

STRATOS Modular Data Concentrator

PAV Data Systems Ltd's Modular Data Concentrator is a key component in the PAV Network Management Systems. It forms a cost effective interface to 48 polling routes.

Product Overview

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

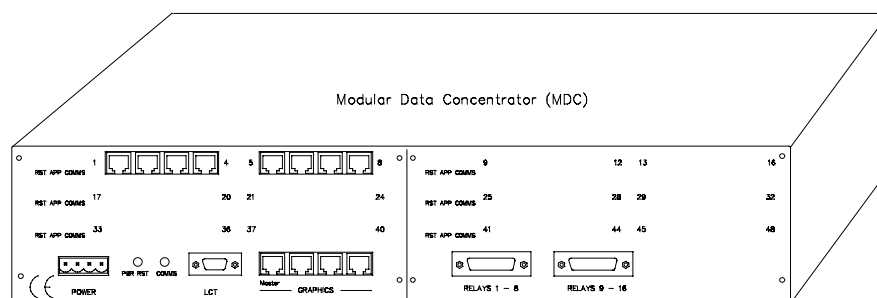
The Modular Data Concentrator, is far from being just a dumb connection device but is provided with its own intelligence. On start up, the MDC is given its set of instructions by the Server and from then on it can work on its own. The concentrator can conduct polling of up to 48 network connections or "routes", essentially in a simultaneous mode rather than sequentially. This polling method, with special "shortcut" algorithms, can be 100 times faster than normal polling techniques.

The time saving is not achieved at the cost of security however because extra checks, such as polling in both directions around a loop, are standards applied to ensure that data gathering continues in the event of a faulty circuit situation.

Each of the 48 routes can comprise up to 50 remote terminal units each of which could be supervising a multiplicity of functions.

- **2U 19" Rackmount, Compact Construction**
- **Support for Loop, Spur and Star Networks**
- **Integral Input/Output Functionality**
- **Various Polling Configurations**

The Network Management System can accommodate to eight data concentrators so expansion is guaranteed, making possible the monitoring of several hundred thousand alarm sources by using hundreds of RTU's.



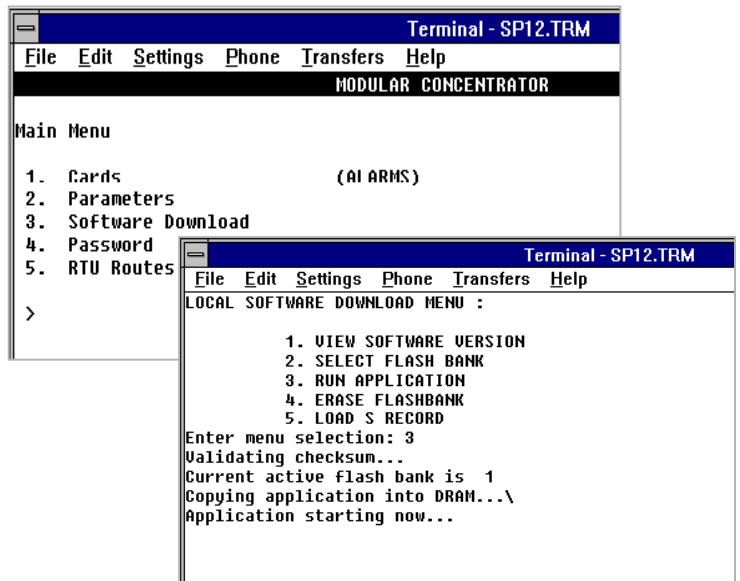
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Operation

The MDC consists of a master CPU (with one master and three slave terminal ports, a 16-relay card with no inputs, and between one and six asynchronous routes cards.

When power is applied to the MDC, it requests system data from the master terminal. From this it is able to poll sequentially the RTU's which exist on each route. Routes which have no RTU's will not be polled. When an RTU is found which has not been initialised, the concentrator will request RTU data from the master terminal. This data is then sent via the correct route to the RTU.

All alarm data from the RTU's and all control data to the RTU's passes through the MDC.



SPECIFICATION

Base Unit

Enclosure	2U (3.25") Aluminium ventilated enclosure
Rack Practice	19" – alternative brackets available
Weight	2.5Kg
Connectors	
NMS	1 x Master RJ45 (RS232 or RS422) 3 x Slave RJ45 (RS232 or RS422)
LCT	1 x 9-way 'D' male (RS232 only)
Input/Output	25-way high density "D" connector
Power	4-way Slim-line Trident
Power Supply	48V nominal (36 V DC to 72 V DC), positive or negative ground permitted
Status Indication	3 LED's – 1 green, 2 red

Route Polling Cards

Connectors	
Routes	8 x Master RJ45 (RS232 or RS422)
Status Indication	3 LED's – 2 yellow, 1 red
Polling Speeds	1200, 2400, 4800, 9600 or 19200 baud

Environmental	Complies with the requirements given in 'Generic Environmental, EMC, and Safety Requirements for PAV Data Systems Ltd Product', D95-0013. Also complies with ETS 300 386-1
Safety	Complies with BS EN 60950

PAV Data Systems maintain a continuous process of research and development, and as such, all specifications within this document are subject to change without notice.