Syrus & Doran TPMS Integration Guide

v2 - Sep.2019

This guide is intended for anyone looking to integrate Doran's Tire Pressure Monitoring System solution to **Syrus** devices. For technical support on Doran please contact: https://doranmfg.com

Requirements

- Syrus device - minimum firmware 3.4.37
- ECU Monitor+ Accessory - minimum firmware 6.0.4
- ECU Monitor+ installation guide
- Doran MDAS-9 RS-232 Protocol Standard (93)
- Manufacturer Installation Guide
- Pegasus Configuration: **Syrus Standard TPMS** (ID: q552) (contact support@digitalcomtech.com for access)
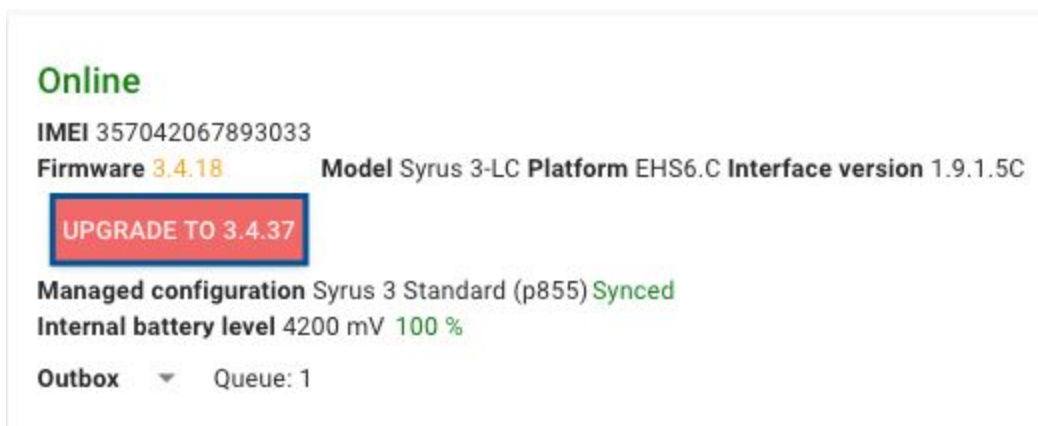
Preparing Syrus & ECU Monitor

Prior to the installation we have to make sure that the Syrus & ECU monitor are in the latest stable firmware versions. In order to do this we recommend doing it on a closed environment before installation.
Start by connecting the Syrus and ECU Monitor together like so:

Syrus		Description	Description	ECU Monitor
Red (Vin)		MPOWER Y or Vin (8-32V DC)	Main Power	**Green (PWR)**
Black (GND)		GND	Ground	**Black (GND)**
White	Red	1-WIRE BUS	Data bus	White

This will make the Syrus detect the ECU monitor and prepare it for proper firmware upgrade procedure.

On Pegasus you can upgrade it from the Pegasus Device Console section.

*Upgrading the Syrus takes about **3-4** minutes*

Other Firmware

ECU Monitor 6.0.1

[UPDATE]   [QUERY]   [CONSULT STATUS]

