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a Converteam Group company
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GEM80
Unlimited upgrade options



Converteam

A commitment to success and the power to drive your business

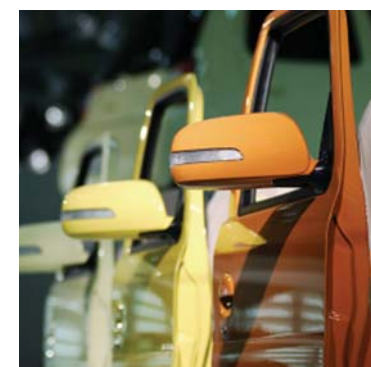
Converteam is a worldwide specialist in Power Conversion. We provide customised solutions to convert electrical energy through optimum applications of technology in drives, controls, motors and generators.

Our customers operate in three main markets: Marine and Offshore, Oil and Gas and Process Industries, as well as in many specialised areas. Our extensive offering – from design only to turnkey systems, installations and commissioning – is backed by a full range of services.

Since its launch in 1979, thousands of companies world-wide have enjoyed the benefits that GEM80 PLC systems bring.

Whether it be manufacturing or process, the utilities industry, building services or energy, the GEM80 family of controllers have helped companies realise their full potential in terms of output, efficiency and high plant availability.

With some systems now 25 years old, many users will be looking to upgrade and extend existing hardware to cope with the demands of today's environment.



GEM80

Benefits

By choosing to upgrade installed GEM80 with the latest models, such as the GEM80-500, users can expect the following benefits (when compared to moving to another PLC type):

- Re-use of existing control programs with only minimal changes – thus saving on high software costs
- Retain existing I/O if desired.
- State of the art open communications
- Enhanced PLC diagnostics
- Quick project cycle time and fast commissioning
- Retention of the familiar 'feel' that the GEM80 range affords and hence minimise on re-training costs.
- Latest open communications including Modbus over Ethernet Profibus and Devicenet.
- Webserver access with built-in Ethernet options.
- Continued support and service from the GEM80 team

Flexible
The modular design combined with the wide range of I/O modules and options provides the exact system for your needs.



GEM80-400

The GEM80-400 continues to be the best choice migration path for larger systems. The 400S can support traditional Fast I/O modules and Ethernet communications are possible via GEMLAN T module.

The product is available in four architectural layouts:

- A "400 Standard" subrack system which allows integration of the processor and up to 8 I/O modules in the first subrack.
- A "400 Enhanced" version with the facility for 5 Central highway modules and space for 4 local I/O modules in the first subrack.
- A "400 Special" version allowing 5 Central highway modules and up to 4 Fast I/O modules in the first subrack.
- A "400 CE" version allowing 10 Central highway modules in the first subrack.

The processor is equipped with a number of innovative features designed to increase availability and reduce downtime; for example, a firmware upgrade can be achieved without removing the card from the subrack.

GEM80-500

The GEM80-500 has the same performance as the 400 controller but as a stand alone unit that can be used to replace a whole range of earlier generation products such as the 100 and 140 series. It can be panel mounted or located in an existing GEM80 subrack.

In terms of I/O support, the 500 has a range of plug in modules that allow it to interface to your existing range of Basic and Verification GEM80 I/O. Should you want to replace the I/O then the 500 has its own range of GEMTEQ intelligent I/O. The GEM80-500 has a full range of communication options available including Ethernet TCP/IP, Modbus, Profibus, DeviceNet and CAN.

All modules, connections and indication are front access, which facilitates rapid installation and minimal disruption plant.

GEMTEQ I/O

GEMTEQ is the fourth generation of I/O modules specifically designed for the GEM80-500.

GEMTEQ provides local and distributed I/O, allowing I/O to be located where it is needed, with minimal plant wiring.

With its built in intelligence and comprehensive diagnostics information, GEMTEQ is easy to configure, design and maintain using the standard GEM80 programming package.

Connectivity

Serial

GEM80 controllers include standard RS485 or RS232 serial ports, using GEM80 Extended Simple Protocol (ESP). Communication can be configured between controllers, variable speed drives, operator displays (HMI's) or supervisory systems (SCADA).

Ethernet

GEMLAN-T allows controllers to communicate using TCP/IP Ethernet. GEM80 controllers can exchange data with SCADA or DCS systems that support TCP/IP or Modbus.

GEMLAN-T can be used to provide a powerful and flexible peer to peer network between controllers.

