

TrackIt[®]

Engine Data Controller

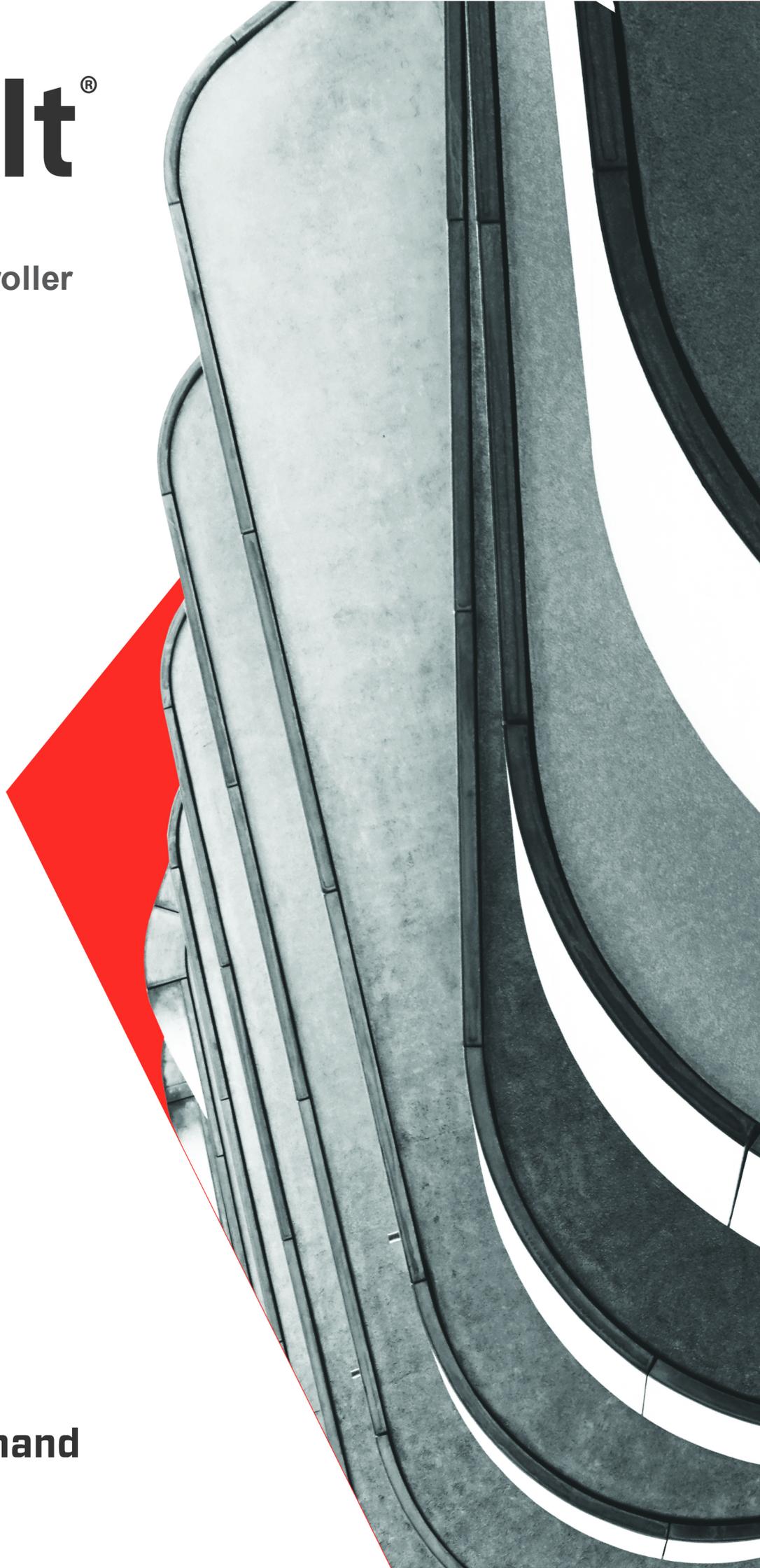
Version: 1.3

Hardware Installation &
Configuration

09/04/18



**Command
Alkon**



The engine data controller (EDC) is a manufacturer-delivered system that consists of a WiFi-enabled on-board computer (OBC) adapter and uniquely-designed diagnostic cable. Unlike the older OBC units with multiple codependent components, EDC devices require only a vehicle diagnostics port to begin pulling engine data and a wireless connection with a configured driver tablet to interface with TrackIt.



Overview

This installation guide covers the four main components of performing a field installation with the EDC.

1. [Ensure all components are included and hardware or software requirements met.](#) In preparation for the installation, you should gather together the tools necessary to install the new system.
2. [Use a compatible engine and power diagnostics cable.](#) The unique design of the EDC and its connector requires the use of new cabling that you'll want to ensure are supported.
3. [Connect the EDC and diagnostic cable to your truck's ECU.](#) Once you've removed the old OBC, the process of installing the EDC and its accompanying cable begins.
4. [Configure the driver tablet to connect with the EDC wirelessly.](#) The final step of the installation process is configuring your tablet(s) to connect with a specific EDC device via wireless hotspot.