*Upgrading the ECU Monitor takes between **18-20** minutes*

Once upgraded, head to the Organization -> Devices section, select the Syrus device you want to load work with Doran TPMS. Click on the Managed Configuration tab and find the **Syrus Standard TPMS** configuration (ID: **q552**), and load it to the Syrus.
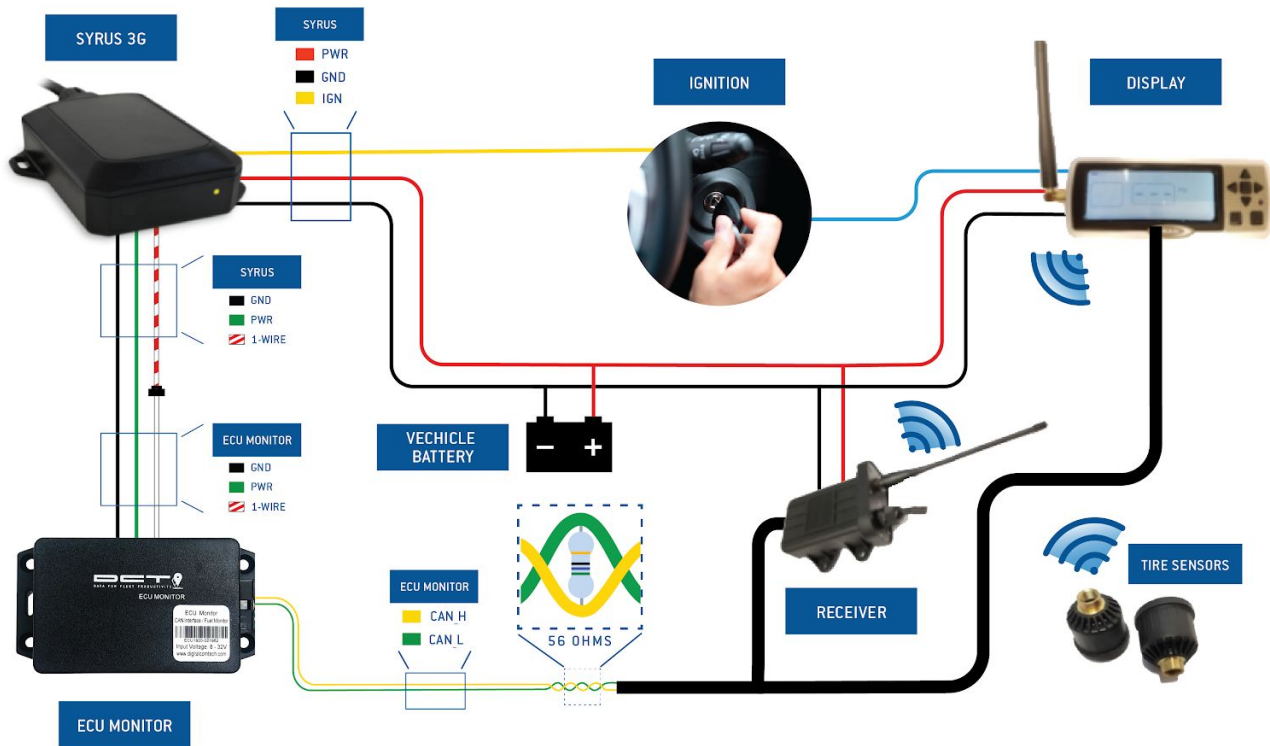
PARAMETERS   **MANAGED CONFIGURATION**   TRIP MANAGEMENT   SIM CARDS

