AiM InfoTech

Link G4+ Series ECUs

Release 1.01

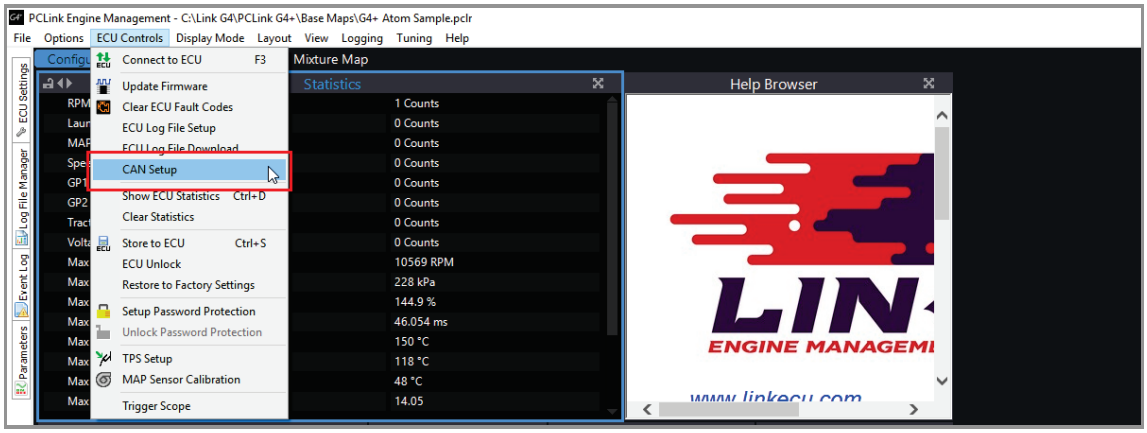
1 Models

This document explains how to connect AiM devices to Link G4+ Series ECUs.
Supported models are:

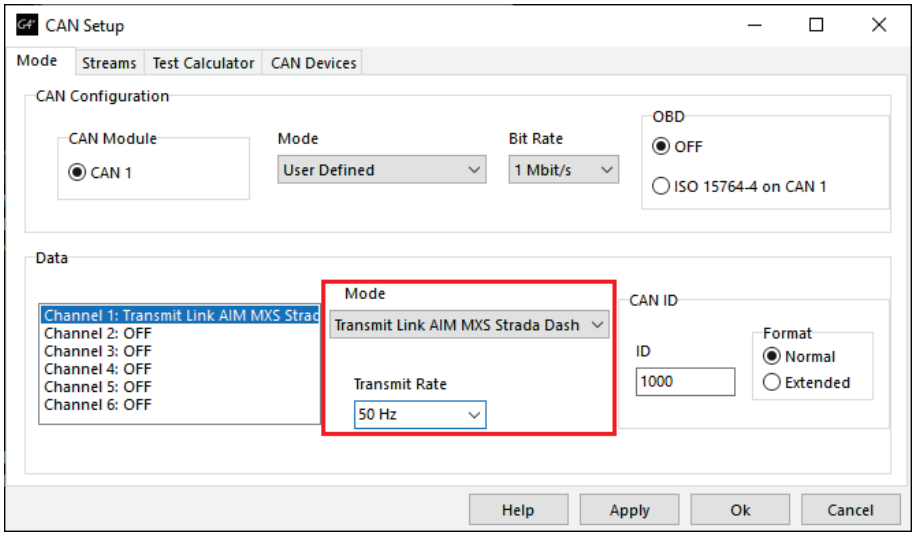
- G4+ Atom II
- G4+ Monsoon
- G4+ Kurofune
- G4+ Storm
- G4+ Xtreme
- G4+ Fury
- G4+ Thunder
- G4+ Force GDI

2 Software setup

Link G4+ ECUs need software configuration via PCLink Engine Management software, in order to correctly communicate with AiM devices.
Once the ECU is connected to the PC or a base map has been loaded, from the main menu press ECU Controls -> CAN Setup (following image).



