAN+Power	AiM Part N: <b>V02589130</b>
EVO 4S	Cable length 400 mm – Only CAN	AiM Part N: <b>V02585200</b>

## 3

# Race Studio configuration

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

- ECU manufacturer: **YAMAHA**
- ECU Model: **CAN\_2015**

## 4

# “YAMAHA – CAN\_2015” protocol

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Channels received by AiM devices configured with “YAMAHA – CAN\_2015” protocol are:

<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU W SPD F	Front wheel speed
ECU W SPD R	Rear wheel speed
ECU RPM	RPM
TCS MODE	Traction control mode
ECU GEAR	Engaged gear
ECU GEAR RAW	Gear raw
ECU POWER MODE	Power mode
ECU THROTTLE	Throttle position sensor
ECU TPS HAND	Throttle handgrip
ECU LIFT SET	Lift control set
ECU LAUNCH SET	Launch control set
ECU SCS SET	Suspension control system set
ECU QSS SET	Quick shift set
ECU R ABS IN	Rear ABS intervention
ECU F ABS IN	Front ABS intervention
ECU LAUNCH IN	Launch control intervention



ECU LIFT IN	Lift intervention
ECU SCS IN	Suspension control system intervention
ECU TCS IN	Traction control system intervention
ECU MAP SEL	Map selected
ECU ECT	Engine coolant temperature
ECU AAT	Intake air temperature
ECU ACCX	Inline acceleration
ECU ACCY	Lateral acceleration
ECU GYRO	Gyroscope
ECU BRK F REQ	Front brake pressure request
ECU BRK R REQ	Rear brake pressure request
ECU BRKP F	Front brake pressure
ECU BRKP R	Rear brake pressure

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