

# What is Commander?

Commander is the smallest of North's family of building controllers, which also includes Integrator and ObServer. All the controllers contain North's interface technology, cause-and-effect language, and easy-to-use web services.

Commander can work as a stand-alone controller, or alongside other North controllers and display systems, becoming part of a larger control or monitoring solution.



## Interfacing

Commander contains North's interface technology. Commander can access values within thousands of different third-party systems using North's library of drivers. These drivers allow Commander to pass data between systems – HVAC systems can interact with chillers, security systems can interoperate with lighting systems, CCTV systems can link with fire alarm systems – and make these values available to BACnet and Modbus. This technology enables different sub-systems within a building to be fused together to form a single, coherent system.

## Controlling

ObVerse is North's graphical cause-and-effect language. It is available in all North controllers. It is easy to use, provides real flexibility during engineering, and allows access to values within any connected third-party system. Date and timer functions are included, along with feedback control and logic.

## Informing

Commander communicates with all North products – including ObSys with its powerful display and engineering tools. Commander also generates and serves HTML web pages automatically - these provide a consistent user display on all browsers, including those on mobile devices. Commander can even send alarm notifications to your email server.

# Interfacing

Commander has an Ethernet port and two serial ports, which can be configured to use different protocols – these then allow values within the external systems to be accessed.

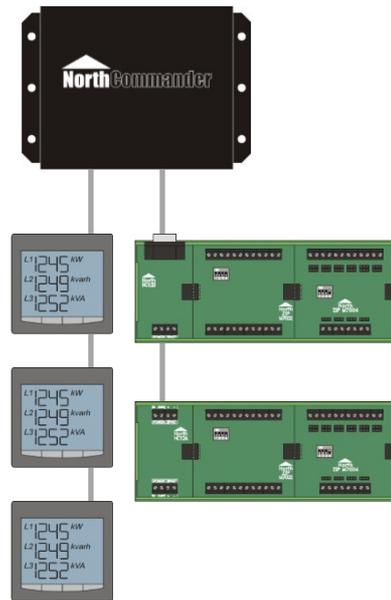
A range of different systems is supported, including:

- HVAC controls and packaged air-conditioners
- Lighting and signage
- Fire detection and suppression
- Power meters, UPS, and generators
- CCTV, security, and access control
- IT and other enterprise systems
- Data acquisition
- Home automation including audio-visual equipment

Third-party systems can also access values from within Commander, using a range of standard communication protocols, including BACnet/IP and Modbus/IP.

As well as supporting third-party systems, Commander can connect to North’s networked input-output system, Zip, and access extra sensors and actuators directly.

Commander comes with a set of drivers installed for immediate use, but more can be downloaded.



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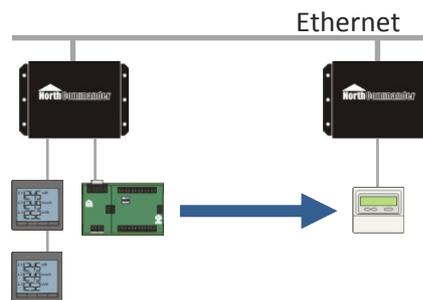
*Commander can connect with two Zip Networks and support BACnet simultaneously – producing a **320-point BACnet controller***

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# Integration

Commander is easily configured to transfer values from one system to another. These systems can be connected locally, or to other North devices located elsewhere.

Frequency of individual transfers can be set, with important information taking priority – all of this requires no programming ability whatsoever.



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***Save more energy** – collect occupation data from the lighting system and transfer it to enable individual heating/cooling units*

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# Controlling

## Time Control

The calendar and timers within Commander provide timed on-off control to other devices, based on Commander's real-time clock. The clock automatically deals with the daylight-saving/summer time changes, and can be synchronised using Network Time Protocol (NTP).

Commander's calendar is used to specify day-types for each day of a standard week as well as exception dates throughout the year. Each of Commander's timers has a different profile for use on particular day-types, with each profile supporting up to five on-off periods.

Besides being accessible from other North devices including ObSys PC software, the end-user can adjust both the calendar and the timers via password-protectable web pages.

Standard Week						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
						Next
January 2013						
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			
February 2013						
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			



**Improve efficiency** - timer outputs can be transferred to any system that does not have a clock function

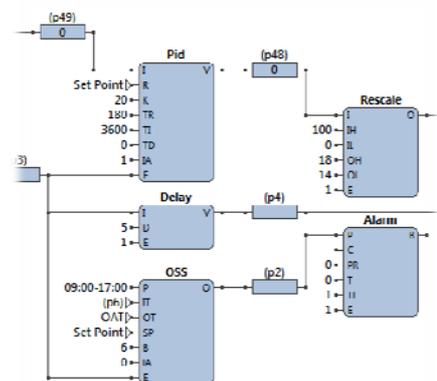
## Programmable Control

Commander supports ObVerse, North's 'cause-and-effect' language.

Standard modules include PID, optimum start and stop, logic, maths, and data-access within third-party systems.

ObVerse is common to all North controllers and is created within the graphical click-and-drag environment of ObVerse Editor. Strategies can be pre-tested offline if necessary.

ObVerse Editor also has a 'watch' facility, which allows the engineer to monitor strategy in real-time; the engineer can also set values to check strategy operation.



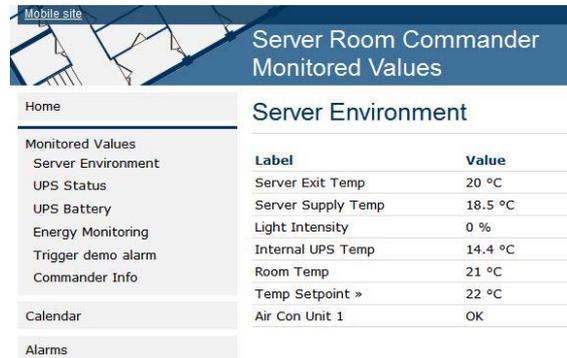
# Informing

## Web Server

Commander's web server can display values from different third-party systems on the same page, in a common format - simply select which points you wish to display.

The web pages are pure HTML, and work with all modern browsers, including those within mobile devices.

Page viewing and value adjustment can be password-protected – Commander can support hundreds of end-user passwords, which are also available to attached systems for security clearance. Timers, transfers, and ObVerse strategy can be used to enable individual users, and groups of users.



Server Environment	
Label	Value
Server Exit Temp	20 °C
Server Supply Temp	18.5 °C
Light Intensity	0 %
Internal UPS Temp	14.4 °C
Room Temp	21 °C
Temp Setpoint >	22 °C
Air Con Unit 1	OK

## Alarms

Commander can receive alarm messages from some third-party systems, and can monitor individual values directly to generate alarm messages.

As well as keeping a first-in, first-out history of alarms, Commander also send selected alarm messages onwards.

Commander alarms can be:

- emailed to different end-users
- sent to other North controllers
- sent to Alarm Manager, a display application within ObSys

Individual alarm destinations can be enabled using timers, transfers, or ObVerse strategy.

## Next steps...

The Commander Tutorial is available on [www.northbt.com](http://www.northbt.com)

A cost-effective Commander Training Pack is available for use with the Tutorial, and is useful for demonstrations.

Hands-on training courses are available, covering Commander, Integrator, ObSys and Zip.



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