

# DataPass & $\mu$ DataPass Description & Installation

## 1.1. SCOPE

This section includes a general and functional description of the DataPass and installation procedure.

## 1.2. DATAPASS & $\mu$ DATAPASS DESCRIPTION

DataPass and  $\mu$ DataPass are miniature units connecting to the vehicle bus and capture data from the vehicle CPU/BUS. They then transmit this data to the nearest Wireless Gateway in the forecourt. Two unit types are available for the installer (see Figure 0-1.  $\mu$ DataPass or Figure 0-2. DataPass):



$\mu$ DataPass (CAN) for CAN Bus protocol,  
Cat. No. 800907400

$\mu$ DataPass (k-line) for K-line protocol,  
Cat. No. 800907405

*Figure 0-1.  $\mu$ DataPass*

**$\mu$ DataPass** – a connector shaped unit that plugs into the vehicle On Board Diagnostics connector (OBD II) and intended for light and commercial vehicles which has OBD II connector.  $\mu$ DataPass has two versions:

**DataPass** - connected directly to the vehicle bus harness and is used in heavy and light vehicles and supports most bus protocols common to those vehicles. DataPass unit supports vehicle protocols (this manual deals with k-line and CanBus protocols:

There are two types of devices:

**DataPass** for light vehicles (OBD), Cat No. 800907300

**DataPass** (J1708/FMS) for heavy vehicles, Cat No. 800907310



### NOTE

Please check the manufacturer specifications for the proper protocol supported by the Vehicles in your fleet!

The System comprises several parts installed in various configurations as follows (see Figure 0-2):

- **DataPass Harness** – used in conjunction with the DataPass; it connects the DataPass to the Diagnostics plug rear wiring in heavy vehicles.



DataPass for light vehicles (OBD-II), Cat No. 800907300

DataPass (J1708/FMS) for heavy vehicles, Cat No. 800907310

Figure 0-2. DataPass

## 1.3. DATAPASS – TECHNICAL SPECIFICATION

### 1.3.1. Communication

- **Wireless Interfaces**
  - Single IEEE802.15.4 wireless channel
  - Operating Frequency ISM 2.405 to 2.480 GHz (Global license free band)
  - Implements proprietary Mesh network
- **IEEE802.15.4 Modem**
  - DSSS/FA - Direct Sequence Spread Spectrum with Frequency Agility
  - Supported network topologies –Propriety Mesh network
  - Channel capacity – 16 frequency channels / 5MHz channel spacing
  - Transmit power output – 2mW (3dbm)
  - Receive sensitivity – (-101dbm)
- **Wireless Antenna**
  - Built in PCB Antenna

- ***Wired Interfaces***
  - OBDII – J2284/ISO15765 (CAN BUS)**
  - OBDII – ISO14230/ISO9141 (KLINE)**

### **1.3.2. *Electrical***

- ***Supply Voltage***
  - Normal operation: 12VDC (Nominal)
  - Minimum 10 VDC
  - Maximum 32 VDC
- ***Current Consumption (typical)***
  - KLINE Mode:***
    - In sleep mode - 4mA
    - In active mode - 35mA
  - CAN Mode:***
    - In sleep mode - 4mA
    - In active mode - 25mA

### **1.3.3. *Mechanical***

- ***Dimensions***
  - 70 x 22 x 17 mm (W x H x D)
- ***Weight***
  - 10 grams
- ***Connectors***
  - OBDII compatible (male)

### **1.3.4. *5. Environmental Conditions***

- ***Temperature Range***
  - Operating: -40 to +70 °C
  - Storage: -40 to +85 °C

## **FCC COMPLIANCE STATEMENT IN USER'S MANUAL**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### **Sample user information for a Class A digital device:**

#### **THE FCC WANTS YOU TO KNOW:**

This equipment has been tested and found to comply with the limits or a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

his equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, ay cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### **FCC Warning**

Modifications not expressly approved by the manufacturer responsible could void the user's authority to operate the equipment under FCC rules.

### **Sample user information for a Class B digital device**

#### **THE FCC WANTS YOU TO KNOW:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential area.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician

#### **FCC Warning**

Modifications not expressly approved by the manufacturer responsible could void the user's authority to operate the equipment under FCC rules.

#### **WARNING**

Removal of the epoxy covering will damage the radio circuitry and the device will cease to function and the product will be destroyed.

Removal of the epoxy covering will void any guarantees made by Orpak Systems Ltd. concerning  $\mu$ DataPass.