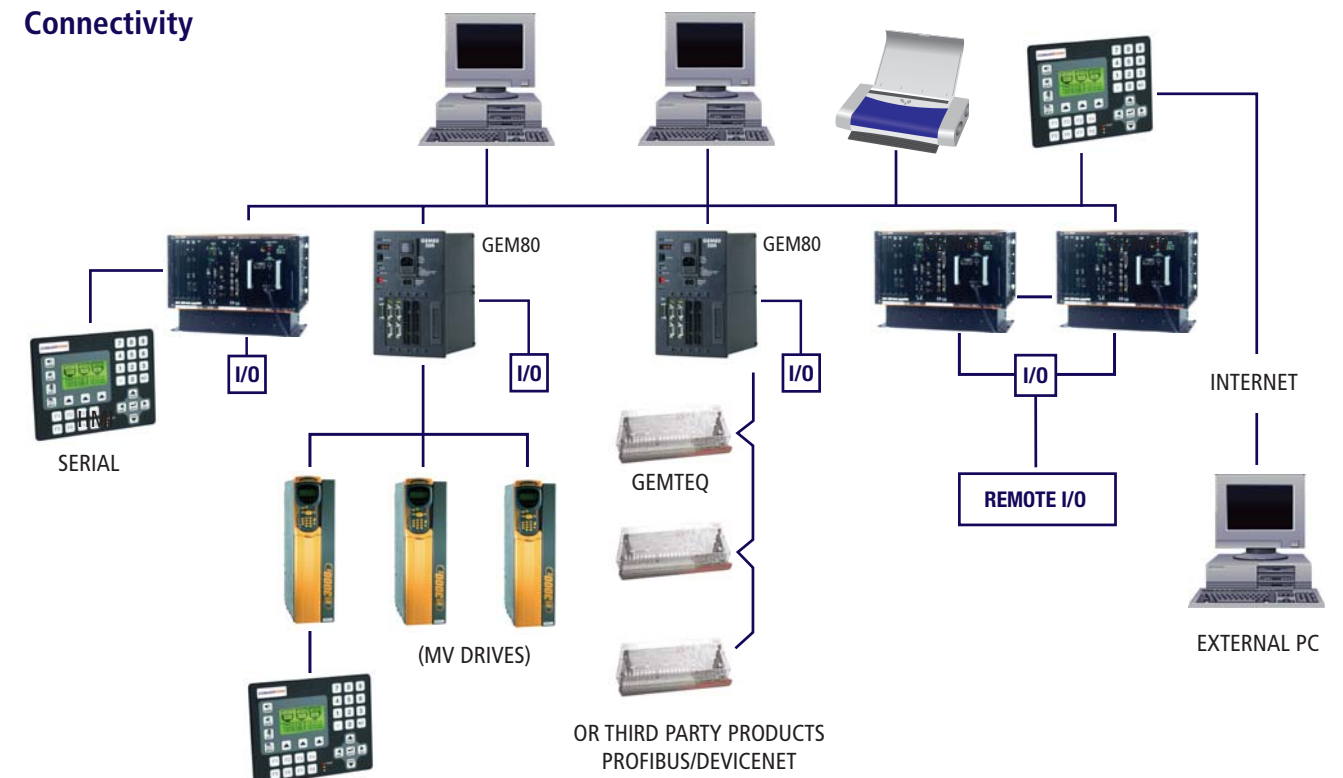
An in-built webserver can also be accessed in GEMLAN-T. Users can develop their own web pages, access and monitor application data as mimic displays or data tables.

