

AiM InfoTech

HONDA
CBR 1000RR-R HRC
2022-2023

Release 1.00



ECU





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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:

- CBR 1000RR-R HRC 2022-2023

2 Wiring connection

These bikes feature a specific protocol based on CAN, accessible through the Yazaki Sogyo female connector labelled "LOGGER" connector. For this installation refer to the following pinout of the Yazaki connector and its connection table.

Note: this is a specific connector provided by the HRC harness, reserved to data logging and is not to be confused with the red diagnostic connector of standard bikes.



Yazaki CBR1000RR-R	Function	AiM cable	AiM cable color
Brown	CAN High	CAN+	White
Yellow	CAN Low	CAN-	Blue
Black/white	Ignition 12V	Ignition	Red
Green	Ground	GND	Black

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Race Studio configuration

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

- ECU manufacturer: **HONDA**
- ECU Model: **CBR HRC 2022 ECU** (RaceStudio 3 only)

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“HONDA – CBR HRC 2022 ECU” protocol

Channels received by AiM devices configured with "HONDA – CBR HRC 2022 ECU" protocol are:

CHANNEL NAME	FUNCTION
RPM	Engine RPM
Gear Position	Engaged gear
Est Vehicle Speed	Vehicle Speed
FrontWheelSpeed	Front wheel speed
RearWheelSpeed	Rear Wheel speed
Direction Accerl	Running direction acceleration
NE Conversion RW	Conversion value from rear wheel speed
FrontWheels 001	Front wheel speed (r/s)
Rear Wheel S	Rear wheel speed (r/s)
Coolant Temp	Engine coolant temperature
Intake Air Temp	Intake air temperature
MAP Sensor Value	MAP sensor value
ThrottlePosition	Throttle position sensor
Grip Position	Grip position
Grip Position AD	Grip position (deg) after tool adjustment
Bank Angle	Bank angle



Pitch Angle	Pitch angle
PitchAngle Wheel	Relative pitch angle from wheelie
PitchAngle Speed	Pitch angle speed
Shift Drum Angle	Shift drum angle
Amount Control R	Amount of control retards
Ignition Adjust	Ignition adjustment
Throttle Posi 001	Throttle position sensor 01
TC Slip target	Traction control slip target
Slip Tar Map Val	Slip target Map value
Slip Tar Offse	Slip target offset
EB Slip target	EB Slip target
Control Torqu V	Control torque intervention value
Grip Positio 001	Grip position
Slip Rate	Slip rate
FC Rate Cycle	FC Rate cycle
Slip Rate	Slip target
FC rate Cycle	FC Rate Cycle
Delta Slip	Delta slip
Engine Rev Time	Engine rev frequency (time)
Engine Rec Distan	Engine rev distance (distance)
Battery Voltage	Battery voltage
Shift Ref Value	Shift rev value
Ext AD Input 4	External AD input 4
Ext AD Input 1	External AD input 1
Ext AD Input 2	External AD input 2
Ext AD Input 3	External AD input 3
LAFAD	LAFAD
Shift Sensor In	Shift sensor input value
Shift SensorLearn	Shift sensor input value learned value
Fuel Consumption	Fuel Consumption
LAF	LAF
Cylinder FuelCat	Number of cylinders fuel is cat to in engine braking



Lap Switch Input	Lap switch input
Fuel Correction1	Fuel Correction 1
Fuel Correction2	Fuel Correction 2
Fuel Correction3	Fuel Correction 3
Fuel Correction4	Fuel Correction 4
NE Conversion FW	Conversion value from front wheel speed
SRG Identified	STG already identified
Cluch Switch ON	Clutch switch ON
FI Model	FI Mode
GRPPCT Mode	GRPPCT Mode
TCS Mode	Traction control sensor mode
Traction Control	Traction Control
Slip Tar Offset	Slip target offset level
Wheelie Mode	Wheelie mode
SlipRate Control	Slip rate control mode
Engine Braking Mo	Engine braking mode
EBSLIP Mode	EBSLIP Mode
AntiJerk Mode	Anti-Jerk Mode
Mode A	Mode A
Mode B	Mode B
Mode Tyre	Mode tyre
MILCODE	MIL Code
Intervention CT	Control torque intervention value
HE SD Factory	HESD Factory setting level
X2 Input IID	X2 Input ID

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.