



RACE PROVEN RELIABILITY AND PERFORMANCE

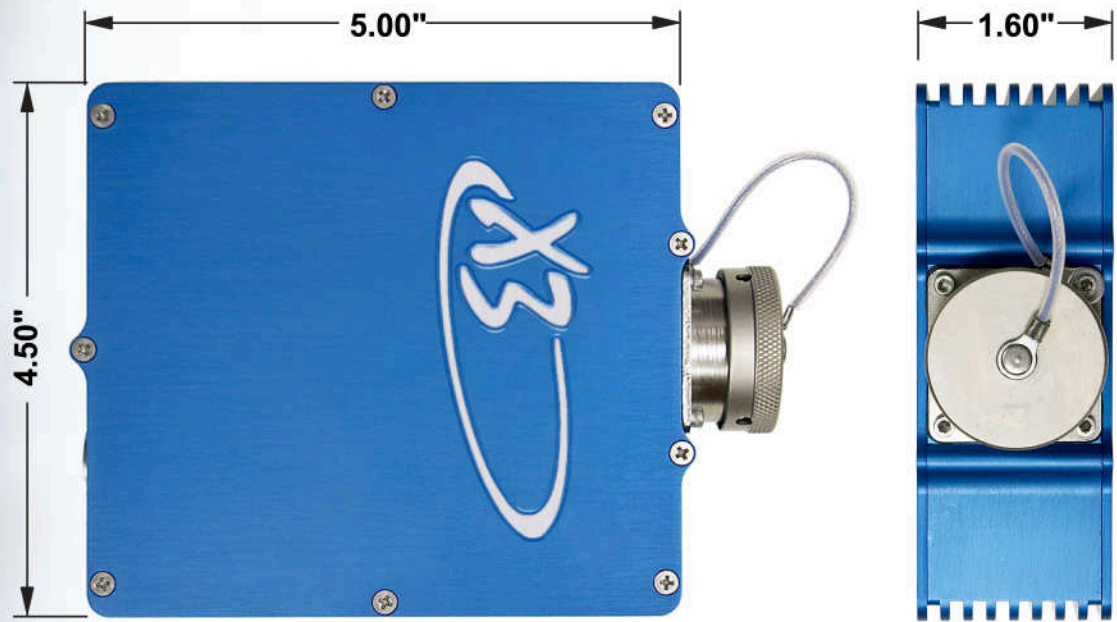
*Race Winning solutions for
4,6 & 8 cylinder racing engines
with sequential injection and
single or dual coil ignitions*

X3 ENGINE CONTROL UNIT

STANDARD FEATURES

- Sequential injection with up to 8 injectors
- Distributor-less ignition with 4 coil outputs (direct or CDI)
- 20 analog inputs
- 4 digital inputs (hall or magnetic)
- 2 switch inputs
- Closed-loop lambda control
- Shift without lift function
- Auxiliary control outputs
- Idle air control (IAC 4 wire)
- Pit lane speed limiter
- Compact and rugged design
- Mil-spec. main connector
- 2 Driver selectable maps
- 1 PWM Control (wastegate)
- Up to 2 MB internal data logging (optional)
- User programmable self diagnostics
- 1 RS232 interface (115,200 kbaud)
- 4 Stage Nitrous control (optional)
- Traction control (optional)





X3 ENGINE CONTROL *Technical Specifications*

SOFTWARE

- 3D fuel and spark maps
- All maps with adjustable breakpoints
- Programmable sensor calibrations
- Closed loop lambda control
- Unique self-mapping software
- Fuel and spark trims for each cylinder
- 3D injection phase map
- Sensor correction tables
- Closed loop boost control (5 maps)
- Shift - without - lift function
- Pit lane speed limiter
- ECU loadable with 2 maps
- Adjustable internal logger sample rates
- Programmable Traction Control
- Programmable Engine Protection functions

OUTPUTS

- 8 injector drives - peak and hold
- 4 internal 8A coil drivers
- Wastegate controls
- Lambda heater control
- Fuel pump output
- Shift lamp output
- Cooling fan output
- Digital tach output
- Stepper motor (IAC 4 wire)
- Data link to data logger
- Expansion box interface
- 4 Stage Nitrous outputs

DIGITAL INPUTS

- Engine speed
- Cam position
- Front wheel speed
- Rear wheel speed

ANALOG INPUTS

Throttle, Battery, Airbox, ExBP, Air Temp, Water Temp, Oil Temp, GBox Temp, Fuel Press, Oil Press, Lambda, NGK, Beacon, ECU Temp, Vref, Mixture SW, Boost SW, Gear Position, Accel, Shift SW, Pit SW

DIAGNOSTICS

- Error codes for all sensors and pickups
- Programmable error thresholds
- Sensor Min and Max values recorded
- Non-volatile diagnostic memory

OPTIONS

- Up to 2MByte internal data-logger
- Dual lambda sensor option
- 4 Stage Nitrous

OPERATIONAL

Enclosure:	Billet 6061 Aluminum
Construction:	CMOS surface mount design
Environmental:	EMI O ring sealed
Connector:	Mil-Spec 79 pin
Dimensions:	5.0" x 4.5" x 1.6"
Weight:	1.5 lbs
Power Supply:	8 to 20 volts transient protected
Power Consumption:	8 watts @ 14 volts
Operating Temp:	-40 to +85 deg C continuous
EMI Protection:	Exceeds 100 V/m >1GHz

Specifications subject to change without prior notice