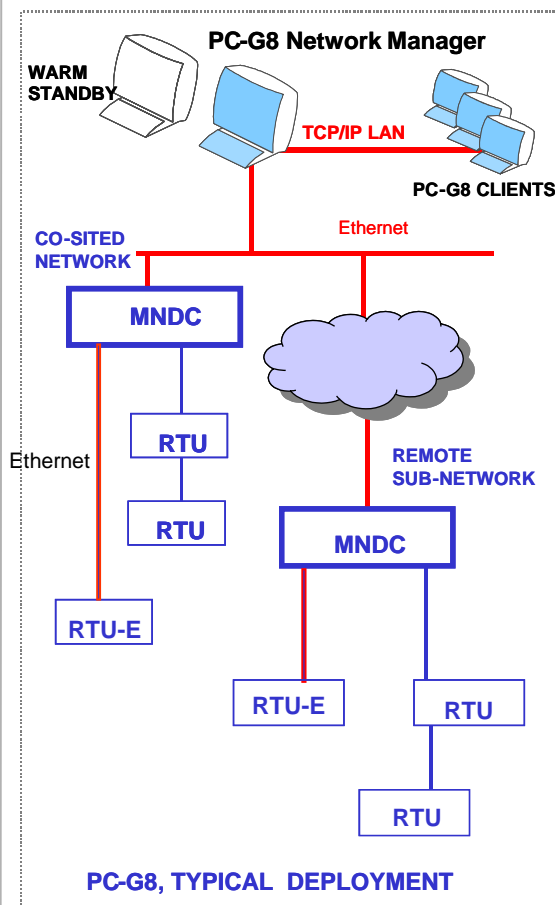


Network Management System PC-G8

“Let us solve your network management problems”



PC-G8 - Condition, Configuration, Capability

Actively managing system nodes and associated equipment, especially where these are remote and geographically distributed, can bring significant benefits in operational efficiency, resource scheduling and the quality of information on system resources. These translate to ensuring maximum equipment availability and minimum system down time and cost, factors that can help you provide your customer the highest level of service, whatever your business. Pro-active management is the key to competitiveness and customer satisfaction.

DMS (Data Management) Ltd trading as (D&IT) has developed a range of solutions under the generic PC-Gx brand, which coupled with our range of Remote Terminal Units offers a powerful node management solution that provides an operational overview of system performance, 24 hours a day.

Using Microsoft™ Windows™ technology, the node management solution is designed to help monitor and manage systems and equipment, locally or remotely located, in an efficient and logical way.

Easily integrated into customers existing environments, PC-G8 can be utilised to support the business front-end systems (OSS Handoffs), thereby offering the ideal solution for system maintainers giving them the ability to improve the level of service provided and reduce maintenance costs whilst ensuring Service Level Agreement (SLA) obligations are satisfied.

PC-G8 can monitor a variety of equipment, network and environmental alarms. Automatically reported alarms & pre-emptive events can be actively managed, initiating call-outs to service engineers when necessary as well as enabling remote access, facilitating further investigation or corrective action, from the management centre.

DMS (Data Management) Limited is dedicated to serving the customer by developing and supplying innovative products and solutions to support high quality customer care.

PC-G8 is the name given to this D&IT management solution.

For small or Trial Networks, D&IT offer a “small NM package” to cover network sizes of 50, 100 & 200 nodes – this is a Manager at low margin for small operations.

PC-G8 NMS

A central site comprising of a single application Server, running Microsoft™ Windows™ Win 10 and MNDC (Modular Network Data Controller), a polling Front End Processor unit, which handles the transmission circuits (Communications) to the remote sites. Multiple operator stations (Clients) running Microsoft™ Windows™ Win 10 and/or Win 7 can be supported using a LAN/WAN to access the server-based database. Remote user access is supported provided that the Username and Password are valid.

Communications resilience can be facilitated by alternate routing from remote RTUs should the communications supported by the main network path fail.

The system supports a Warm Standby Server facility by the addition of a graphically separated standby server and licence, that is kept updated by the main server (Physical Level). At the Logical/Functional Level the servers are referenced as Active Server and Non-active Server.

Optional Software Download facilities (to MNDCs and RTUs) are supported via a PC-G8 adjunct application, supporting installation of new features without site visits.

A Powerful Graphical User Interface

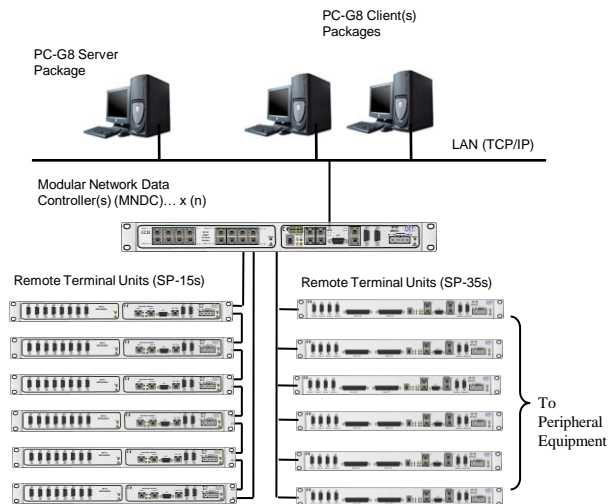
PC-G8 has a graphical user interface (GUI) which automatically detects, filters and reports real-time alarm data and events. This enables centralised management of large or small mixed networks to be monitored by non-specialist personnel.

PC-G8 removes many of the time consuming and non-productive stages in the process of handling alarms, allowing a reduction in operating costs. Alarms can be filtered for reportable events, translated and pre-determined conditions displayed on the screen.