Hardware & Software Requirements

This system consists of the EDC, driver tablet, diagnostics cable, and mounting equipment. The EDC and tablet are both provisioned in-house and shipped ready for configuration.

Compatibility Requirements

The EDC and tablet are shipped with the required hardware and software configurations in place.

For troubleshooting purposes, the following requirements exist:

- ▶ Android OS 6.0.1+
- ▶ Android System WebView 62+
- ▶ TrackIt EDC Build
- ▶ Event Service Manager (ESM), EDC Build
- ▶ Vehicle Telematic Service (VTS), EDC Build
- ▶ Tablet with cellular and mobile hotspot coverage included
- ▶ J1939 and J1708 diagnostic connectors

EDC system components

This vehicle data monitoring system consists of three main elements: EDC, driver tablet, and power and diagnostic cable.



Component *Command Alkon Inc. EDC*

Description

- ▶ Requires no cellular or GPS antennae
- ▶ Requires no mounting assembly
- ▶ Connects wirelessly to a tablet hotspot

Component *Android Tablet*



Description This consists of the tablet, mount, and mount assembly equipment. New installations of TrackIt Android include one of the following tablet smart devices:

- ▶ Samsung Galaxy Tab® E
- ▶ Samsung Tab Active2
- ▶ Panasonic Tough Tab B2

Component *Diagnostics Cable*



Available Types Depending on the configuration of your trucks, you will receive one of several supported cable types. These use a compact design that facilitate placing the EDC hidden from driver view.

A full list of diagnostics cable types, connector mapping, and cable installation instructions are available in the [Power & Engine Diagnostic Cables](#) section.

Required tools & equipment

You only need the following equipment to install the EDC:

- ▶ Cable ties for securing the diagnostic cable
- ▶ Any other tools required to access the truck's engine diagnostics port

BYOD and BYOD EDC Policy

While TrackIt customers have options to purchase or leverage TrackIt Turn-Key Services for acquisition of the necessary hardware platforms to support the TrackIt software applications, some customers choose to provide and maintain their own Android tablet devices: Bring Your Own Device (BYOD). In that regard to allow Command Alkon the ability to provide the best support possible for the TrackIt products on those separately purchased devices, the following is our official policy for such BYOD scenarios:

1. Cellular carrier agreement must be with Verizon or AT&T only at current time. Others may be added in the future.
2. Cellular carrier agreement must support Mobile Hot Spots if Verizon and Tethering if AT&T, to support the Engine Data Connector (EDC) for the capture of engine diagnostic data.
3. Three tablet devices supported are: Samsung Tab Active II, Samsung Tab E and the Panasonic Toughpad FZ-B2. Others can be submitted for testing and approval on a contract labor basis.

We need to strongly recommend that the customer add BYOD devices to our “SureMDM” Mobile Device Management system, for the best customer experience. This is necessary to provide our support team remote access to the customer-provided tablet devices, as well as pushing any necessary software updates to maintain current release status.

SureMDM has a \$10 monthly SaaS charge. Customer must be willing to ship new devices to us for loading and configuration of the MDM software. The customer will cover the cost of shipping in both directions. We will not charge for the time to load and configuration service on the BYOD tablets.

4. Shipping of the devices for configuration will not be necessary if the devices already are loaded with SureMDM software and we are able to access them remotely.
5. Alternatively, if the customer would rather administer their own MDM system, they need to make us an administrator (remote screen view, collect logs, push updates) on their account. SureMDM (by 42Gears) is recommended, while other MDMs need approval.

For any situations not covered by the qualifications noted above, please communicate the specific customer request for their planned BYOD scenario for detailed response and recommendation. Our goal is to provide our customers with reliable and dependable products and support services for all our products. We want to assure any devices in the field can support the proper functionality that our software applications provide and that we in turn can be successful in supporting those devices remotely will continue to be our focus.

Power & Engine Diagnostic Cables

The cabling between your Engine Control Unit (ECU) and on-board computer (OBC) acts as the nervous system for transmitting vehicle data to the driver tablet.

The cables supported by the EDC are shown below along with basic instructions on how to install them within your vehicle.

*Type 1 Deutsch 9-pin,
flanged*



*Type 1 Deutsch 9-pin,
threaded*



*Type 2 Deutsch 9-pin,
threaded*



*Deutsch 6-pin to 9-pin,
flanged*



ODB II to Deutsch 9-pin



Installing the EDC

The process of integrating the EDC into your vehicle equipment entails three steps:

1. Remove the previous OBC hardware
2. Attach the EDC to the diagnostic cable
3. Install the power & engine diagnostic cable

Remove the previous OBC hardware

If you're upgrading from a previous FiveCubits system, then the OBC components such as those shown below are no longer needed and may be removed from the vehicle.



