AiM InfoTech

# HONDA
# CBR 1000RR-R HRC 2024

## Release 1.00

# 1
# Models and years

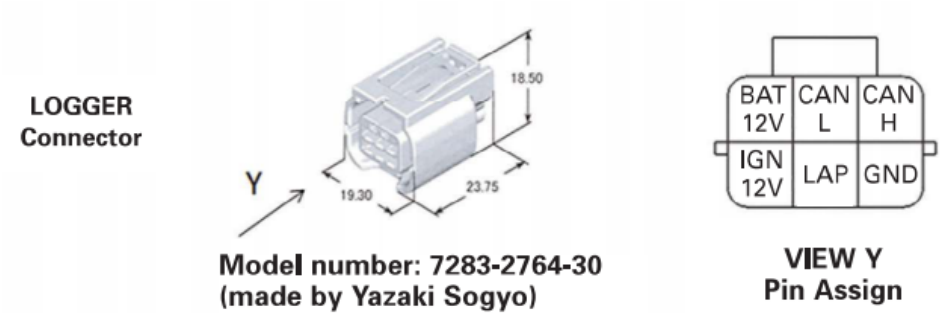
This document explains how to connect AiM devices to the vehicle Engine Control Unit (ECU) data stream.
Supported models and years are:

- CBR 1000RR-R HRC from 2024

# 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 pinout and the connection table shown here below.

**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 |
|---|---|---|---|
| LightBlue | CAN High | CAN+ | White |
| Brown | CAN Low | CAN- | Blue |
| Black/white | Ignition 12V | Ignition | Red |
| Green | Ground | GND | Black |

# 3
# RaceStudio 3 configuration

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

- ECU manufacturer: **HONDA**
- ECU Model: **CBR HRC 2024 ECU** (Only RS3)

# 4
# "HONDA – CBR HRC 2024 ECU" protocol

Channels received by AiM devices configured with "HONDA – CBR HRC 2024 ECU" protocol are:

| CHANNEL NAME | FUNCTION |
|---|---|
| Engine RPM | Engine RPM |
| Gear Position | Engaged gear |
| Est Vehicle Speed | Vehicle Speed |
| FrontWheelSpeed | Front wheel speed |
| RearWheelSpeed | Rear Wheel speed |
| Direction Accel | Running direction acceleration |
| NE Conversion FW | Conversion value from front wheel speed |
| NE Conversion RW | Conversion value from rear wheel speed |
| Front Wheel RPM | Front wheel speed (rpm) |
| Rear Wheel RPM | Rear wheel speed (rpm) |
| Coolant Temp | Engine coolant temperature |
| Intake Air Temp | Intake air temperature |
| MAP LCyl 1-2 | MAP sensor value for cylinders 1 and 2 left side |
| MAP RCyl 3-4 | MAP sensor value for cylinders 3 and 4 right side |
| TPS Cyl1-2 | Throttle position sensor for cylinders 1 and 2 |

| | |
|---|---|
| TPS Cyl3-4 | Throttle position sensor for cylinders 3 and 4 |
| 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 |
| IGTrqRtd LCyl1-2 | Left side (1/2 cylinder) control retard amount |
| IGTrqRtd RCyl3-4 | Right side (3/4 cylinder) control retard amount |
| Ign Adj L Cyl1-2 | Left side (1/2 cylinder) ignition correction amount |
| Ign Adj R Cyl3-4 | Right side (3/4 cylinder) ignition correction amount |
| THL Angle Cyl1-2 | Left side (1/2 cylinder) throttle opening (deg) |
| THR Angle Cyl3-4 | Right side (3/4 cylinder) throttle opening (deg) |
| TC Slip target | Traction control slip target |
| Slip Tar Map Val | Slip target Map value |
| Slip Tar Offset | Slip target offset level |
| SlipTarget Offse | Slip target offset (%) |
| EB Slip target | EB Slip target |
| Intervention CT | Control torque intervention value |
| Grip Position | Grip position |
| Slip Rate | Slip target |
| FC rate Cycle | FC Rate Cycle |
| Delta Slip | Delta slip |
| Engine Rev Time | Engine rev frequency (time) |
| Engine Rec Dist | Engine rev distance (distance) |
| VBat | Battery voltage |
| Shift Ref Value | Shift rev value |
| Shift Sensor In | Shift sensor input value |
| ShiftSensorLearn | Shift sensor input value learned value |
| Ext AD Input 1 | External AD input 1 |
| Ext AD Input 2 | External AD input 2 |
| Ext AD Input 3 | External AD input 3 |

| | |
|---|---|
| Ext AD Input 4 | External AD input 4 |
| Ext AD Input 5 | External AD input 5 |
| Ext AD Input 6 | External AD input 6 |
| Ext AD Input 7 | External AD input 7 |
| Ext AD Input 8 | External AD input 8 |
| LAF 1 | Lambda A/F 1 |
| LAF 2 | Lambda A/F 2 |
| LAF 3 | Lambda A/F 3 |
| LAF 4 | Lambda A/F 4 |
| Fuel Cut total | Fuel Consumption |
| Fuel Correction1 | Fuel Correction 1 |
| Fuel Correction2 | Fuel Correction 2 |
| Fuel Correction3 | Fuel Correction 3 |
| Fuel Correction4 | Fuel Correction 4 |
| SRC Trigger | SRC trigger setting value |
| Clutch sw | Clutch switch ON |
| FI Model | FI Mode |
| FI IND | FI warning |
| GRPPCT Mode | GRPPCT Mode |
| TCS Mode | Traction control sensor mode |
| Traction Control | Traction Control |
| Wheelie Mode | Wheelie mode |
| SlipRate Control | Slip rate control mode |
| EngineBraking Mo | Engine braking mode |
| EBSLIP Mode | EBSLIP Mode |
| AntiJerk Control | Anti-Jerk Mode (Drumming control level) |
| Mode A | Mode A |
| Mode B | Mode B |
| Mode TYRE | Mode tyre |
| MILCODE | MIL Code |
| HESD Factory | HESD Factory setting level |
| TrqTrgPct | Control target torque amount (%) |

| | |
|---|---|
| TrqTrgRid Pct | Rider required torque amount (%) |
| Control Torque V | Control torque intervention amount |
| IG Mode | IG mode |
| Power Mode | Power mode |
| NSect | Sector number |
| NDVMap | TH split mode |
| USSAJLVL1 | Upshift Driving force cut time level |
| USSAJLVL2 | Upshift Driving force return time level |
| DNSTLVL1 | Downshift Blip adjustment level |
| DNSTLVL2 | Downshift Shift error EB adjustment level |
| K SRC ROAN | SRC basic setting Factor |
| KLFWGYAJ | Front tire size correction factor |
| KLRWGYAJ | Rear tire size correction factor |
| RCV | Exhaust valve opening (V) |
| Sect Time | Sector time |
| Lap Time X2 | Lap time |
| X2 Input IID | X2 Input ID |
| DistSCM | Partial distance |
| Lap X2 | Lap number |
| Sec X2 | Sector number |

**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.