

AiM InfoTech

## WIRELESS MOTORSPORT BIOTELEMETRY CAN

Release 1.00

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# 1

## Software configuration

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This document explains how to connect third party CAN expansion modules to AiM devices CAN2 bus.

The driver here documented allows to read data from a Wireless Motorsport Biotelemetry system programmed with the default "Device CAN Identifier format (CAN0)". To correctly communicate with the AiM device, it is necessary to check if the module is set with the following default parameters. Refer to the manufacturer for additional details on the configuration procedure.

Baudrate: **1Mbit/s (1000kbit/s)**

CAN Base Address: **0x400**

Which leads to the following setup

CAN ID for Heart Rate strap:	<b>0x400</b>
CAN ID for Temperature sensor:	<b>0x401</b>
CAN ID for Muscle Oxygen sensor:	<b>0x402</b>
CAN ID for Board parameters:	<b>0x403</b>

**Please note:** In case this module is going to be used with different parameters, the user can set up a custom driver from the **CAN Protocols** section of the AiM configuration software Race Studio 3. Check the dedicated manual from the AiM website [www.aim-sportline.com](http://www.aim-sportline.com), Documentation – Firmware/Software area.

## 2

# Wiring connection

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These modules feature a bus communication protocol based on CAN, this data stream is accessible through two different solutions, 6 or 8-pin DTM connectors. their flying leads here pictured, following the connection table below.



6-pin Deutsch Pin nr	8-pin Deutsch Pin nr	Function	AiM wire label (optional harness)
3	7	CAN High	CAN2 +
2	2	CAN Low	CAN2 -

### 3

## AiM device configuration

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Before connecting the kit to the AiM device set this up using AiM Race Studio software. The parameters to select in the device configuration are:

- ECU manufacturer: **WIRELESS\_MOTORSPORT**
- ECU Model: **BIOTELEMETRY\_CAN0** (Only RS3 – CAN2 Stream)

If there is only the AiM device connected to this module, enable the CAN Bus 120 Ohm Resistor.

<input checked="" type="checkbox"/> Enable the CAN Bus 120 Ohm Resistor
<input type="checkbox"/> Silent on CAN Bus

## 4 “WIRELESS\_MOTORSPORT – BIOTELEMETRY\_CAN0” protocol

Channels received by AiM loggers configured with “WIRELESS\_MOTORSPORT – BIOTELEMETRY\_CAN0” protocol are:

<b>CHANNEL NAME</b>	<b>FUNCTION</b>
HRTDriver	Driver identifier
HRTID	Heart rate strap identifier
HRTValue	Heart rate
NumDrvs	Number of drivers detected by the device
DrvWithPriority	Driver with the highest priority
HRTIdSt	Heart rate strap status
TempDriver	Driver identifier
TempId	Temperature unit identifier
TempValue	Temperature value
TempStatus	Temperature unit status
TempIdSt	Temperature unit status
OxDriver	Driver identifier
MOXId	Muscle oxygen sensor identifier
TotHemogl	Total Hemoglobin
OxygenPerc	Oxygen percentage
MOXIdSt	Muscle oxygen sensor status
BoardTemp	Board temperature