



THE INDUSTRY LEADING ECU FOR THE MOST DEMANDING PROFESSIONAL RACE TEAMS

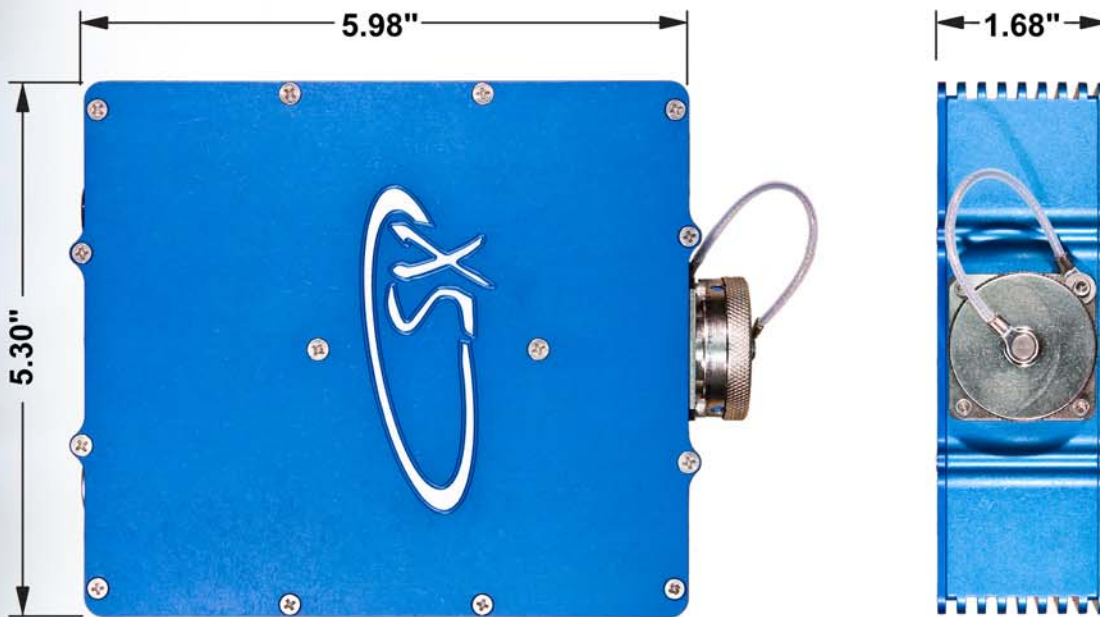
Complete solutions
for all high performance
4,6,8,10 & 12 cylinder engines

X5 ENGINE CONTROL UNIT

STANDARD FEATURES

- Sequential injection with up to 12 injectors
- Distributor-less ignition with 12 coil outputs (external ignitor or CDI)
- 22 analog inputs
- 4 digital inputs (hall or magnetic)
- 2 switch inputs
- Closed-loop lambda mapping and control
- Shift without lift function
- Auxiliary control outputs
- Idle air control (IAC 4 wire)
- Pit lane speed limiter
- Compact and rugged design
- Mil-spec. filtered main connector
- Driver selectable maps
- 2 PWM Control (wastegates)
- User programmable self diagnostics
- 2 RS232/RS485 interfaces (115,200 kbaud)
- Internal DC motor drive (optional)
- 2 MB internal data logging (optional)
- Internal dual NGK amplifiers (optional)
- Internal dual knock sensor amplifiers (optional)
- Internal CAN interface (optional)





XS 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

OUTPUTS

- 12 injector drives - peak and hold
- 12 digital ignition drives
- Wastegate controls (2)
- Direct DC motor control (1)
- 4 Auxiliary outputs
- Lambda heater control
- Digital tach output
- Stepper motor (IAC 4 wire)
- Data link to data logger
- Telemetry RS232/RS485 output
- CAN interface
- Expansion box interface

DIGITAL INPUTS

- Engine speed
- Cam position
- Front wheel speed
- Rear wheel speed
- 3rd wheel speed
- Shift switch
- Pit switch

ANALOG INPUTS

Throttle, Battery, Airbox, ExBP, Air Temp, Water Temp, Oil Temp, GBox Temp, Fuel Press, Oil Press, Dual NGK, Beacon, Lateral G, ECU Temp, Vref, Mixture SW, Boost SW, Dual EGT, Dual knock

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 internal EGT amplifiers
- CAN interface
- Stepper motor drive
- DC motor drive

OPERATIONAL

Enclosure: Billet 6061 Aluminum
 Construction: CMOS surface mount design
 Environmental: EMI O-Ring sealed
 Connector: Mil-Spec 79 pin filter type
 Dimensions: 5.98" x 5.30" x 1.84"
 Weight : 2.15 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