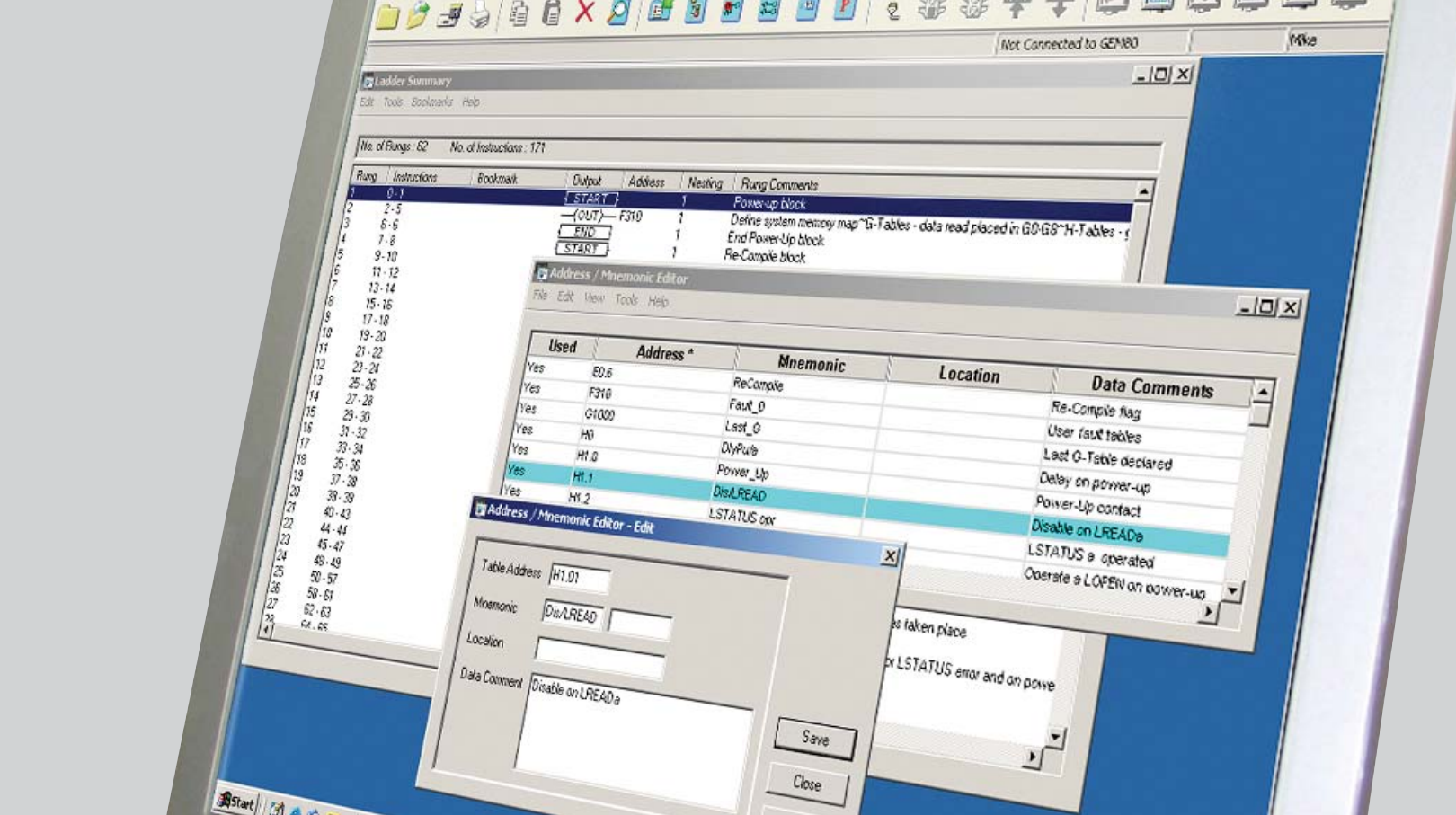
Fieldbus

A range of Fieldbus networks can be connected. Convertteam products can communicate using WorldFIP and CANBUS. The GEM80-500 controllers also now have option modules to network Profibus and DeviceNet.



Connectivity





Programming Tools – AGP

Converteam has improved and developed the Advanced GEM80 Programmer (AGP) to provide a powerful and flexible programming tool for use with GEM80 controllers.

AGP Developer-Pro is an ideal platform for creating programs, with a wide range of powerful new features to make programming and monitoring your GEM80 software even easier. AGP provides extensive facilities for developing, documenting, testing and maintaining your application. AGP Developer-Pro runs on the latest operating platforms including Microsoft Windows NT, Windows 2000® & Windows XP.

AGP Developer-Pro features include:

- Ladder summary - lists all rungs and associated comments
- Rung Overview - multiple rungs displayed with live data
- Rung and P Table Editor - for concise and quick editing
- Extensive monitoring and documentation
- Import facility from traditional GEM80 programming tools
- Comparison facilities
- Easy configuration of communications ports
- Ethernet communication to GEM80 controllers
- Export/Import Rungs - sections of programme can be built up as library routines
- Event log access - for GEM80-400 and 500 controllers
- Test panel - versatile facility for testing programmes
- Data Logger - monitor and logs datatables
- Diagnostic Monitor - tabbed window displaying GEM80 diagnostics
- Ethernet communication via GEMLAN-T
- Increases data table monitoring
- Enhanced mnemonic editing
- Test panel extending monitoring facilities
- Data Logger for specified events
- Enhanced keyboard interface

Customer Service

Converteam offers a comprehensive range of services in supporting our products and systems for all equipment supplied regardless of use.

