# M2C Expert Control

## ecCST – THE Embedded Controller for any Application

### Overview

With the control algorithm ecCST, M2C ExpertControl offers a powerful solution for even highly complex feedback-control systems in realtime or in simulation. ecCST is a flexible software controller, and the controller structure and parameters themselves are determined at runtime.

## Highlights

ecCST offers some interesting additional features beyond "normal" control:

- · adapts controller structure according to system dynamics
- independent from kind or quantity of process variables to be controlled
- feasible for systems with multiple oscillations
- automatic Controller Switching Technology (structure and parameters)
- eliminates tracking errors for ramp setpoint signals

All these features enable ecCST to be the perfect controller algorithm for any application.

#### Example

#### **RPM Control**

Of an engine which is difficult to control due to nonlinearities and strong noise.

Only 1 PID-Controller is not sufficient to achieve acceptable control behavior, therefore **ecICP** has calculated automatically 4 different controllers which will be realized and switched by **ecCST** control algorithm.



#### Technical requirements for using ecCST

- compliant with Windows 7 and 10
- parameterization tool ecICP is highly recommended
- simulation environment, e.g. MathWorks Simulink<sup>®</sup> is recommended (more by request)

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 requires real-time hardware with suitable development environment, e.g. dSPACE RTI (more by request)

Are you interested in knowing if your hardware is supported by M2C ExpertControl? Please, contact us for the full list of supported hardware.

# LANIKA SOLUTIONS PRIVATE LIMITED

TF-04, Gold Signature, No. 95, Mosque Road, Frazer Town, Bangalore - 560 005, INDIA Phone: +91 – 80 – 2548 4844 Fax: +91 – 80 – 2548 4846 Email: info@lanikasolutions.com www.lanikasolutions.com

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