

# ADDITIONAL F1 SYSTEM MODULES

High speed data logger



HSL-500

**HSL-500** A compact, self-contained high rate data logger including advanced hardware acceleration of front-end signal processing functions including filtering and down-sampling.

The unit can acquire data from on-board interfaces at rates of up to 400 ksamples per second, and from remote units via CAN and FlexRay links. A high-performance on-board 32bit microprocessor hosts customer applications for real-time data analysis. Data is logged to on-board Flash memory, available via ARCNET for telemetry and downloaded for analysis via Gigabit Ethernet.

Control Interface Unit



CIU-400

**CIU-400** A compact auxiliary processing unit for on board control. The CIU-400 provides a powerful 128MHz processing platform with 1kHz sampling of analogue input channels and actuation of high side drive stage outputs. A 32bit processor provides the processing resource for application code which may be autcoded from Matlab/Simulink using our GDE and reprogrammed using the System Monitor application tool.

The unit includes 3 CAN interfaces for communications with System Monitor, host ECU and other CAN linked system devices.

In-cylinder ion current measurement



ICU-308

**ICU-308** A dedicated hardware platform for sampling and real-time analysis of in cylinder ion current for up to 8 cylinders. The unit provides 400ksamples per second conversion for 8 channels of ion current and 2 channels of pressure measurement.

The unit features a powerful 32 bit DSP, in combination with a high speed FPGA, for processing of the captured ion current waveforms and other customer-defined algorithms. A CAN link provides for data transfer back to the TAG310B for data logging.

Multi channel  $\lambda$



SN-32LT

**SN-32LT** A data acquisition and lambda measurement unit for up to 6 wide band UEGO sensors, 10 K-type thermocouples, 12 analogue inputs and 4 DHE speed inputs. The unit provides additional input channels to extend the on board instrumentation of the system. Sampled data is transmitted back to the TAG310B via a 2Mbps HDLC link.

32 Channel Sensor Node



SN-32

**SN-32** A data acquisition unit providing additional input capture capability. The unit extends the on-board instrumentation of the system providing 26 analogue inputs, 2 K-type thermocouples and 4 DHE speed inputs. Sampled data is transmitted back to the TAG310B via a 2Mbps HDLC link.

32 channel  
thermocouple interface



TIU-32C

**TIU-32C** A compact 32 channel K-type thermocouple interface unit providing output via CAN. Cold junction is provided. The onboard microcontroller samples each channel in turn and provides transmission of scaled results via the CAN bus at speeds up to 1Mbps.

Sensor interface unit



SIU-400

**SIU-400** A local interface unit designed to expand the input capacity of a logging or control system. Data from 11 analogue inputs is transmitted by CAN to a main control unit and so reduces the harnessing while extending the analogue input capabilities of the system.

Tyre pressure system



**TPS** The system consists of a powered pressure sensor with transmitter fitted to the wheel rim. Pressure data is transmitted over an RF link to a compact receiver on the chassis. Sampling rates increase automatically when a change in pressure is detected and the system shuts down below a threshold pressure to preserve battery life. The receiver module sends data to the car control system via CAN.

CAN interface unit



CIU-3

**CIU-3** This interface device provides a simple compact solution providing up to 3 0-5V analogue inputs sampled at 1kHz and available for transmission to a host ECU via CAN for logging. Each sensor input is via its own dedicated connector providing 5V and car supply along with signal connections.

16 channel aero sensor



PIN-16

**PIN-16** A 16 channel pressure module with each channel measurement made with reference to a single reference input. Designed for aero measurements onboard or within a wind tunnel facility. Data is available for transmission to a host ECU via CAN for logging.

Further details of these and other products within our range are available on our website and in our printed catalogue. Our track support engineers and our customer support team will be happy to discuss application of these parts to meet your objectives and will be able to provide quotations on request.