

AVIATOR

Intelligent Ventilation Control



FANTECH
Intelligent Ventilation

Tailored air movement control solutions

Fantech is committed to the ongoing development of innovative technologies that are designed to optimise indoor air quality and lower energy consumption. In addition, the continuous increase of energy prices is driving greater demand for cost effective systems that can deliver energy efficient buildings. These systems are helping to create healthier and more productive spaces while providing centralised system monitoring and remote diagnostics.

The innovative range of Aviator Control Systems is designed to monitor, and control one fan to a large system with multiple fans and sensors. Aviator controllers take advantage of the latest digital technology to ensure they can be tailored to suit the requirements of almost any ventilation application.

Aviator controllers can reduce on-site commissioning and installation time as they do not require specialised programming knowledge. Aviator is a flexible Demand Control Ventilation system that monitors the indoor environment and provides real time feedback from the fans. This adjusts the fan speed and modulates the ventilation rate to match the specific requirements of the area.

Fantech have an extensive range of Aviator controllers available to create purpose-built systems that meets the requirements of most ventilation applications.



Aviator Graphic User Interface



Aviator MINI



Aviator MAX



Aviator Touch PRO



Aviator Fan Interface Module



ComLink Repeater

ComLink

Aviator controllers utilise the Fantech ComLink system (RS485) to connect the controller, fans, variable speed drives (VSD) and sensors together. This intelligent system provides reliable three-wire communication between devices, simplified cabling and a greater level of system adjustment.





Carpark Ventilation mode

Aviator GUI modes of application

The Aviator GUI touchscreen interface is designed to adapt to the mode of operation once connected to the MAX or MINI controller. So whether it's a car park, HVLS or another ventilation application, the Aviator GUI interface will automatically display the appropriate application screen based on controller feedback.



Generic ventilation mode



HVLS fan mode in a Sports Stadium Environment



HVLS fan mode in a Warehouse Environment



Destratification mode in a Sports Stadium Environment



Destratification mode in a Warehouse Environment

Aviator MAX Controller

Ideal for Larger Commercial Applications

The Aviator MAX Controller is a tailored solution to efficiently manage large commercial car park ventilation applications. It has been developed to increase the energy efficiency of a carpark, while ensuring the ventilation output is optimised. Aviator MAX works in conjunction with JetVent fans, pollutant sensors, temperature sensors, VSDs, supply/exhaust fans and the Building Management System.

- AS1668.2 compliant atmospheric contaminant monitoring system
- Through fieldbus protocol, connect up to 50 EC fans, 16 Danfoss VLT drives, 50 sensors and 5 expansion modules
- Connect to either the 4.3" or large 7" graphic user interface (GUI)
- Analogue EC fans can be connected direct to the Aviator MAX controller or expansion boards
- Can be connected to a BMS for easy system monitoring; Modbus or BACnet
- Three mechanical switch board connections for Supply/Mixer/Exhaust fan groups with On/Auto/Off modes of operation
- Six demand zones and one fire zone operation
- Integrated Smoke detection system for quick shut down
- Purge timer with real time clock and run indicator alarm
- Includes up to 20 program schedules



