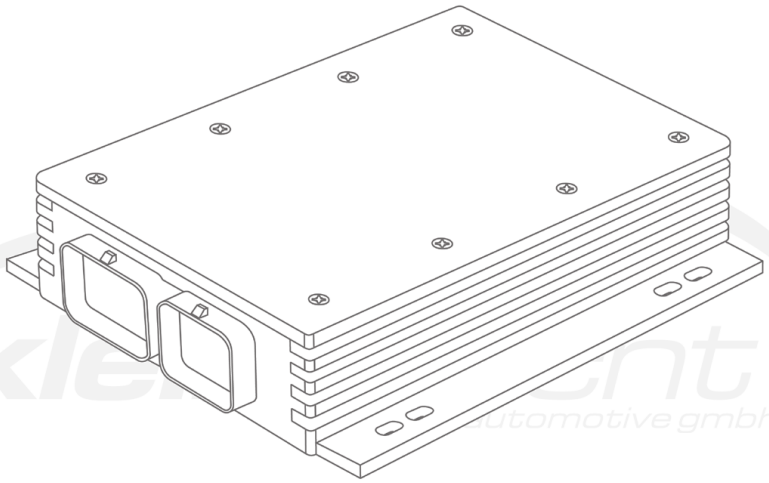
Advance Product Information

MCS400 EC

Embedded Controller Concept



The high performance MCS400 Embedded Controller Concept allows custom control unit designs to be built on request, the modular construction set hardware design allows the control unit to be tailor made to your requirements.

The MCS400 Embedded Controller Concept has been built from the ground up to enable MATLAB/Simulink model based design. It is fully programmable under RTW, no 'manual coding' is required. Sample strategies are supplied.

Rapid Prototyping as Standard. The MCS400 EC comes integrated with @Source, a plug-in for the Matlab®/Simulink® toolchain. Just build your model under RTW and @Source-Lite will generate a selfcontained Rapid Prototyping Module (RPM) that runs on the MCS400 EC, together with the corresponding A2L description file. It takes less than a minute to build models and start live execution.

Features:

Architecture:
Multi-processor 32bit PowerPC architecture
Scalable performance levels starting at 700 MIPS
Optional DSP functionality
1 GB FlashDrive on-board

I/O resources:
Standard 5V Analog inputs (16bit, 1 kSps per channel, groups of 16)
Fast 5V Analog inputs (12bit, 2 MSps), support for sampling at angular rate
Analog inputs for resistive temperature sensors (groups of 8)
Thermocouple inputs (groups of 8)
High speed timed digital I/O (groups of 16)
Multi-channel speed sensing for standard sensor types or angle encoders
BOSCH LSU4.x wideband LAMBDA sensor management (on-board/off-board)

Power stages:
High-side and Low-side power switches with current limiting
Industry standard injector drivers with diagnostic capabilities
High current peak-and-hold injector drivers
Ignition drive stages
DC motor H-Bridge driver stages

Communications:
FlexRay V2.1
CAN 2.0B
Ethernet 10/100
RS232

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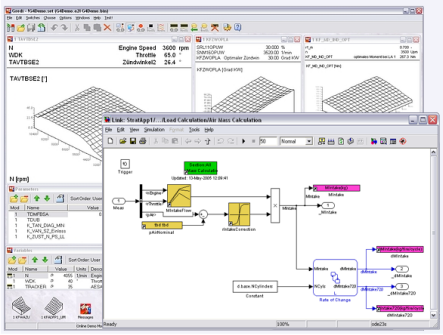
Applications:

Long term endurance testing
Model based design & verification
Data Acquisition
Advanced ECU Calibration
Advanced ECU control strategy debugging
Prototype vehicles
Industrial control
Customizable for Motorsport applications

User Front End:



Gredi V4

All-in-one. All major calibration functions required are integrated into a single intuitive framework.

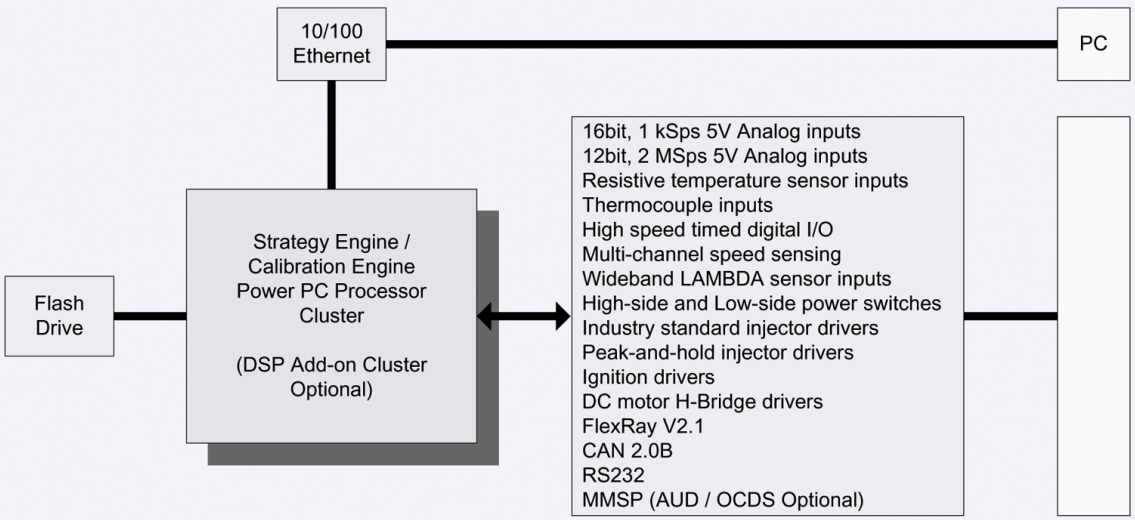
MATLAB/Simulink

The MCS400 EC platform is designed for rapid code generation from the familar MATLAB/Simulink environment. Description files are generated automatically from the @Source blockset.

Benefits:

The easy to use fully integrated MCS400 EC platform allows trully rapid application development without the high cost traditionally associated with rapid code generation. The high performance calibration interface included provides a development tool that allows you to concentrate on strategy development and calibration tasks without encountering traditional interfacing problems.

Block Diagram:



Contact:

www.kleinknecht.com

Kleinknecht Automotive GmbH
Sauerlacher Strasse 25 b
D-82515 Wolfratshausen
Germany

Telephone: +49 (0) 8171.998.76 -0
Facsimile: +49 (0) 8171.998.76 -9
info@kleinknecht.com

Kleinknecht Automotive
Industry and Trade center bldg.
2 Yamashita-cho, Nakaku, Yokohama-shi,
Kanagawa-ken 231-0023, Japan

Telephone: +81 (0) 45.640.0036
Facsimile: +81 (0) 45.662.7190
info.jp@kleinknecht.com

クラインクネヒト オートモーティブ
〒231-0023 横浜市中区山下町二番地
産業貿易センタービル