The window displays the Mode tab (following image): from Can Configuration box, set the CAN Module you're using to connect our device (CAN2 presence is ECU model dependent), and let Bit Rate set as 1Mbit/s. From Data box, highlight Channel 1, then set Transmit Link AiM MXS Strada dash as Mode and 50Hz as Transmit Rate (red box).



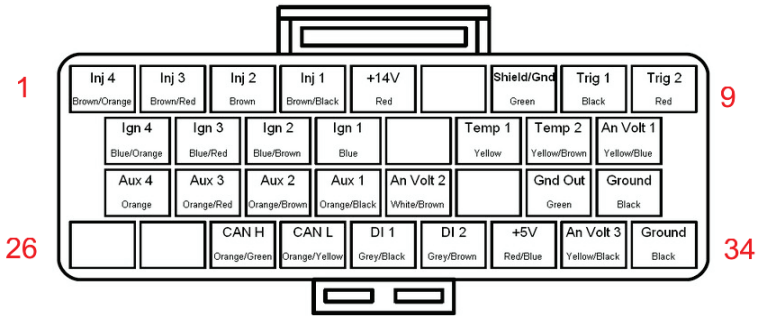
Please note: dedicated datastream for AiM devices is available from G4+ ECUs firmware version **n. 5.6.6.** onwards.

3
Connection

Link G4+ Series ECUs feature a communication protocol based on CAN, that can be accessed from different connectors, dependently from the model in use. In the following pages, each ECU model is shown on the left, with its related connectors pinout on the right **(front view)** and connection table below.

3.1
Link G4+ Atom II ECU

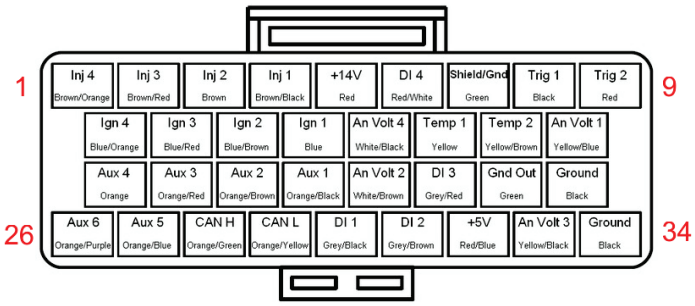
Link G4+ Atom II ECU features a Bus communication protocol based on CAN, accessible through the 34pins connector, placed on the ECU main side. Here below connector is shown with its connection table.



34pins connector pin	Function	AiM cable
28	CAN H	CAN +
29	CAN L	CAN -

3.2
G4+ Monsoon ECU

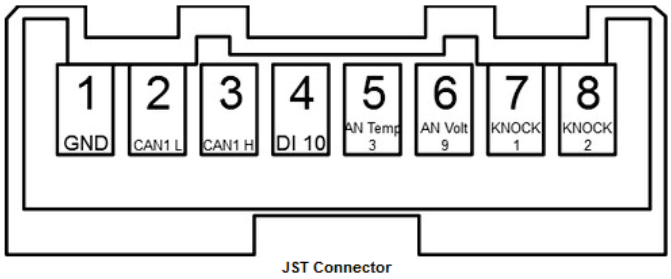
Link G4+ Monsoon ECU features a Bus communication protocol based on CAN, accessible through the 34pins connector, placed on the ECU main side. Here below connector is shown with its connection table.



34pins connector pin	Function	AiM cable
28	CAN H	CAN +
29	CAN L	CAN -

3.3
G4+ Kurofune ECU

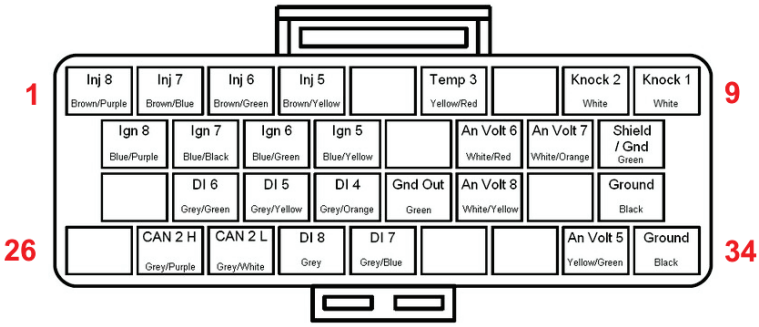
Link G4+ Kurofune ECU features a Bus communication protocol based on CAN, accessible through the 8pins JST connector, placed next to the Mini USB one. Here below connector is shown with its connection table.