The information made available to operators can be assigned to specific domains within the network additionally access rights can be assigned to meet operational needs, for example - Power or Environmental alarms/events. Operator attributes can also be restricted, for example - read only access.

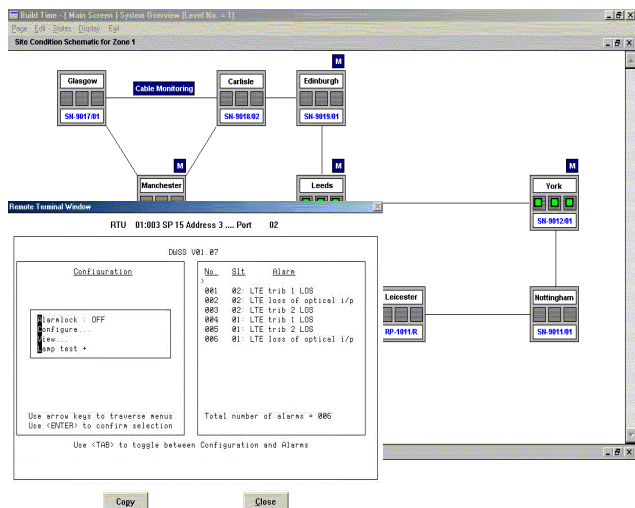
Independently, individual domains may be selected for handoff to an associated OSS when further analysis of data is required.

The simple to use Microsoft™ Windows™ based GUI allows users to install and configure PC-G8. Technicians or non-technical staff can add additional sites, configure alarms and draw a network schematic with the appropriate training



Ethernet communications to multiple 'Modular Network Data Controllers' (MNDC) are supported allowing greater diversity of communications to be utilised, as the MNDC may be remote to the NM to service islands of equipment. Multiple communication options between MNDCs & RTUs are supported including Ethernet and Serial data.

An alternative version of the 'Modular Network Data Controller' (MNDC) Supports Ethernet and Dial-in communications.



Comprehensive Remote Site Monitoring

The SP-xx family Remote Terminal Units (RTU) may be used to detect and report serial, digital and analogue alarms or status changes at remote sites, process the data, which is subsequently reported to the PC-G8 network management system.

The compact front access 1U 19" rack-mount RTU acts as a data buffer/processor and consequently allows the system to operate independently to the equipment that is being managed.

Any equipment that has a serial interface, digital alarm input or output or analogue outputs can be connected to the RTU. Boolean functions can be implemented to support local automated control applications.

The SP-15 RTU can handle a maximum of 80 digital inputs on the base unit and the SP-35 RTU-E supports a maximum of 72 digital Inputs (24 Inputs on base unit & 48 using additional PIMs) – see individual RTU diagrams below.

RTUs (SP-15 & SP-35) support volt free relay control outputs and in addition may execute logical algorithms in order to perform local automated smart control tasks when specified.

The front end MNDC handles automatic polling of the network RTUs, with LAN or serial data RS422/RS232 communications options.

For the dial-in RTU version a high level of resilience can be achieved by configuring the RTU to call two telephone numbers, over PSTN or GSM, to report an alarm. Should the RTU fail to establish and complete the call, the RTU will continue to dial out at predefined intervals until a successful call is made, however the NMS can be configured to raise an alarm if communications are not established within a specific time period.

Alarms can be filtered for priority, critical alarms can be configured to automatically dial out whilst minor alarms can be configured to dial out only where certain criteria are met.

The RTU can be remotely configured from PC-G8 systems (Password protected)

Flexible Input/Output

Using the configurable inputs and outputs a wide range of peripherals can be managed, for example:

Equipment Management –Interfacing Options

- Relays
- Opto-isolators or solid state
- Serial and parallel data
- Copper and optical drivers

Environmental Management

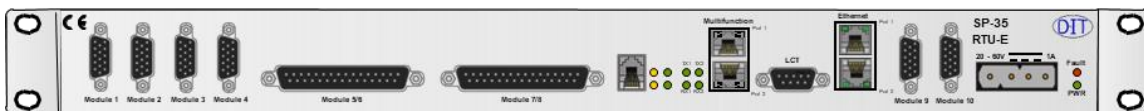
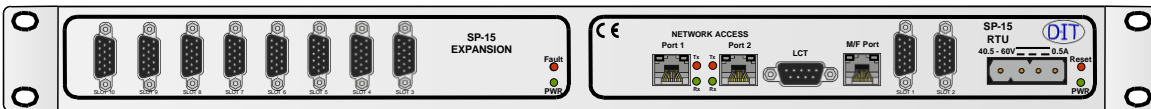
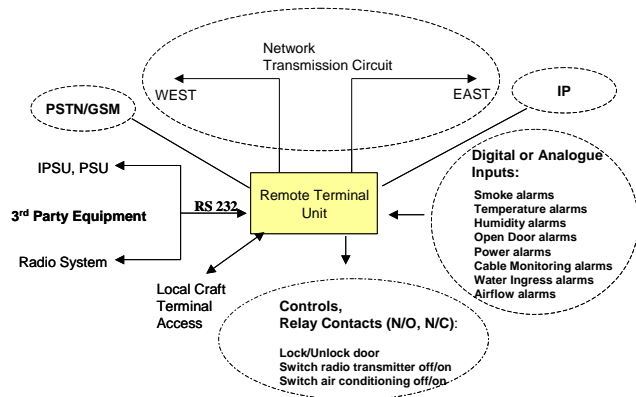
- AC/DC power equipment monitoring and control
- Environmental monitoring and management
- Fire and smoke detection

Un-interruptible Power Supply Management

- Report status
- Primary power fail (activate local control function)
- Initiate battery discharge test

Security Management

- Activate local locking mechanisms (Drivers available)
- Door entry alarms (Tamper)
- PIR activity detectors
- Smart Logic alarm reporting algorithms



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