**Competition Systems - 4/2 Brett Drive
Carrum Downs
Victoria, 3201
Australia**

**Phone: +613-8743-5550 - Email:
sales@compsystems.com.au**

Emtron SL6 Motorsport ECU

Brand: Emtron Australia
Product Code: EMSL6
Availability: 7 Days
Weight: 0.50kg
Dimensions: 25.00cm x 20.00cm x 5.00cm

Price: $2,585.00

Short Description
Perfect for budget conscious competition vehicles, both 2 and 4 wheeled. The SL6 features four injector and coil drivers and 20 customisable inputs.

Description
Emtron's SL6 is a wire in ECU with extreme flexibility. This ECU will support up to 6 Channels of fully sequential Fuel and Ignition. Every unit is housed in a durable billet Aluminium enclosure and includes 32MB permanent memory for on-board logging, 4-channel oscilloscope function, DBW control, Knock control up to 2 channels using digital filter technology, high speed Ethernet communications and 3-axis G-force sensing to name a few.

General
Power Supply

- Operating Voltage: 6.0 to 22.0 Volts DC (ECU shutdowns at 24.0V)
- Operating Current: 290mA at 14.0V (excluding sensor and load currents)
- Reverse Battery Protection via External Fuse
- "Smart" battery transient protection

Operating Temperature

- Max operating range: -30 to 110°C (-22 to 230°F)
- Recommended operating range: -30 to 85°C (-22 to 185°F)

Physical

- Aluminium 6061 grade CNC billet enclosure
- Enclosure size 120 mm x 130 mm x 27 mm
- Weight: 470g
- Connector system: 68-way Super Seal waterproof connectors with gold plated contacts
- Pin diameter: 1 mm
- Current rating: maximum 15A per pin (wire gauge dependant)

Internal

- Dual 100MHz processors
- 500Mb DDR RAM (0.5Gb)
- 32MB ECU logging memory. Over 1200 channels available, 1Hz to 500Hz logging rate
- Oscilloscope 4-channel function with 32MB storage
    - Sampling at 100k samples/second
    - Includes Crank Index and Sync sensor inputs
    - Includes Digital Inputs 1-4
- On-Board barometric pressure sensor. Range 40 – 115.0 kPa
- 3-Axis accelerometer. 16-Bit resolution, $\pm$2g/$\pm$4g/$\pm$8g dynamically selectable full-scale

Outputs
6x Port Injector Outputs—high ohm

- 70V clamping
- Outputs can be used for ground switching, 6A Continuous, 10A Limit
- All outputs are short circuit and over current protected
- No Flywheel diodes (external diode(s) required for VVT control)

6x Ignition Outputs

- Adjustable TTL Ignition drive current (35mA or 70mA)

- Outputs can be used for ground switching, 1A Continuous, 3A Limit
- All outputs are short circuit and over current protected
- No Flywheel diodes (external diode(s) required for VVT control)

10x Auxiliary Outputs

- Variable Valve Timing (VVT) and Variable Valve Timing Electric (VTiE), Drive by Wire (DBW), dual boost control, gearshift solenoids, stepper motor and many more.
- All outputs have PWM control, maximum frequency = 15 kHz
- Flywheel diodes integrated into all outputs
- All outputs are short circuit and over current protected.
- Low Side Driver Auxiliary 1-4: 4A continuous, 6A peak modulated, 8A limit
- Low Side Driver Auxiliary 5-8: 2.5A continuous, 4A peak modulated, 5A limit
- High Side Driver Auxiliary 1-8: High Side 4A continuous, 9A limit
- Half Bridge Driver Auxiliary 9-10: 5A continuous and 8A limit. Can be used as Low Side, High Side or together in H-bridge configuration for DC motor control (DBW)

1x EFI Relay Output

- Low Side Driver for relay control. Current limited to 200mA (Output will switch ON when Ignition Switch Input (B4) is greater than 4V)

1x Shield Output

- Connection for Trigger and Knock shielded cables. Short to battery protection

Inputs
10x Analog Voltage/Temperature Inputs

- Fully configurable including custom calibrations
- Switchable 1k ohm pull-up resistors on ANV 7-10 for temperature inputs (available on 4 channels)
- Accepts a 0.0 – 5.0V analog input. Resolution is 1.22mV (12-Bit)

6x Digital/Speed Inputs/Switched Inputs

- Frequency range from 0.0Hz up the 30.0kHz on all 8 channels
- Magnetic and Hall effect sensor compatible on DI 1-4 with programable trigger edge(s)
- Hall effect sensor only on DI 5-8 with programable trigger edge(s)
- Independent programable frequency-based arming threshold control, range 0.0 – 12.0V on DI 1-4
- Fixed frequency-based arming thresholds on DI 5-8. Rising = 1.2V, Falling = 1.0V.
- Wheel speed, output shaft speed and other frequency-based signals
- VVT position(s) up to 4 channels available on DI 1- 4.
- ON/OFF switched inputs: AC request, Launch enable, cruise switch, table control switching etc with arming threshold control, range 0.0 -20.0V
- Accepts a 0.0 – 20.0V analog input. Resolution is 4.88mV (10-Bit)
- Switchable 4k7 ohm pull-up resistors on all 8 channels to 10V

2x Knock Inputs with configurable Frequency and Gain.

- Using Bosch digital knock integrated circuit technology
- Selectable center frequency from 500Hz – 25kHz
- Selectable bandwidth from 100Hz – 5kHz
- Selectable digital filter window; Hamming or Blackman

1x Dedicated Ignition Switch Input

- 0 – 20.0V input used for EFI Relay Control. (With input > 4V the EFI Relay output (D9) will switch ON)

2x Crank Index and Sync Engine Decoding Inputs

- Magnetic and Hall effect sensor compatible with programable trigger edge(s)
- "True" zero crossing detection on magnetic signals for precise engine position decoding.
- Programmable independent arming threshold control from 0.1V to 12.0V
- Switchable 4k7 ohm pull-up resistor to 5V
- OEM patterns supported

Voltage and Ground Supplies
1x ECU Supply Input

- 15.0A Max (pin limited)
- 6V – 22.0V Range
- Supplies ECU power
- Supplies power to Auxiliary 1-8 High Side Drivers

1x Auxiliary 9-10 Supply Input

- 15.0A Max (pin limited)
- Power supply for Auxiliary channels 9 -10.

1x 5.0V Sensor Supply

- 5.0V Vref1 output current 250mA

1x 8.0V Sensor Supply

- Output current 400mA

2x ECU Main Grounds

- 15.0A per pin, total 30A

1x Sensor 0V Reference

- Analog Sensor 0V Reference with short to battery protection

Communications and Software
- 1x high speed Ethernet 100Mbps
- 2x CAN 2.0B 1Mbps/ 6 Channels per node, total 128 messages.

Emtron's comprehensive Emtune tuning software is used to connect to the ECU.

- Microsoft Windows 7 -10 compatible
- Free licence
- Memory requirements: 0.5GB RAM
- ECU connection using Ethernet, IPV4 protocol
- Tuning and data analysis
- PC and ECU data logging
- Live pause and data playback
- Advanced tuning functions

- Diagnostics
- Oscilloscope display

Product Gallery