AiM InfoTech

SYVECS
S7-I and S7-Plus ECUs

Release 1.00

1 Models and years

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

- S7-I
- S7-Plus

2 Wiring Connection

Syvecs S7-I and S7-Plus feature a specific manufacturer protocol based on CAN fixed datastream, accessible through the **C connector** plug placed on ECU harness. For this installation refer to the following pinout and its connection table.

C connector pin	Pin function	AiM cable	AiM color cable
C8	CAN Low	CAN -	Blue
C9	CAN High	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: **SYVECS**
- ECU Model: **S7** (only RS3)

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"SYVECS – S7" protocol

Channels received by AiM devices configured with "SYVECS – S7" protocol are:

CHANNEL NAME	FUNCTION
RPM	Engine RPM
PPS	Pedal position sensor
TPS	Throttle position sensor
Trq_Est_Output_T	Maximum value for eng Trq Output Pot Clamp
Trq_Output_Pos	Torque output position
Trq_Dmd_Pps	Torque driver demand
Trq_Est_Friction	Friction torque estimate multiplier
BP1_Duty	Blink code 1 duty
BP2_Duty	Blink code 2 duty
CL_PWM1_Duty	Pulse width module 1 duty
DPC_Duty	DPC duty
Brake_Light	Brake light
Launch_Switch	Launch switch
Change_Light	Change light
VIN_Tx	Vehicle identification number transmission
Fan3_Duty	Fan3_Duty

Fan6_Duty	Fan6_Duty
Fan7_Duty	Fan7_Duty
Fan8_Duty	Fan8_Duty
Custom_Sensor1	Custom_Sensor1
Custom_Sensor2	Custom_Sensor2
Custom_Sensor3	Custom_Sensor3
Custom_Sensor4	Custom_Sensor4
RPM_DTR	RPM D trace
MAP1_DT	Manifold air pressure duty
TPS1_DT	Throttle position sensor duty
Vehicle_Speed	Vehicle speed
FL_Speed	Front left wheel speed
FR_Speed	Front rear wheel speed
RL_Speed	Rear left wheel speed
RR_Speed	Rear right wheel speed
MAP_Max	Manifold air pressure maximum
MAP_Target1	Manifold air pressure target 1
MAP_Limit	Manifold air pressure limiter
Clutch_Switch	Clutch switch
Lambda1	Lambda 1
Lambda2	Lambda 2
AFR1	Air fuel ratio 1
AFR2	Air fuel ratio 2
Fuel_Final_Pri	Final fuel amount
Fuel_Final_Sec	Fuel final
Fuel_Duty_Pri	Injector duty %
Fuel_Duty_Sec	Fuel duty second
Fuel_Cons_Vol	Fuel consumption voltage
Fuel_Cons_Rate	Fuel consumption rate
N2O_Final	Nitrous final amount applied to solenoid
Fuel_End_Angle	Fuel ending angle
Long_Acc_G	Inline accelerometer

Lat_Acc_G	Lateral accelerometer
Yaw_Rate	Yaw rate
Pitch_Rate	Pitch rate
ECT	Engine coolant temperature
ACT	Air charge temperature
EOT	Engine oil temperature
FT	Fuel temperature
EOP	Engine oil pressure
Rel_FP	Fuel pressure
ECP	Engine coolant temperature
CCP	Crank case pressure
Trq_Fuel_Sev	Torque fuel
Trq_Ign_Sev	Torque ignition
Trq_Ign_Rtd	Torque ignition retard
Ign_Final_Pri1	Ignition final
Launch_RPM	Launch RPM target
Rev_Limit_RPM	Revolution limited RPM
Rev_Cut_RPM	Revolution cut limited
FLVLA	Fuel level value
Gear	Engaged gear
Fuel_Comp	Fuel consumption
Idle_Target	Idle target
Trq_Fuel_Sev_Src	Torque fuel
Knock_Warning	Knock warning
TPS_CLOSED	Throttle state (Open/closed)
Idle_Control_Act	Idle control activation
N2O_Switch	Nitrous switch position
Custom_Sensor5	Custom_Sensor5
Custom_Sensor6	Custom_Sensor6
Custom_Sensor7	Custom_Sensor7
Custom_Sensor8	Custom_Sensor8
Fuel_Pump_Duty	Fuel pump duty

Fuel pump 1	Fuel pump 1
Fuel pump 2	Fuel pump 2
Fuel pump 3	Fuel pump 3
Dbw_Duty	Drive by wire duty
Dbw_Target	Drive by wire target
EGT1	Exhaust gas temperature 1
EGT2	Exhaust gas temperature 2
VVT_In	Variable valve timing on intake
VVT_Ex	Variable valve timing on exhaust
VVT_In_Target	Variable valve timing on intake target
VVT_Ex_Target	Variable valve timing on exhaust target
Fan1	Fan1
Fan2	Fan2
Fan4	Fan4
Fan5	Fan5
Limp_Mode	Limp mode
Sensor_Warn_Lev	Warn sensor level
Error_Flags_H	Error flags H
Error_Flags_L	Error flags L
Cruise_Active	Cruise active
BAP	Barometric pressure
Air_Con_Control	Output for air conditioning relay
Air_Con_Switch	Air conditioning system switch
CAL_Select	Calibration switches
Launch_Select	Launch select
ALS_Select	Anti-lag selected
WG_Final_Duty	Wastegate duty final amount after all corrections
Launch_In_Stage	Launch in stage
Turbo_Speed	Turbo speed
N20P	Nitrous pressure
Cruise_Set_Speed	Cruise set speed
VBATT	Battery voltage

Pit_Switch	Pit switch
Pit_Limit_Active	Pit limiter active

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.