



AiM Infotech

Nira i2, i3+

Release 1.01

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ECU

# 1 Introduction

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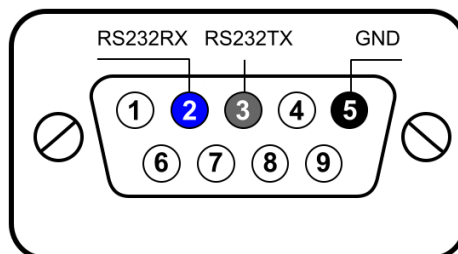
This user manual explains how to connect Nira ECUs to AiM devices. Supported models are:

- Nira i2
- Nira i3+

# 2 Wiring connection

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Nira i2 and i3+ ECUs feature a serial communication protocol on the DB9 male connector shown below. Bottom of it is connection table.



DB9 connector pin	Pin function	AiM cable
2	RS232RX	RS232TX
3	RS232TX	RS232RX
5	Ground	Ground

# 3

## AiM device configuration

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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 "Nira"
- ECU Model:
  - "i2" for Nira i2 ECU
  - "i3+" for Nira i3+ECU

## 4

# Available channels

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Channels received by AiM devices connected to Nira ECUs change according to the selected protocol.

## 4.1

# “Nira” I2” protocol

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Channels received by AiM devices connected to “Nira” “I2” protocol are:

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	I2_RPM	RPM
ECU_2	I2_TPS	Throttle position sensor
ECU_3	I2_TPS_ROC	Engine speed deriv. level for engine ignition detection
ECU_4	I2_ECT	Engine coolant temperature
ECU_5	I2_CHARGE_TEMP	Intake air temperature
ECU_6	I2_MAP	Manifold air pressure
ECU_7	I2_MAP_SENSOR	Manifold sensor
ECU_8	I2_VOL_EFF_COMP	Volumetric efficiency comparison
ECU_9	I2_LAMBDA_M	Lambda measured
ECU_10	I2_LAMBDA_T	Lambda target
ECU_11	I2_INJ_TIME1	Injection time 1
ECU_12	I2_INJ_TIME2	Injection time 2
ECU_13	I2_IGN_ANG	Ignition angle
ECU_14	I2_INJ_STOP_ANG	Injection stop angle
ECU_15	I2_SYNC	Sync counter
ECU_16	I2_BATTVOLT	Battery supply

## 4.1

### “Nira” I3+” protocol

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Channels received by AiM devices connected to “Nira” “I3+” protocol are:

<b>ID</b>	<b>CHANNEL NAME</b>	<b>FUNCTION</b>
ECU_1	NIRA_RPM	RPM
ECU_2	NIRA_WATER_TEMP	Engine coolant temperature
ECU_3	NIRA_BATTERY_VOLT	Battery supply
ECU_4	NIRA_TPS	Throttle position sensor
ECU_5	NIRA_MAP	Manifold air pressure
ECU_6	NIRA_AIRTEMP	Intake air temperature
ECU_7	NIRA_EXHAUST_GAS_TEMP	Exhaust cylinder temperature
ECU_8	NIRA_LAMBDA	Lambda value
ECU_9	NIRA_AUX1	Auxiliary input 1
ECU_10	NIRA_AUX2	Auxiliary input 2
ECU_11	NIRA_AUX3	Auxiliary input 3
ECU_12	NIRA_AUX4	Auxiliary input 4