

Movimento Puma™ 2

Movimento Puma 2 means a revolution for R&D and workshop environments. The versatile and powerful design provides a new level of user ease for stand-alone applications.



Multi-bus Network Tool

Puma 2 support simultaneous usage of three (3) CAN channels. The Puma also has support for J1708, K-line and more, including important protocols such as ISO 14230 and ISO 15765. The Puma supports J2534, RPI210 and the Movimento proprietary API/SDK PumaLib, allowing 3rd party software to utilize the Puma as a pass-through device.

Multi-purpose use

The Puma is capable of solving a wide range of tasks in the field of R&D, engineering, production and after market. Its main areas of use are to perform network diagnostics, logging and flight recording, software download, node simulation and gateway functionality. All these applications can be performed using different E-scripts, making one hardware unit capable of solving several different tasks.

Stand Alone with E-script

The programming language called E-script has been implemented to provide practically unlimited functionality to the Puma. E-script brings stand alone functionality to the hardware and enables engineers to program it to act upon any network event and return an action.

WLAN Capability

Puma can be equipped with WLAN to further enhance the possibility to use it. WLAN brings great flexibility to an engineer's work. It's possible to perform diagnostic services, or any other task, from one location to a fleet of vehicles in the proximity.



Applications

Network Diagnostics

The Puma is a pass-through device that handles all major diagnostic service protocols on major vehicle network types.

Logging and Flight Recording

The Puma can log network communications, both as a stand alone tool in an operating vehicle and as a network logger in a development environment. Logging can be triggered by network events and filters can be applied to log only data of interest.

Software Download

The Puma is able to perform software download, both as a stand alone tool or as a connected device.

Gateway

The scripting capabilities in Movimento Puma allows for advanced and customizable gateway functionality such as filtering or editing network messages. It is also possible to translate messages between different network interfaces, e.g. J1708 to CAN.

Node Simulation

A stand alone Puma can be scripted to emulate an ECU on a vehicle network or the surrounding network environment to an ECU.



Specifications

Part Number

- I20-0201-001, Puma 2
- I20-0201-002, Puma 2, RoHS compliant

Network interfaces

- 3 ISO11898-2 CAN, or 2 ISO11898-2 CAN and 1 SAE J2411 Single Wire CAN (SWC)
- 1 LIN (Master or Device)
- 1 ISO 9141 (Diagnostic systems, K-Line or L-Line)
- 1 J1708
- 1 J1850 PWM (Ford) ⁽¹⁾
- 1 J1850 VPW (DCX and GM Class 2) ⁽¹⁾

Network Protocols

- J1939 (Serial comm.)
- ISO 14230 (Keyword Protocol 2000)
- ISO 15765 (Diagnostics on CAN)

I/O

- 1 Digital Output (500mA sink)
- 1 Digital Input
- 1 Digital Input, Key on
- 1 Low Power Analogue Output 0-5V
- 1 High Power Analogue Output 5-20V
- 2 Analogue Input (0-16V)

Driver Support

- Windows Vista
- Windows XP, SP2 for WPA/ WPA-PSK support
- Windows 2000, SP4 for WLAN support
- Windows Mobile

Performance

- CAN RX, up to 16,000 msg/s
- CANTX, up to 10,000 msg/s

System Features

- E-script engine for stand-alone functionality
- 500 MHz Blackfin Microcontroller
- Real Time Clock with Battery backup
- Time stamp resolution 1 μ s
- Time stamp accuracy 25 μ s
- Sleep mode (<1 mA)
- 1 Internal Temperature Sensor
- 1 VBAT Measurement
- SD card up to 2GB, placed under protective lid
- USB Host
- USB Device
- Wake up on CAN, SWC, LIN, I/O, RTC
- WLAN – 802.11 b/g (optional)
- GPS (accessory on USB host)
- Trigger button (accessory on USB host)

Physical

- Size: 120 mm x 77 mm x 36 mm (4.7" x 3" x 1.4")
- Weight: 0.18 kg (0.4lbs)
- 40 Pin 55959-4030 MOLEX Connector
- USB Host Connector (Type A)
- USB Device Connector (Type B)

API

- PumaLib – Movimento proprietary API and SDK
- RPI210A/B, mostly used in heavy duty vehicles
- J2534 (Flash Programming), Surface Vehicle
- J2534-2 (SWC support)

Environment

- Operating Temperature: -40 to +85 °C (with WLAN Capabilities: 0 to +55 °C)
- Storage Temperature: -40 to +125 °C (with WLAN Capabilities: -20 to +70 °C)
- Operating Voltage: 5 to 36VDC
- RoHS compliant ⁽²⁾
- EMC conformity to Class A, Industrial Requirements
- CE certified

⁽¹⁾ Only I20-0201-001

⁽²⁾ Only I20-0201-002