Managed Configuration Definition ⓘ   ↻

                                                                              ✕

Configuration
Syrus Standard TPMS q552   ▾

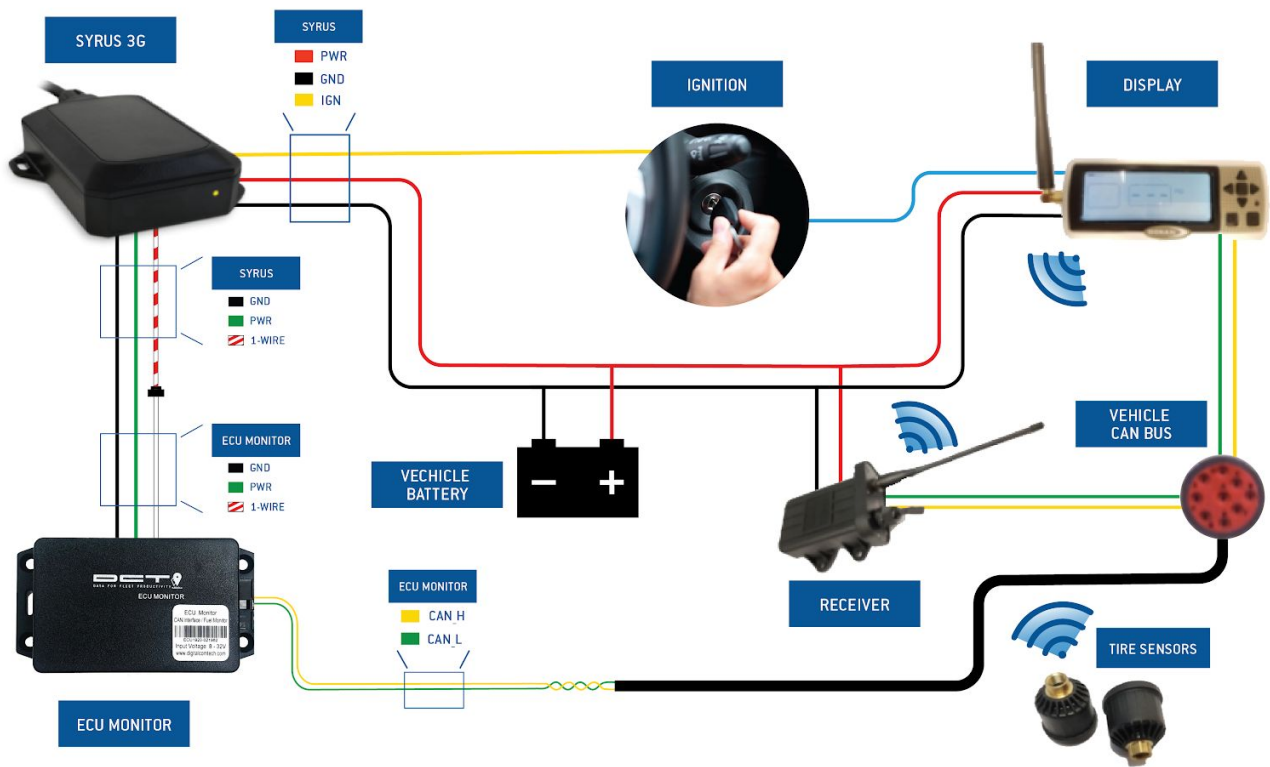📄   DESCRIPTION

SET

Installation

Above you'll find a link to the Manufacturer's installation guide, which provides greater details as to the preparation of the Doran. Follow the steps to program the tire sensors.

For the installation there are two options, the first one **Option A** is without the CAN connection, directly to the display. With this option there's no vehicle CAN data, such as RPMs, total fuel consumed, coolant temperature, etc. only the TPMS related information such as tire pressure, temperature, and warnings. Please note that **Option A** also requires a *56 Ohm* resistance between the CAN_H & CAN_L cables. **Option B** is via the CAN of the vehicle, which does include CAN bus parameters, install whichever option is best suited for your needs.
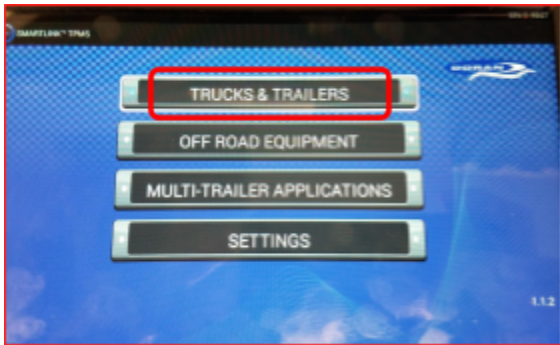
OPTION A: WITHOUT CAN CONNECTION

SYRUS 3G

SYRUS
- PWR
- GND
- IGN

IGNITION

DISPLAY

SYRUS
- GND
- PWR
- 1-WIRE

ECU MONITOR
- GND
- PWR
- 1-WIRE

VECHICLE BATTERY

ECU MONITOR
- CAN H
- CAN L

56 OHMS

RECEIVER

TIRE SENSORS

ECU MONITOR

OPTION B: WITH CAN CONNECTION

SYRUS 3G

SYRUS
- PWR
- GND
- IGN

IGNITION

DISPLAY

SYRUS
- GND
- PWR
- 1-WIRE

ECU MONITOR
- GND
- PWR
- 1-WIRE

VECHICLE BATTERY

ECU MONITOR
- CAN H
- CAN L

RECEIVER

VEHICLE CAN BUS

TIRE SENSORS

ECU MONITOR

Tablet programming

The following are screenshots of the SmartLink tablet programming tool.
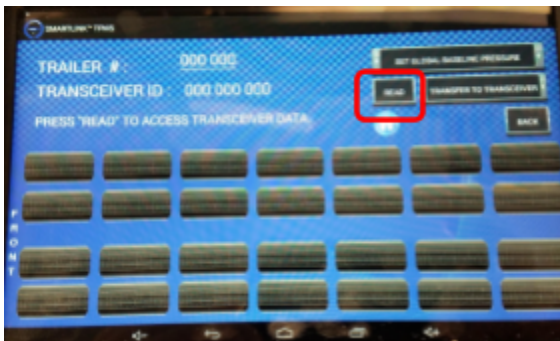