Technical advice and assistance is available in the application of products for new systems and upgrade projects. Support engineers will provide assistance from our Kidsgrove manufacturing and engineering facility, or from our local Regional Business Centres.

Service Support

Service contracts are provided and offer different levels of support 24 hours/7 days a week. Engineers based at our Regional Business Centres will ensure a rapid response and help maintain customers plant availability. Contracts can be tailored to include regular maintenance visits, product repairs, spares and training.

International Support

Converteam is represented in Australia, Brazil, Canada, Europe, South Africa and the USA by a number of partners with GEM80 expertise to support your present and future automation needs.

Spares

Converteam can ensure customers of the availability of spares or alternative replacement parts. Access to original design information together with information on third party products, is held by the company. Components are sourced from in-house stock or functionally equivalent replacements can be engineered to offer a complete spares service.

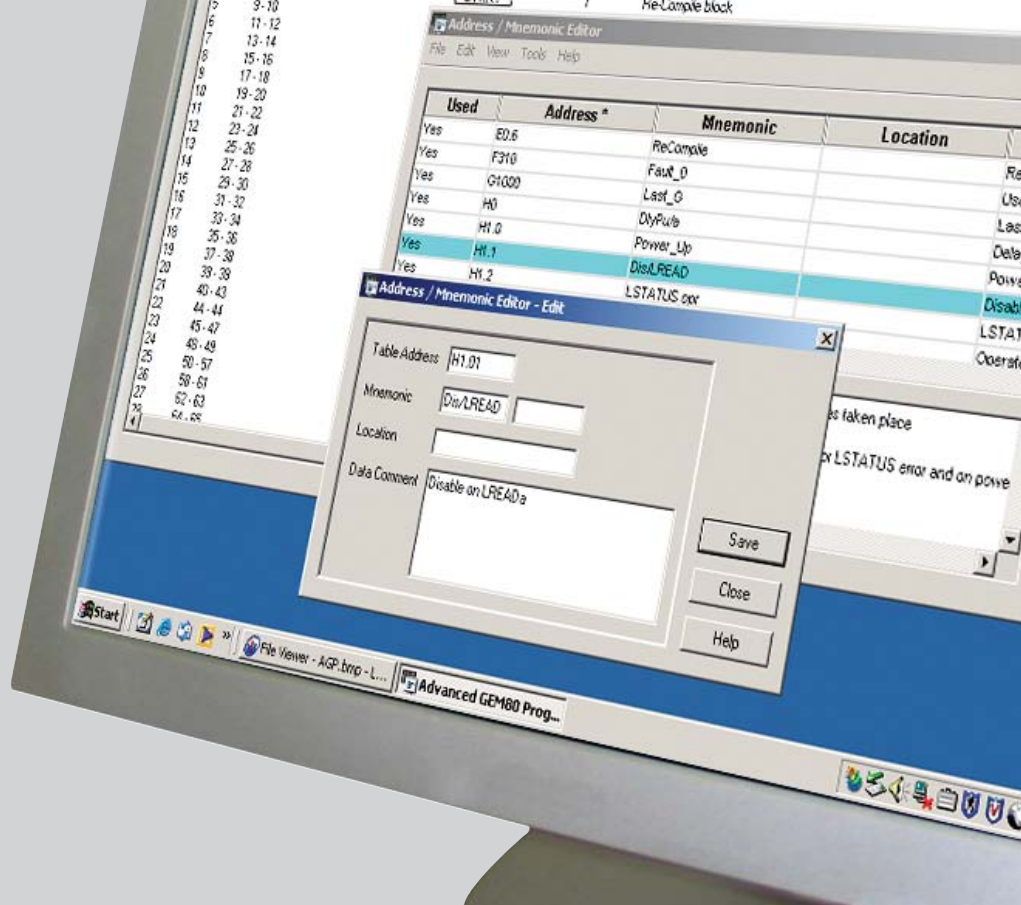
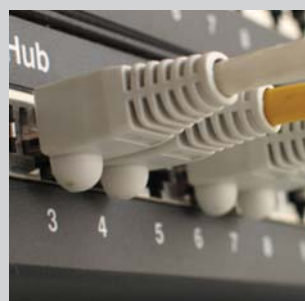


Repairs

Product repairs are carried out at our Kidsgrove manufacturing site. As with spares, historical product design documentation is available. Our comprehensive automatic test equipment can rapidly diagnose faults to offer a reliable service.

Training

Product training is offered for standard courses or tailored for customers requirements. Staff can be trained in the system application of our products or to cover maintenance diagnostics.



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