AiM InfoTech

POLARIS
RZR - RZR-XP

Release 1.01

ECU

1 Supported models

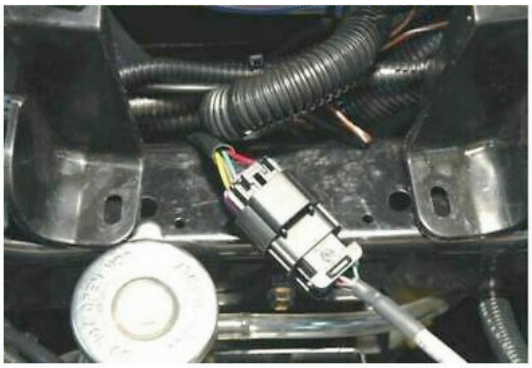
This document explains how to connect AiM devices to the vehicle Engine Control Unit (ECU) data stream.
Supported models and years are:

- RZR – RS1
- RZR – XP 1000
- RZR – XP Turbo
- RZR - PRO

2 Wiring Connection

These models feature a specific manufacturer protocol based on CAN, accessible through the Delphi 8 pins female connector plug placed in the front hood. For this installation refer to the following pinout of the Delphi female connector and its connection table.

Polaris connector pinout	Pin function
B	Battery voltage
D	Ground
G	CAN Low
H	CAN High



AiM cable	AiM cable colour
V Batt	Red
GND	Black
CAN -	Blu
CAN +	White

3 Race Studio configuration

Before connecting the AiM device to the ECU, set all functions using AiM software Race Studio. The parameters to set in the device configuration are:

- ECU manufacturer: **Polaris**
- ECU Model: **RZR**
  RZR V2 (only RS3)

4 Protocols

Channels received by AiM devices change according to the select protocol.

4.1 “Polaris - RZR” protocol

Channels received by AiM devices configured with "Polaris - RZR” protocol are:

CHANNEL NAME	FUNCTION
RPM	Engine RPM
VehicleSpeed	Vehicle speed
ThrottlePosition	Throttle position sensor
WaterTemperature	Water temperature
IntakeAirTemp	Intake air temperature
ChargeAirTemp	Charge air temperature
EPSTemperature	Electronic power steer temperature
ManifoldAirPressure	Manifold Air pressure
BarometricPress	Barometric pressure
BoostPressure	Boost pressure
BrakeSwitch	Brake switch
Gear	Engaged gear
EngineLoad	Engine load
FuelLevel	Fuel level
FuelRate	Fuel rate
FuelEconomy	Fuel economy
AverageFuelEco	Average fuel economy
EPSSteeringRate	Electronic power steer rate
EPSInputForce	Electronic power steer input torque
EPSOutputForce	Electronic power steer output torque
EPSCurrent	Electronic power steering current
EPSAlarm	Electronic power steering alarm
FrontDriveActive	Front wheel drive activation
MIL	Malfunction indicator lamp
BatteryVoltage	Battery voltage

SeaBelt	Seat belt
Odometer	Odometer
OdometerTrip1	Odometer trip 1

Technical note: not all data channels outlined in the ECU template are validated for each manufacture's model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.

4.2
"Polaris – RZR v2" protocol

Channels received by AiM devices configured with "Polaris – RZR v2" protocol are:

CHANNEL NAME	FUNCTION
RPM	Engine RPM
Gear	Engaged gear
VehicleSpeed	Vehicle speed
ThrottlePosition	Throttle position sensor
WaterTemperature	Water temperature
IntakeAirTemp	Intake air temperature
BrakeSwitch	Brake switch
ChargeAirTemp	Charge air temperature
EPSTemperature	Electronic power steer temperature
ManifoldPressure	Manifold air pressure
BarometricPress	Barometric pressure
BoostPressure	Boost pressure
EngineLoad	Engine load
FuelLevel	Fuel level
FuelRate	Fuel rate
FuelEconomy	Fuel economy
AverageFuelEco	Average fuel economy

EPSSteeringRate	Electronic power steer rate
EPSInputForce	Electronic power steer input force
EPSOutputForce	Electronic power steer output force
EPSCurrent	Electronic power steer current
EPSAlram	Electronic power steer alarm
FrontDriveActive	Front wheel drive activation
MIL	Malfunction indicator lamp
BatteryVoltage	Battery voltage
SeaBelt	Seat belt
Odometer	Odometer
OdometerTrip	Odometer trip 1

Technical note: not all data channels outlined in the ECU template are validated for each manufacture's model or variant; some of the outlined channels are model and year specific, and therefore may not be applicable.