1. On the Home Screen, select "Trucks & Trailers"

2. Select "Programming"

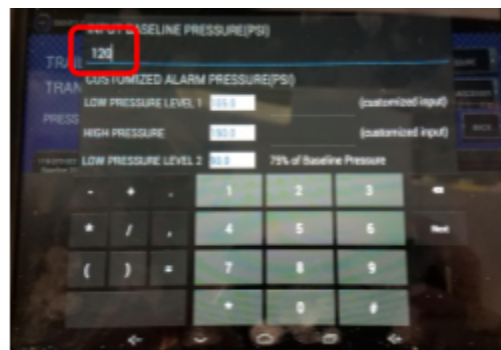3. "SmartLink Transceiver"

4. Select "Read"

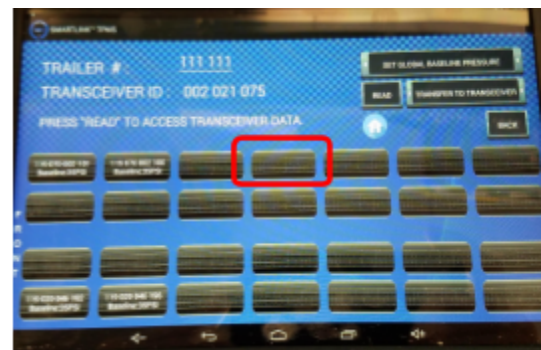5. Select the Transceiver you want to program

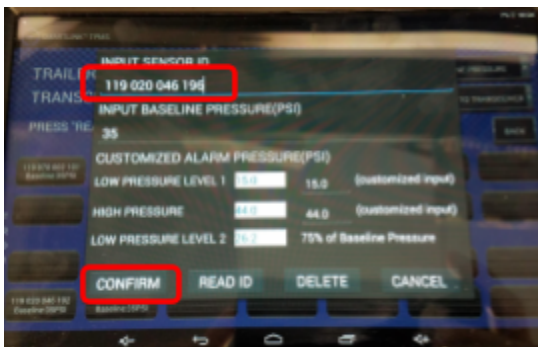6. Select "Trailer #" and input your trailer ID #

7. Select "Set Global Baseline Pressure"

8. Input desired trailer tire cold operating pressure

9. Select the tire position where you want to add a sensor

10. Input 12-digit sensor ID # and press "Confirm". Repeat for each trailer tire.
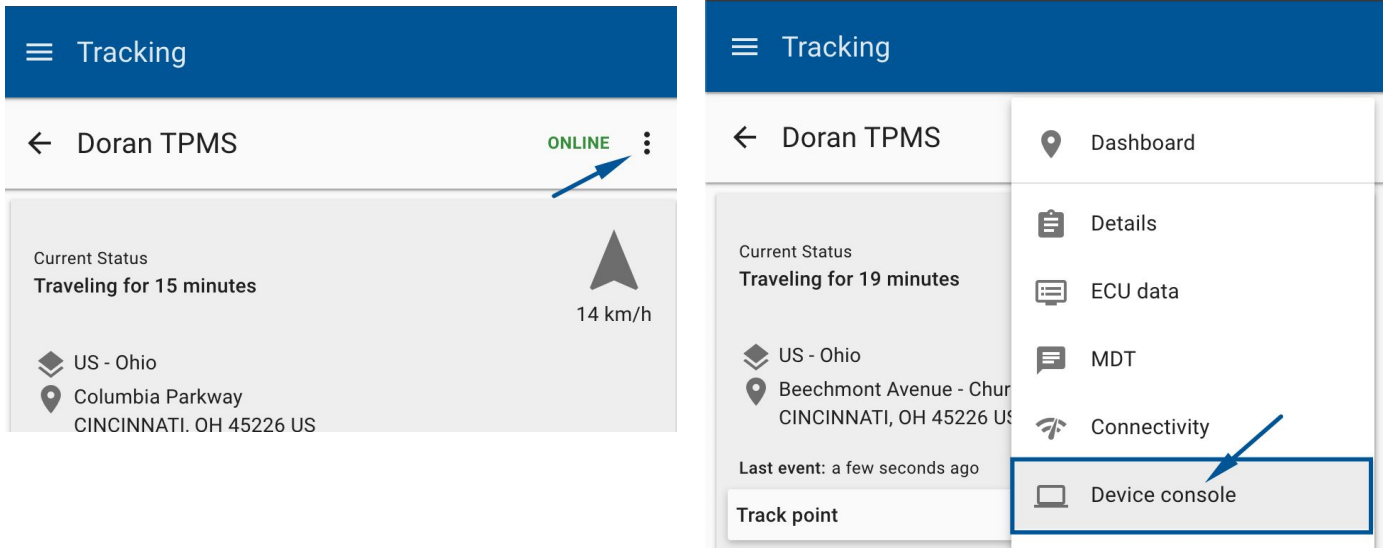

