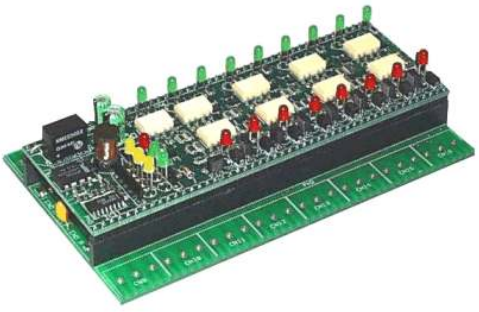
Introduction

Colter have the capability to design special OEM modules or embedded PLCs to suit your exact needs based on our standard FMT-100 and FMT-200 range. The modular construction of these products makes it relatively easy to design a product for you based around our existing technology.
All OEM products can be programmed either by yourself or Colter using the powerful FLEX32 programming software which enables programming in both ladder code or Colter's own text based instruction language which has a format recognisable to people who have programmed in high level text based languages such as 'C' and 'BASIC'.
With full technical and design support at Colter you can rest assured that an OEM product designed for you will fulfil your expectations.

Benefits of a Colter OEM design / Embeded PLC

* Fast time to final product.
* Reduced unit cost.
* Low development costs.
* Free ongoing product enhancements in parallel with standard products.
* The design can fulfil very specific requirement, far more specific than an off-the-shelf PLC.
* The physical size of the unit can be made to suit
* The design is based around Colter's proven standard products therefore reducing design time and cost.
* The design can enjoy free retrospective software enhancements on parrallel with standard products.
* The design can benefit from the large program storage capacity of the FMT CPU boards, therefore allowing you to write programs for very complex applications.
* The product utilises Colter's easy to learn FLEX32 programming language which enables programs to be written either in Ladder Logic code or in Colter's own high level text based language which will be of a familiure format to anyone used to 'C' or 'BASIC' or similar.
* Either the customer or Colter can write the application software.
* Specially written firmware is possible for particular applications, please speak to Colter.



The standard FMT-100 processor and I/O boards which can be built into a design to you own specifications

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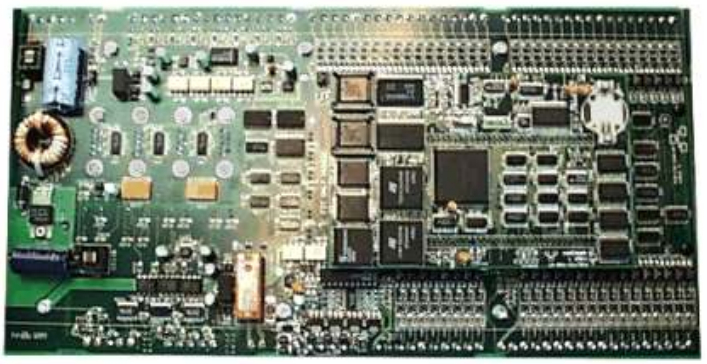
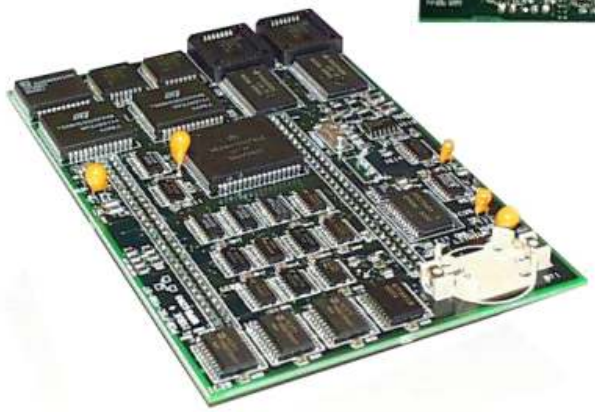
General Capabilities

* CPU boards based around the popular Motorola 68000 CPU
* Large Digital I/O capability
* Large Analogue I/O capability
* RS232 and RS485 communications ports
* High speed inputs (for counting from optical shaft encoders etc.)
* Non volatile data storage (Flash RAM)
* Real Time Clock
* Flash RAM plug in card capability (for data logging / program storage etc.)
* Fieldbus communications modules (for communicating with Fieldbus networks)
* Signal conditioning
* PID (Proportional Integral, Differential) Control
* User displays (LCD Alphanumeric & Graphic displays, LED indicators etc.)
* Push button controls
* Text based and Ladder based programming

The standard FMT-200 I/O boards and processor board which can be built into a design to you own specifications





Examples of past designs

Industrial boiler control and monitoring

This OEM design for IECS/GESTRA is an advanced boiler control unit for the control of large industrial boilers. The control taking the form of monitoring of exhaust gases from the boilers burners to ensure safety of the burning process. The unit also performs load sharing control between several boilers.
This design also incorporates a modem to enable remote monitoring and control to take place.
The design is based on the architecture of a FMT-200J utilising the standard CPU board but a redesigned I/O board incorporating a modem and power supply.

Special Features:
* High safety integrity
* Different display options
* Special 0_2 sensor signal conditioning module
* Flexible power supply options
* Modem interface
* 240V AC I/O
* Utilises standard FMT-200 microprocessor board

A view of the boiler control unit design. The standard CPU card can be seen in the top left of the large board.
The LCD display and push buttons can be seen in the far top left.

