DATASPEED inc.
making mobile easier ®

BY-WIRE KIT

AUTONOMOUS TECHNOLOGY

DATASPEED DRIVE-BY-WIRE KIT
A Complete By-Wire Platform

The By-Wire Kit is a complete industrial-grade hardware and software solution that allows seamless electronic control of a vehicle's brake, throttle, steering, and shifting to enable testing for autonomous vehicle applications. The Kit taps into the vehicle's existing control system and CAN bus messaging with minimal modifications to production parts and without disabling safety features. It can be installed within a day, allowing your engineers to get up and running quickly on their algorithm, sensor, or data research.

What Does It Include?

- Brake, throttle, steer and shift by-wire controller modules
- CAN interface module with 4 networks up to 1Mbps each and configurable bit rates
- CAN breakout module enabling up to five additional nodes (additional available for further expansion)
- 12 Channel intelligent Power Distribution System
- Switchboard Kit or Touchscreen Display Kit for power distribution monitoring and control
- Inverter module (if required based on geographic location)
- Discrete wiring harness with positive locking mechanisms on every connector
- Installation Baseplate and Mounting Rack with Optional Active Cooling
- Demonstration Pack including laptop, joystick controller and carrying bag

Additional Features

- Intuitive driver override by pressing the brake, throttle, shifting, or turning the steering wheel (E-Stop Button available as an added accessory)
- Built-in speed and acceleration commands, an alternative to brake and throttle position commands
- Built-in turning radius or yaw rate commands, an alternative to steering wheel angle commands
- USB/CAN Converter for use with ROS
- Supports ROS nodes to control system from a provided computer
- Supports dSPACE blockset to control system using a MicroAutoBox
- Dataspeed technician installation or provided installation training for your team
- Full production vehicle functionality when Kit is powered off
- Recommended Maintenance Subscription available providing latest firmware updates

Why Choose Dataspeed?

- Global Leader in By-Wire Technology, with Over 500 Kits Installed
- Engineers Well-Versed in the Automotive Industry
- Located in Metro-Detroit, Close to Automotive OEMs and Tier 1 Suppliers

Available Platforms

Vehicles	Platform	Model Years	Required Features
Lincoln MKZ	FORD CD4	2017-2020	• Hybrid
Lincoln Nautilus	FORD CD4	2019-2020	• Adaptive Cruise Control • Active Park Assist
Ford Fusion	FORD CD4	2017-2020	• Hybrid
Ford Mondeo[1]	FORD CD4	2017-2020	• Hybrid
Ford F-150	FORD P5	2018-2020	• Adaptive Cruise Control • Console Mounted Shifter [2]
Ford Transit Connect	FORD C1	2019-2020	• Adaptive Cruise Control
Ford Ranger	FORD T6	2018-2020	• Adaptive Cruise Control • Console Mounted Shifter [2]
Chrysler Pacifica	FCA RU	2017-2020	• Hybrid • Parallel and Perpendicular Park Assist
Jeep Grand Cherokee	FCA WK2	2018-2020	• Adaptive Cruise Control with Stop • Parallel and Perpendicular Park Assist
Lincoln Aviator	FORD U6	2020	• Adaptive Cruise Control • Active Park Assist
Polaris GEM			**Ideal For:** • Colleges & Universities / Security Patrol

[1] The Ford Mondeo platform does not support shift-by-wire.

[2] Shift-by-wire not available for column mounted shifter.

info@dataspeedinc.com   (248) 243-8889

Partner with Dataspeed

Whether your company is just getting started in the autonomous vehicle (AV) industry or is looking to scale your vehicle fleet, Dataspeed has the solution for you. Our experienced team of engineers and business professionals can guide your organization in developing an action plan to meet your specific needs. We're skilled in full vehicle integration including by-wire implementation, sensor and computer installation, data acquisition, and vehicle communications. Our vehicle systems engineers have extensive experience creating custom hardware and software solutions. Contact us today to discuss how Dataspeed can accelerate your AV research and development.