aimshop

• LAP TIMERS • LOGGERS • CAMERAS • DASHES • SENSORS • AND MORE

SHOP NOW

AiM InfoTech

MARELLI – LIGIER LMP3
From 2020

Release 1.00

ECU

VISIT SUPPORT CENTER | SOFTWARE DOWNLOADS | FIRMWARE UPDATES | PRODUCT DOCUMENTATION

1 Models and years

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

- LIGIER – JS P320 LMP3 2nd gen from 2020

2 Wiring connection

Ligier JS 320 LMP3 cars are equipped with a Marelli ECU and feature a bus communication protocol based on CAN on a DTM connector placed bottom right of the passenger seat. The connector part number is: DTM 06-4S-E007 and is shown here below on the right. On the left is connector pinout and bottom is connection table.

DTM 06-4S connector pin	Function	AiM cable	AiM color cable
4	CAN+	CAN+	White
3	CAN-	CAN-	Blue

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: **MARELLI**
- ECU Model: **CAN LMP3 2020** (RS3 only)

4
"MARELLI – CAN LMP3 2020" protocol

Channels received by AiM devices configured with "MARELLI – CAN LMP3 2020" protocol are:

CHANNEL NAME	FUNCTION
RPM	Engine RPM
BarrelVolt	Barrel position elaborated
Gear	Engaged gear
Speed	Vehicle speed
WSpeed FR	Front right wheel speed
WSpeed RR	Rear right wheel speed
WSpeed RL	Rear left wheel speed
WSpeed FL	Front left wheel speed
ECT	Engine coolant temperature
AirTemp	Intake air temperature
OilTemp	Oil temperature
TPMSRRTemp	Rear right TPMS temperature
GearboxTemp	Gearbox temperature
TPMSFLTemp	Front left TPMS temperature
AirCompTemp	Air compressor temperature
TPMSFRTemp	Front right TPMS temperature

TPMSRLTemp	Rear left TPMS temperature
OilPress	Oil pressure
BrakeRearPress	Rear brake pressure
BrakeFrontPress	Front brake pressure
FuelPress	Fuel pressure
Baro	Barometric pressure
ClutchPress	Clutch pressure
TPMSFRPress	Front right TPMS pressure
pInlet	Inlet pressure
TPMSRLPress	Rear left TPMS pressure
TPMSFLPress	Front left TPMS pressure
WaterPress	Water pressure
TPMSRRPress	Rear right TPMS pressure
AirCompPress	Air compressor pressure
Steer	Steering position sensor
TPS	Throttle position sensor
Pedal	Pedal position sensor
ActLapTime	Act time through 2 beacon events
ELBStageTime	ELB – Engine stage mode time
BestLapTime	Lap best time
PedThrLearnTime	Pedal learn timer
AuxLapDiffBestTi	Lap diff with best lap time
ELBTotalKm	ELB – Engine total mode kilometers
ELBStageKm	ELB – Engine stage mode kilometers
xDamper RL	Rear left linear damper elaborated value
xDamper FR	Front right linear damper elaborated value
xDamper FL	Front left linear damper elaborated value
xDamper RR	Rear right linear damper elaborated value
VBatt	Voltage battery
AnaSpare1	Spare 1 analog input elaborated value
AnaSpare2	Spare 2 analog input elaborated value
AnaSpare3	Spare 3 analog input elaborated value

VFuelConsLap	Lap fuel consumption
FuelUsed	Fuel used
VTankLevelEstd	Estimated remaining fuel volume in tank
Lambda2	Lambda 2 richness output
Lambda1	Lambda 1 richness output
PlTTgtSpeed	Pit limiter speed target
PbuCh8Cur	Powerbox channel 8 current
PbuCh2Cur	Powerbox channel 2 current
PbuCh9Cur	Powerbox channel 9 current
PbuCh1Cur	Powerbox channel 1 current
PedThrLearnState	Pedal learn state
SwFuelLowState	Fuel low switch input state
SwHeadRestState	Head rest switch input state
ELBEngineSN	ELB - Engine serial number
FCYiSpeed	FCY limiter speed selection
SwResAlarmState	Reset alarm switch input state
RotMapPos	MAP rotary selector elaborated position
SwPitLimState	Pit limiter switch input state
SwForceFPState	Force fuel pump switch input state
DashAlarm	Dash alarm
Ignition	Ignition power state
SwRaintLightState	Rain light switch input state
AirCompState	Air compressor state
PlTiSpeed	Pit limiter speed selection
TCState	Traction control enabled
SwFCYState	Full course yellow switch input state
SwFuelP2State	Fuel pump 2 switch input state
CurrentLap	Logger current LAP number
RotTCPos	Traction control rotary selector elaborated position

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