Guillotine Control

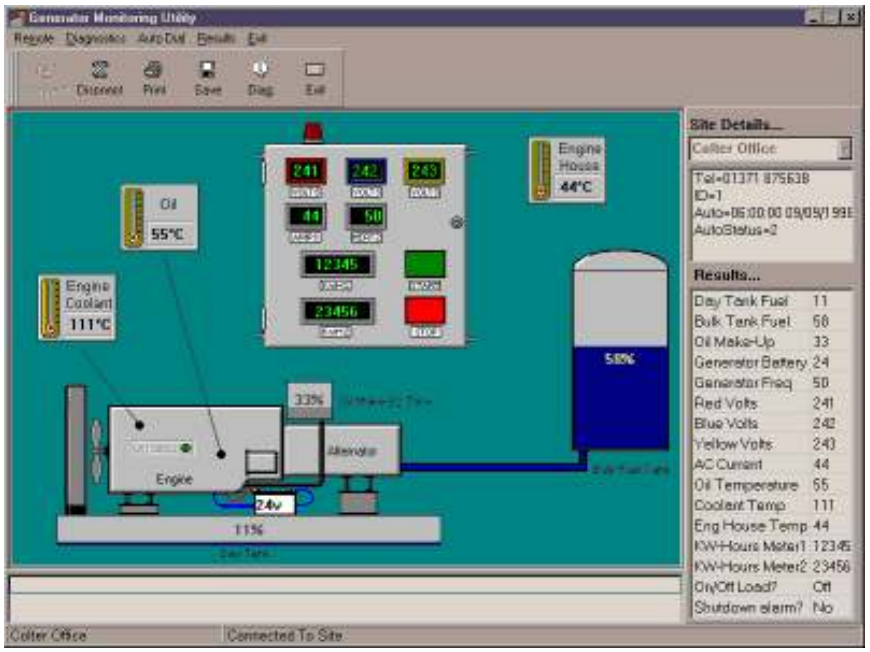
This OEM design is for a guillotine controller. It consisted of a special high speed, high memory capacity FMT-100 CPU board mounted into a specially designed keyboard and LCD display unit with I/O to control a guillotine.

Special Features:
* Large character LCD display
* 25 key keyboard
* Standard FMT-100 microprocessor board but with double the processing speed and four times the standard memory capacity

Remote generator control and monitoring:

This OEM design for Silent Power is a device to monitor remotely situated backup generators (before this device was available an engineer would have to visit hundreds of sites every month to check on the generators condition). The device comprises a FMT-100D without it's case or terminals which was supplied to the customer who fitted it into a special 'mother board' of their own design.
This design also consisted of a specially written piece of OEM software which displayed the generator being remotely monitored as a mimic panel.
The FMT-100D was connected via the mother board to a modem which enabled it to be communicated with over the public telephone network, hence allowing very remote monitoring.

Special Features:
* Modem interface
* Standard FMT-100D used (without casing and terminals)



A screen-shot from the specially designed OEM software mimic panel

Engine / gearbox monitor:

This OEM design for Nissan consisted of a standard FMT-100C with specially written firmware. It was used to monitor the engine / gearbox speed and data was logged at regular intervals in the battery backed RAM of the FMT. This data was downloaded after some time for analysis.

Special Features:
* 12V DC powered
* Internal non-volatile data storage
* High speed counting
* Standard FMT-100C but with specially written firmware

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Irrigation control system for large manufacturer:

This design consists of a FMT-100 processor board mounted in a I/O board specially designed by Colter. The unit controlls an irrigation system in the Middle East because of this geographical location the design had to cope with extremes of temperature (up to 70°C).
The unit controlled and monitored the irrigation sprinklers. Data for the weeks irrigation was downloaded to the unit once a week and the unit used it's real time clock to know when to perform irrigation.

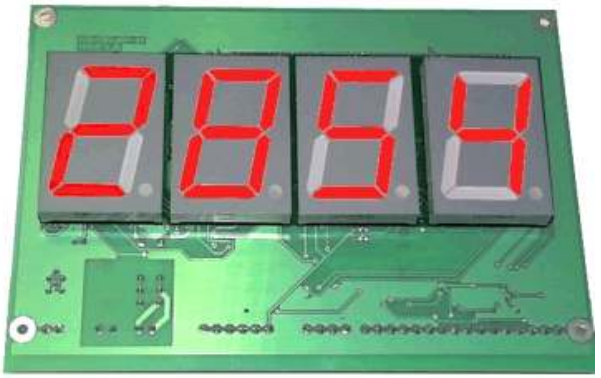
Special Features:
* Wide operating temperature (-5°C to +70°C)
* Fully isolated I/O
* On-board power supply for external devices
* Utilises standard FMT-100 micro processor board

Press batch counter / control:

This OEM design used by Ford is a controller which operates a press and also displays the current batch number. The design utilised a FMT-100 CPU board mounted in a special I/O board designed by Colter. The board controls the press and also displays the batch number using a large seven segment LED display.

Special Features:
* Large character display
* Standard FMT-100 microprocessor board
* Special display / I/O board.

Front view of press batch controller showing the large display



Rear view of the press batch controller showing the specially designed I/O board in more detail, also shown in the top left quarter of the board is the FMT-100 CPU board

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Further Details

For further details on OEM design, and to discuss your requirements please contact Colter Systems at the address shown on this page.

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