You can likewise disassemble components on the truck associated with the system, such as:

- ▶ Existing GPS and cellular data antennae such as pucks, whips, and fins
- ▶ OBC mounting hardware

If you presently use tablets with cellular plans, you may continue to use them with the EDC. However, your cellular plan must include mobile hotspot functionality.

Attach the EDC to the diagnostic cable

Connecting the EDC with the included power and diagnostic cable entails only mating the connectors and fastening the connection.

Prior to installing the diagnostic and power cable in your vehicles, connect the EDC to the cable. This process is illustrated below.

Step 1



Attach the EDC to the "tail" of the cable.

Step 2



Align the central connector pins.

Step 3



Mate the connectors.

Step 4



Mate the connectors.

Step 5



Secure the connection by twisting the fastener counter-clockwise.

Step 6



The cable and EDC are ready for installation.

Install the power & engine diagnostic cable

The cable included with the system uses a splitter design consisting of at least one Deutsch 9-pin port for the EDC itself and then two ports for the Engine Control Unit (ECU) and diagnostic connections. The type of cable included with your EDC is based upon the configuration you selected when purchasing equipment.

As an example, the basic Deutsch Type 1 cable is shown in the diagram below and identifies which connector should be used for each vehicle component.



1. EDC
2. Vehicle ECU
3. Diagnostic equipment

To connect the power and engine cabling

1. Remove the existing diagnostic cable from the vehicle.
2. Identify each connector of your new FiveCubits power/engine diagnostic cable as shown above and match them to your existing vehicle connection points.



Write down the EDC MAC address to use for the [configuration step](#). Verify that the MAC address on the QR code sticker included within the EDC packaging.

3. Connect the EDC to the connector along the "tail" of the cable.
4. Mate and fasten the female connector on the splitter head with the ECU connector in the vehicle.
5. Ensure that the connector opposite to the ECU connector is accessible to diagnostic equipment, as shown in the example below. Using a threaded fastener or flanged mount, you can secure the connector to the vehicle cab wall.

Configuring the EDC & Driver Tablet

After having installed the EDC and diagnostics cable to the engine diagnostics port, you should see a solid green power light. For some vehicles, this may require the key in the **On** position to get power to the EDC device.

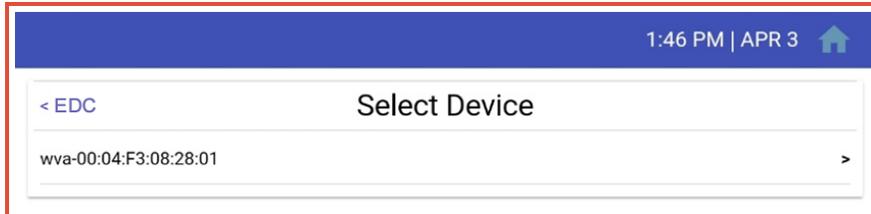
Once the device is fully powered, it actively searches for any wireless hotspot created by nearby tablets. Configuring these devices requires that you meet the following conditions:

- ▶ The EDC is powered on
- ▶ The EDC is within range of your tablet's wireless hotspot
- ▶ You have logged out of your TrackIt account on the tablet



To configure a connection between devices

1. From the TrackIt app, navigate to **Settings** ⚙️ > **Devices** > **EDC** > **Configure** > **Select Device**. A list of EDC devices within range of your tablet will populate the list.



2. Locate and tap the desired EDC from the displayed list. Nearby devices are listed by MAC address with the following format: `wva-00:04:XX:XX:XX:XX`.

The MAC address may be found on the EDC device as well as the QR code sticker that came with the EDC's original packaging.



- From the Assign Truck screen, enter the **Truck** number. This is the same value as the **Equipment #** on the TrackIt Web Console.



The screenshot shows the 'Assign Truck' screen. At the top right, the time is 1:46 PM and the date is APR 3. Below the header, there is a back arrow and '< EDC'. The main title is 'Assign Truck'. Underneath, there is a status bar with the text 'wva-00:04:F3:08:28:01'. A text input field labeled 'Truck' is present, followed by two buttons: 'CONFIGURE' and 'CANCEL'.

- Click **Configure**. The tablet begins the connection process with your EDC.

When the devices are successfully configured, you'll be taken back to the EDC screen where you can then tap the home icon and log in with your normal credentials. The tablet will now receive engine data wirelessly via the EDC device.



If you receive a configuration failure message, then you'll need to double-check and possibly reenter the **Truck** field. Should this issue persist, make sure that you meet the conditions specified at the head of this topic.



You're done setting up your EDC for use. Good job!