11. Select "Transfer to Transceiver"

12. "Send Success" confirms information has been sent to the trailer transceiver

Platform Integration

Pegasus Gateway

Once the tire sensors are programmed and the Doran is working, send the following 2 commands via the Device Console on Pegasus. The device console is found directly in Tracking's Vehicle Dashboard Menu

Device Commands

```
>SXAEMP1<                                    #read data from J1939/J1708 CAN bus
```

```
>SXAZIR<                                 #resets the information reported by the TPMS
```

Successful Responses

With everything connected, you are ready to turn ON the truck.
To verify that it's working you can send any of the following commands.

```
>QXAZN<                                              #query the tire pressures
```

```
>QXAZW<                                               #query the tire warnings
```

```
>QXAYN<                                            #query the tire temperatures
```

It will respond information similar to this, depending on how many tire sensors were provisioned
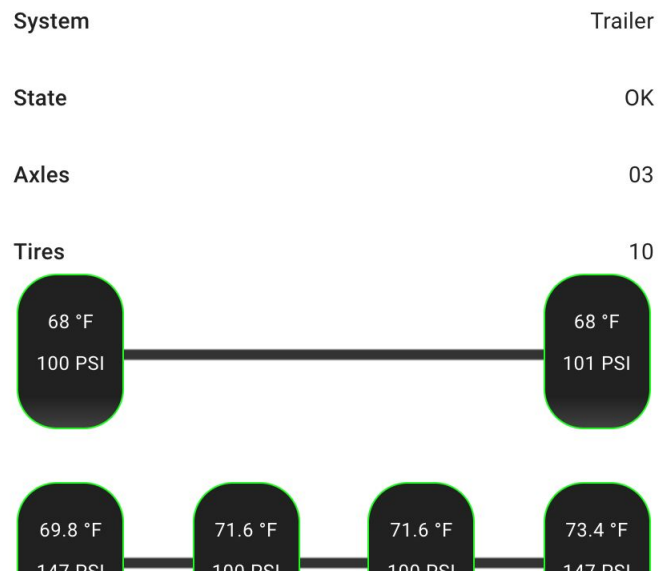
Admin, Aug 21, 3:09 pm

QXAZN

Aug 21, 3:09 pm

>RXAZNT019111,018111,017111,016110,035111,034109,033111,032110,002111,00111
0<

Finally, you can go back to Tracking's Vehicle Dashboard Menu and click on the ECU data, and scroll to the bottom

≡ Tracking	

← DoranSyrusTest	📍 Dashboard
TTM Mute	📋 Details
<	🖥 ECU data
	📝 MDT
Assigned: None	

System	Trailer
State	OK
Axles	03
Tires	10

| 68 °F | 68 °F |
| 100 PSI | 101 PSI |

| 69.8 °F | 71.6 °F | 71.6 °F | 73.4 °F |
| 147 PSI | 100 PSI | 100 PSI | 147 PSI |

Third Party Platforms

For integrations outside of Pegasus, you can use the Syrus Firmware Plugin for DORAN.
You can purchase the Doran Firmware Plugin from our [Support site store](#).

SPI TPMS DORAN

$49.00

After purchasing just download the ECU Monitor installation guide with the link provided at the beginning.

Useful Device Commands

>**SXAEMP1<**	#read data from J1939/J1708 CAN bus
>**SXAZIR<**	#resets the information reported by the TPMS
>**QXAZN<**	#query the tire pressures
>**QXAZW<**	#query the tire warnings
>**QXAYN<**	#query the tire temperatures