# AiM InfoTech

# K-M-P - GCU2

# Release 1.00



Modules

# 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 K-M-P GCU-2 module programmed with default settings on the calibration software K-M-P GCU-2 interface. 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 ID 1:     **2000 (0x7D0)**
CAN ID 2:     **2001 (0x7D1)**
CAN ID 3:     **2002 (0x7D2)**
CAN ID 4:     **2003 (0x7D3)**
CAN ID 5:     **2004 (0x7D4)**

**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.

# 2
# Wiring connection

These modules feature a bus communication protocol based on CAN, this data stream is accessible through a 2-way DTM06-2S-E007 connector (right picture below) located on the universal loom or through the main 37-way connector of the GCU-2. In this case the mating part AS614-35SN is pictured below (left), and the connection table for both options follows.



| 35-pin Deutsch Pin nr | 2-pin Deutsch Pin nr | Function | AiM wire label (optional harness) |
|---|---|---|---|
| 10 | 1 | CAN High | CAN2 + |
| 11 | 2 | CAN Low | CAN2 – |

# 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:        **KMP**
- ECU Model:               **GCU2**  (Only RS3 – CAN2 Stream)

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



# 4
# "KMP – GCU2" protocol

Channels received by AiM loggers configured with "KMP - GCU2" protocol are:

| CHANNEL NAME | FUNCTION |
|---|---|
| GEAR POT | Gear potentiometer voltage |
| SYS PRESSURE | System pressure |
| COMP TEMP | Compressor temperature |
| ERROR CODE CNT | Error code counter |
| ERR CODES | Error code |
| UP | Upshift valve |
| DOWN | Downshift valve |
| BLIP | Blip valve |
| IGN CUT | Engine cut active |
| COMPRESSOR | Compressor active |

| VP SWITCH | Paddle switch |
| EMERG SW | Emergency switch active |
| VC GEAR | Gear number |
| VC RPM | RPM |
| RPM Vx | Downshift RPM |
| TPS | Throttle position |
| NEUTRAL | Neutral switch active |
| SHIFT STATUS | Shift status |
| AUTOCALIB ST | Autocalibrationstatus |
| CLUTCH FLAG | Clutch active |
| CLUTCH PRESS | Clutch pressure |
| AUTOSHIFT FLAG | Autoshift flag |
| SHIFT LIGHT | Shift light active |
| VEH SPEED | Vehicle speed |
| CALC GEAR RATIO | Calculated gear ratio |
| SHF CHK FLAG | Shift check flag |
| REVERSE | Reverse switch active |
| BLIP LEV | Blip level (variable blip) |
| CAN OK | CAN-bus ok check |
| DEBUG MODE | Debug mode active |