AiM InfoTech

## WIRELESS MOTORSPORT BIOTELEMETRY CAN

#### Release 1.00







### 1 Software configuration

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:	0x400
CAN ID for Temperature sensor:	0x401
CAN ID for Muscle Oxygen sensor:	0x402
CAN ID for Board parameters:	0x403

**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, Documentation – Firmware/Software area.

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# 2 Wiring connection

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** 3 2

8-pin Deutsch Pin nr	Function
7	CAN High
2	CAN Low

AiM wire label (optional harness) CAN2 + CAN2 -

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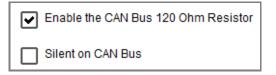
## 3 AiM device configuration

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\_CANO
- (Only RS3 CAN2 Stream)

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





## 4 "WIRELESS\_MOTORSPORT – BIOTELEMETRY\_CAN0" protocol

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

CHANNEL NAME	FUNCTION
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
Templd	Temperature unit identifier
TempValue	Temperature value
TempStatus	Temperature unit status
TempldSt	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