JST Connector pin	Function	AiM cable
3	CAN H	CAN +
2	CAN L	CAN -

3.4
G4+ Storm ECU

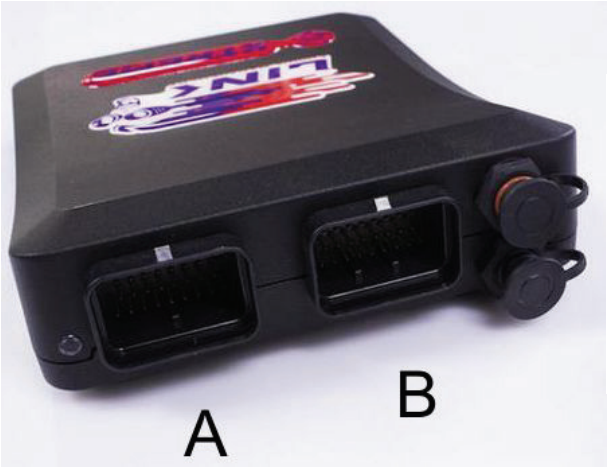
Link G4+ Storm ECU features a Bus communication protocol based on CAN, accessible through the 34pins B connector, placed on the ECU main side. Here below B connector is shown with its connection table.

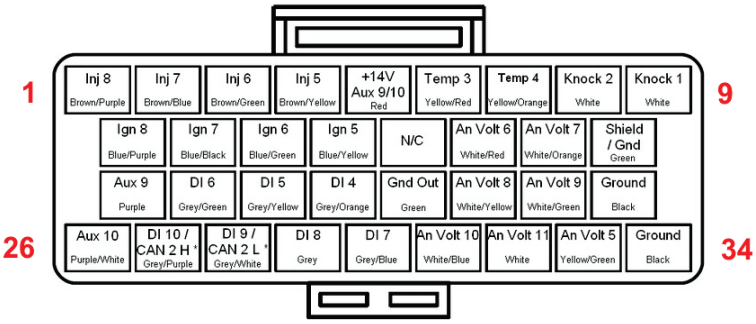


B Connector pin	Function	AiM cable label
27	CAN 2 H	CAN +
28	CAN 2 L	CAN –

3.5
G4+ Xtreme ECU

Link G4+ Xtreme ECU features a Bus communication protocol based on CAN, accessible through the 34pins B connector, placed on the ECU main side. Here below B connector is shown with its connection table.





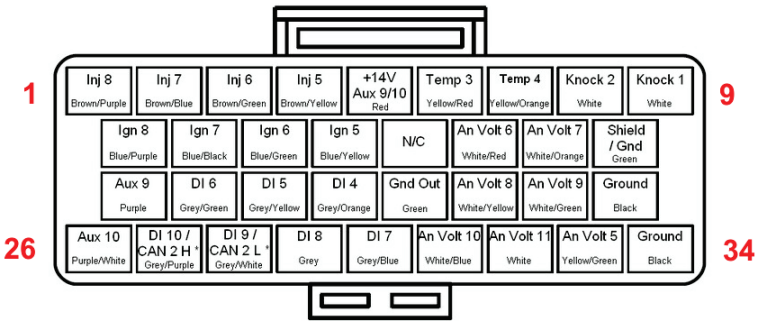
B connector pin *	**Function**	
27	CAN 2 H	CAN +
28	CAN 2 L	CAN –

*

Xtreme ECU PCB version	**Pin 27**	**Pin 28**
1.3b or earlier	DI 10 only	DI 9 only
1.4 or later	DI 10 or CAN 2 H	DI 9 or CAN 2 L

3.6
G4+ Fury ECU

Link G4+ Fury ECU features a Bus communication protocol based on CAN, accessible through the 34pins B connector, placed on the ECU main side. Here below B connector is shown with its connection table.

