

# Commander

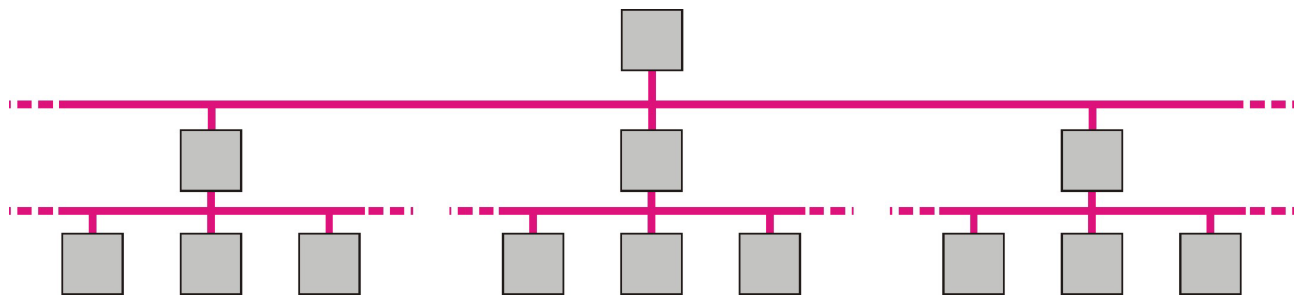
## Introduction

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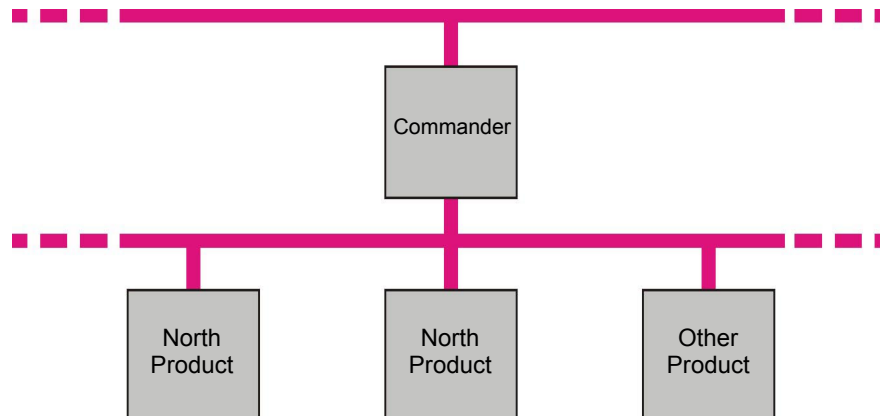
### *The Multilayer Model*

North base all their products on a multilayer model, which allows the products to be connected together in a logical way. The model divides different areas of function within a building and links them with a network. Each functional area is again divided into areas, which are again linked with a network. This dividing and linking provides a scalable model, which can extend upwards to include international networks such as the Internet, and downwards to small networks for linking sensors together.



### *The Commander*

Commander is a link between devices and an IP network. Commander has a 10Base-T Ethernet port supporting a range of IP protocols, including DHCP, SMTP, HTML, IPBUS and BACNet. DHCP allows Commander to automatically address itself on the network; SMTP allows Commander to send emails when alarms occur; HTML allows Commander to serve simple documents to standard browsers on the network; IPBUS allows this Commander to communicate directly with other Commanders and IPBUS devices on the network. BACNet allows user data to appear as a BACNet device on the IP network.



Commander also has a 9-way RS232 port supporting various protocols. This allows Commander to access values from the system connected to its RS232 port, and visa versa, and within other IPBUS devices over the IP network.

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## **Commanders Capabilities**

### **Alarms**

Commander contains intelligent alarm handling, including alarm distribution to several destinations, as well as having a list of alarms that require user-acknowledgement.

When Commander receives an alarm from the system connected to the RS232 port is automatically passed to the Alarm Router module. The Alarm Router is used to route alarms to one or more destinations in an intelligent way. All alarms generated within the Commander are automatically sent to this module for onward routing.

The Alarm Router can send alarms to 8 destinations. A 'destination handler' handles each destination. The handler can test alarms if necessary, so that only certain alarms are sent to a particular destination.

Each destination is specified using its object reference. The destination can be another module within Commander such as the AlmEmailer which can sent alarms to a maximum of 4 e-mail address, or any alarm destination across the IP network, such as Alarm Manager, GSMSMS, AlmXlate, AlmPrint, etc.

### **IP, Ethernet and Web browsers**

Commander can collect information from the system connected to its RS232 port, and make it available via easy-to-use HTML documents; users can also set values from web-browsers, and Commander will distribute these values to the system connected to its RS232 port and other IPBUS devices.

If necessary, Commander can monitor values collected, and send alarm/warning messages to users elsewhere on the IP network, and/or the Compass network.

### **Time Control**

The Calendar Timer module uses Commander's date and time to provide on-off time control to other devices. The Calendar is used to specify day-types for the following year, and each of the timers then has a set of profiles to be used.

### **Programmable Control**

OBVEngine allows the engineer to develop processes to control objects within Commander, on the system connected to the RS232 port, and on the IP network.

The OBVEngine module in Commander contains three ObVerse Processors, which are programmed using the OBVEditor. Refer to the '[Introduction to ObVerse](#)' document for information on the ObVerse language.

### **BACnet**

Commander supports the ASHRAE BACnet, Building Automation and Control Networks, standard. The Commander BACnet module conforms to AHRAE standard 135 – 2001 and supports the BACnet IP (Annex J) data link layer (BACnet/IP) and the 'BACnet Application Specific Controller' standardised profile.

The BACnet module works closely with the User Database, using its information to automatically build BACnet objects.