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AiM Infotech

Nira i2, i3+

Release 1.01



ECU



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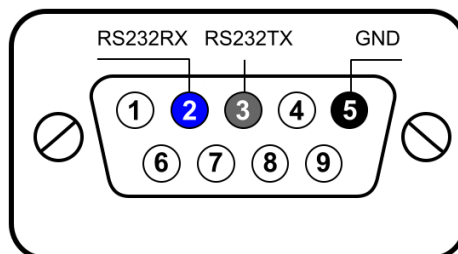
1 Introduction

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

- Nira i2
- Nira i3+

2 Wiring connection

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

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

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

4.1

“Nira” I2” protocol

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

ID	CHANNEL NAME	FUNCTION
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

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

ID	CHANNEL NAME	FUNCTION
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