SP-85 Modular Network Data Controller (MNDC)
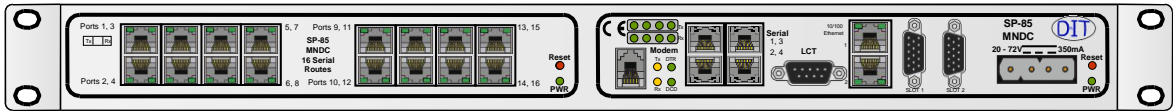

- ☐ **Used with PC-G8 NMS**

- ☐ **Co-sited or remote from PC-G8**

- ☐ **1U Compact Construction**

- ☐ **19" and ETSI Rack mounting options**

- ☐ **Local Alarm Monitoring and Control**

- ☐ **Ethernet & RS422 /RS232 Polling Interfaces**

- ☐ **Multiple Polling Configurations**

- ☐ **Support for Loop and Spur connectivity**

- ☐ **Modem version for Dial-up Networks**


REMOTE AND CO-SITED MNDC DEPLOYMENT

This equipment forms part of Data and Information Technology's network management system. The SP-85 Modular Network Data Controller (MNDC) polls groups of D&IT's range of Multiplexer and RTU products (managed entities), and acts as a proxy to D&IT's network management system, as part of the overall distributed management strategy.

Product Overview

One limitation of conventional network management systems is the requirement to "poll" each active element in order to request information and check status. The bigger the network becomes, the longer this polling cycle takes and the network manager is tied up and unavailable for other tasks.

The Modular Network Data Controller is an intelligent device that addresses this issue and can poll up to 16 routes concurrently – communications access is realised via either RS422/RS232 (16 ports available) or Ethernet (single port). On low speed polling links (e.g. 9.6 Kbit's) this polling method, with special "shortcut" algorithms (exception polling) can be up to 100 times faster than conventional polling techniques. Each MNDC can control up to 200 managed network entities. Up to 25 RTUs supported on each serial port, daisy chain or loop connectivity, Up to 100 RTUs can be supported on the Ethernet port. The Network Management System can control up to 2,200 managed entities, distributed over multiple MNDCs, up to a maximum of 48.

Geographically separated islands of managed entities can be serviced by deploying remote MNDCs. Moreover, with the inbuilt intelligence of the MNDC, each island of managed entities becomes resilient to failures in the communications infrastructure.
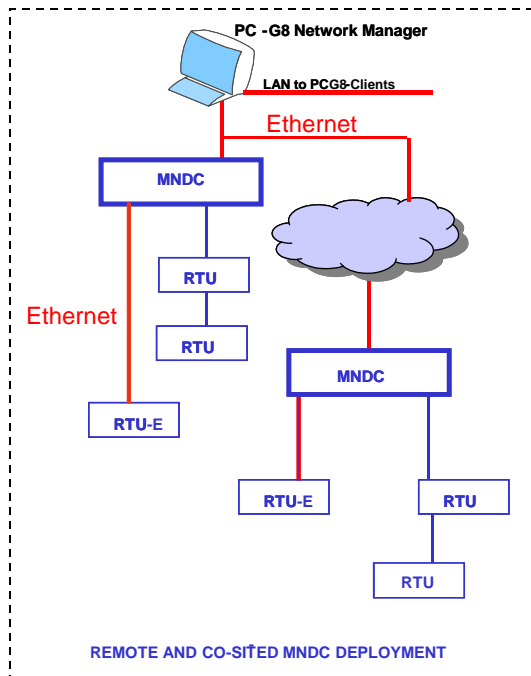
Features

In common with the D&IT range of RTUs, the MNDC supports two slots provided for the fitting of up to two 'Plug-in-Modules' (PIMs). Standard PIMs include the eight channel optically isolated input module, a four relay output module and a secure four relay module.

These modules facilitate control and monitoring of co-sited equipment and the external local representation of network states, for example loss of communications to the network manager, unacknowledged network element alarm etc.

Multi-function ports are provisioned to accommodate communications with a third party manager and associated third party equipment(s).

This enables communications between the third party manager and its remote network entities co-sited with any RTU in the network controlled by the MNDC. The communications route (or association) is set up from the PC-G8 management system.

Ethernet ports support communications with the PC-G8 Network Management system and remote "networked" Ethernet based RTU-Es or network elements. A second Ethernet port is provided to support directly connected (co-located) Ethernet based RTU-Es.

LCT access is provisioned via a front mounted connector.

The LCT can be used to configure the MNDC including the programming of alarm state reporting (i.e. Loss of communications to the manager etc.).

Remote LCT access can be facilitated from the Network Management System via the Ethernet connection.
Modem access is provisioned via an RJ11 connector

All communications ports have associated LEDs, indicating connection and traffic path status.

SPECIFICATION

BASE UNIT

Enclosure	1U (1.75") Aluminium ventilated enclosure
Rack Practice	19" – alternative brackets for ETSI rack practice also available
Weight	2.0Kg
Connectors	
NMS	2 x RJ45 (Ethernet)
Misc	4 x RJ45 (RS232 or RS422)
LCT	1 x 9-way 'D' male (RS232 only)
Input/Output	As per fitted PIM
Power	4-way Slim-line Trident
Power Supply	48V nominal (36 V DC to 72 V DC), positive or negative ground permitted
Status Indication	LED's

ROUTE POLLING OPTION

Connectors	
Routes	16 x RJ45 (RS232 or RS422)
Status Indication	LED's – 2 per port
Polling Speeds	1200, 2400, 4800, 9600 or 19200 baud
Environmental	Meets the appropriate requirements of EN300-019
EMC	Meets the appropriate requirements of R&TTE under Directive 1999/5/EC and EMC Directive 89/336/EEC
Safety	Meets the requirements of LVD 73/23/ECC (EN 60950)

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