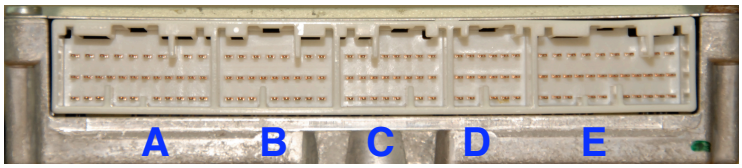
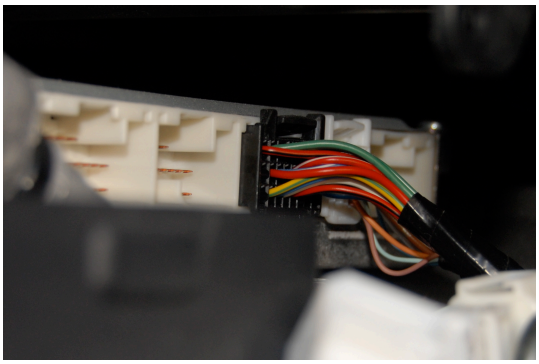
K-Pro Dual ECU

K-Pro Dual for 04-06 Drive by Wire TSX

Thank you for purchasing the Hondata K-Pro Dual for your car. Take a few minutes to go over this brief installation guide to understand how the two engine computers are installed and work together.

Installation
There are 5 plugs on your stock ECU referred to in the Honda manual as connectors A, B, C, D, and E.




Auto ECU with Plugs C and D in place

Connector C is used for Automatic transmission control (unpopulated on the MT) and connector D (the smallest) houses the wiring for the electronic throttle. Plugs C & D must remain connected to the stock ECU or else the throttle and automatic transmission will not work.

You will find an open wire in the harness labelled E20. E20 is used by the K-Pro to control an emissions output *EVAP Bypass,* which is not present on the TSX. This wire connects to pin E20 on the K-Pro and can be used as an output for nitrous relay control and methanol injection etc. Control for E20 (and other outputs) can be found in the K-Manager software under Nitrous.

Stock ECU operation
Hondata reflashes the stock ECU to switch off all emissions controls and VTEC operation. If you have a problem with your K-Pro and it needs to be repaired the reflashed stock ECU will still operate your TSX as long as it has stock injectors. It will not operate the highcam and the rev limit will be lowered but your car will be drivable.

Engine check light and errors
The engine check light is connected to the stock ECU and cannot be connected to the K-Pro. There may be situations in which you get an engine check light caused by sensors that are connected to your stock ECU, such as VSS, crank, cam and temperature sensors. In the case of an engine check light, connect your laptop to the K-Pro USB port, activate datalogging and see if the K-Pro is also reading an error code. If so, correct and clear the error in the K-Manger software. Pull the fuse to the stock ECU to clear any codes it may have recorded. If K-Manager reports no codes but the engine check light is still on, you will need to either connect a scan tool to the OBD2 data port or short the connectors on the OBDII port as per the Honda manual to read the code the stock engine computer reports.

Input/output	Stock ECU	K-Pro
Crank and cam sensors	Yes	Yes
Air and Water sensors	Yes	Yes
Vehicle speed sensor	Yes	Yes
OBDII data port	Yes	
Engine Check light	Yes	
Instrumentation	Yes	
Air Conditioning	Yes	
Vehicle stability assist	Yes	
Drive by Wire	Yes	
Idle speed control	Yes	
Fuel injectors		Yes
Ignition coils		Yes
Oxygen sensors		Yes
Emissions equipment		Yes
VTEC		Yes

Emissions testing and the OBD2 port
Any programmable engine computer cannot by definition be CARB approved, so this system is sold for off-road use only. Both the stock and K-Pro computers are Honda computers and can correctly report the status of connected emissions systems if correctly wired. Only the stock TSX ECU is connected to the OBDI port via one wire (K-Line). K-Line also allows diagnostic tools to communicate to the ABS, EPS and other computer systems. A scan tool connected to the OBD2 port will report the Catalyst, Oxygen sensor and Evaporative systems as not supported. The K-Pro uses K-Line. It would be theoretically possible to connect another OBD2 port to the K-Pro computer, or to run K-Line to the OBD2 port instead of the stock ECU's K-Line. This would allow a scan tool to report on the status of the K-Pro's connected emissions systems, but this wiring is not supported by Hondata's Dual adapter harness or by Hondata's tech support.

Oxygen sensor fitment
You cannot use the stock 02 sensor. You will need to route the oxygen sensor cabling over the top of the gearbox when you replace the TSX sensor with:

- 36531-PLR-003 US 2004-2005 D17 Civic

Correctly tuned and with a stock cat, you should have tailpipe emissions close to stock.

Vehicle Stability Assist works by closing the throttle to reduce power in the event of wheelspin.

Cruise control has been disabled as it was not possible to have it work safely with the dual ECUs.

Idle speed is controlled by the stock ECU. If the ignition and fuel as tuned by the K-Pro is not correct you may experience rough/low idles and stalls. Larger injectors which do not atomize as well may contribute to a rougher idle. Running closed loop, or open loop at 13:1 air fuel ratio may help idle stability, so make sure you have the correct 02 sensor fitted.