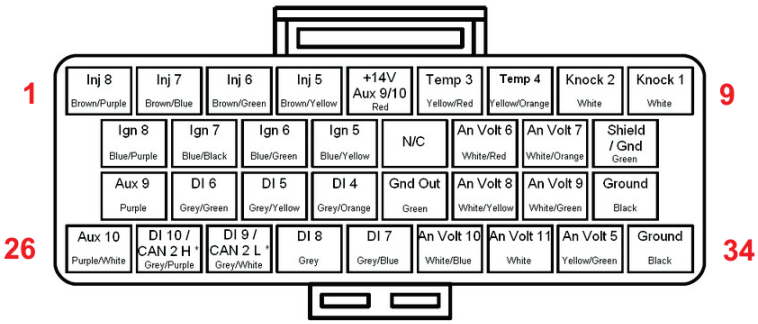


B connector pin *	**Function**	
27	CAN 2 H	CAN +
28	CAN 2 L	CAN –

***DI 10** (pin 27) and **DI 9** (pin 28) can be used as CAN 2 H and CAN 2 L or as Digital Inputs.

3.7
G4+ Force GDI ECU

Link G4+ Fury ECU features a Bus communication protocol based on CAN, accessible through the 34pins B connector, placed on the ECU main side. Here below B connector is shown with its connection table.



B connector pin *	**Function**	
27	CAN 2 H	CAN +
28	CAN 2 L	CAN –

***DI 10** (pin 27) and **DI 9** (pin 28) can be used as CAN 2 H and CAN 2 L or as Digital Inputs.

4 AiM device configuration

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

- ECU manufacturer **LINK**
- ECU Model **CAN_BUS_BASE_LCC**

5 “Link – CAN_BUS_BASE_LCC” protocol

Channels received by AiM loggers configured with "Link – CAN_BUS_BASE_LCC" protocol are:

CHANNEL NAME	FUNCTION
RPM	RPM
MAP	Manifold air pressure
MGP	Manifold gas pressure
BARO	Barometric pressure
TPS	Throttle position sensor
INJ DC	Duty cycle
INJ DC SEC	Duty cycles (seconds)
INJ PULSE	Injection power
ECT	Engine coolant temperature
IAT	Intake air temperature
VOLTS	Battery supply
MAF	Mass air flow
GEAR	Engaged gear
INJECT TIM	Injection time
IGN TIM	Ignition time
Gear4WD	Active gear (4-wheel-drive)

CAM_IN_LF	Left camshaft inlet position
CAM_IN_RH	Right camshaft inlet position
CAM_EX_LF	Left camshaft exhaust position
CAM_EX_RF	Right camshaft exhaust position
WBO2 LAM1	Wideband oxygen 1
WBO2 LAM2	Wideband oxygen 2
TRIG1_ERR	Trig 1 error counter
FAULT CODE	Error code
FUEL PRESS	Fuel pressure
OILT	Oil temperature
OIL PRESS	Oil pressure
SPEED1	Speed 1
SPEED2	Speed 2
SPEED3	Speed 3
SPEED4	Speed 4
KNOCK LEV1	Knock level 1
KNOCK LEV2	Knock level 2
KNOCK LEV3	Knock level 3
KNOCK LEV4	Knock level 4
KNOCK LEV5	Knock level 5
KNOCK LEV6	Knock level 6
KNOCK LEV7	Knock level 7
KNOCK LEV8	Knock level 8
LMT FLAGS1	Contains the following status messages:
= 1	RPM
= 2	MAP
= 3	SPEED
= 4	MAX_IGN_FLAG
= 6	HIGH_VOLT_SUPPLY
= 7	OVERRUN
LMT FLAGS2	Contains the following status messages:
= 1	LOW_VOLT_SUPPLY

= 2	LAUNGH_RPM
= 3	WAKEUP