Aviator 7" GUI

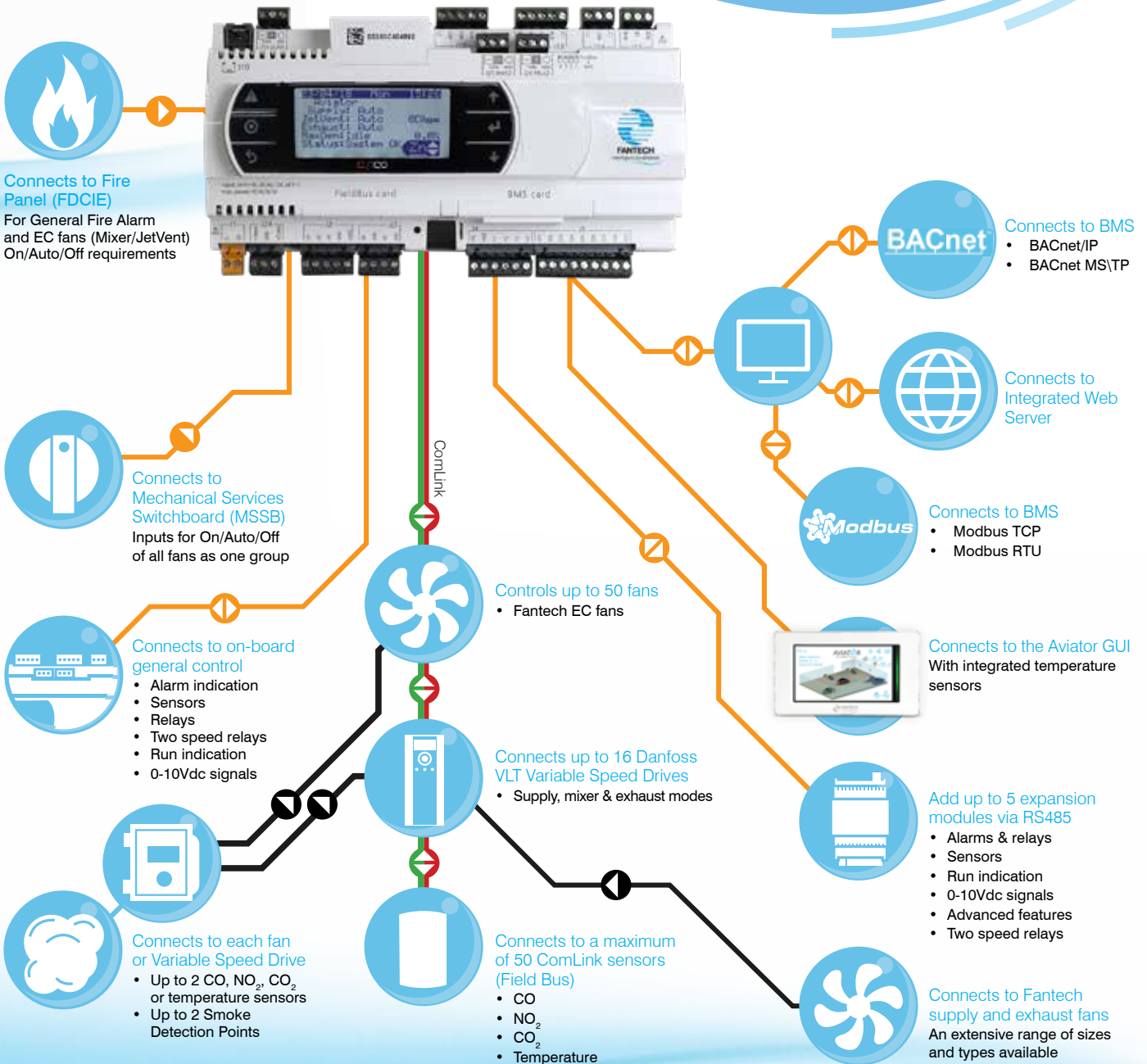
Large Screen for Easy Navigation

The Aviator 7" touchscreen features an intuitive and easy-to-use Graphic User Interface that works with the Aviator MAX and MINI controllers. It can be mounted up to 500m from the MAX and MINI, either on a mechanical service panel or within the control room.

- One 7" GUI can monitor up to 12 Aviator controllers separately
- Main screen summarises the system status and includes highest pollutant sensor monitoring
- Zone screens for each demand control area
- Individual screens for every fan and sensor that is connected
- Service setting and controller remote access screens
- Mechanical Services Auto/On/Off touchscreen control



Aviator MAX Control System Layout



Aviator MINI Controller

Ideal for Smaller Commercial Applications

The compact Aviator MINI is a tailored solution designed to efficiently control ventilation in small car parks, sports stadiums and warehouse facilities, and help maintain a high standard of air quality. It has been developed to increase the energy efficiency of these facilities, while ensuring the air mixing and ventilation requirements are optimised.

Aviator MINI works in conjunction with mixing fans, pollutant sensors, VSDs, supply/Exhaust fans and Building Management Systems. The MINI controller can be factory configured to match your application requirements.

- AS1668.2 compliant atmospheric contaminant monitoring system
- Connect up to 50 JetVent fans, 16 Danfoss VLT Drives, 20 Fieldbus Sensors
- Connect to either the 4.3" or large 7" graphic user interface (GUI)
- Can be connected to a BMS for easy system monitoring; Modbus or BACnet
- Three mechanical switch board connections for Supply/Mixer/Exhaust fan groups with On/Auto/Off modes of operation
- Six demand zones and one fire zone operation
- Integrated Smoke detection system for quick shut down
- Purge timer with real time clock and run indicator alarm
- Includes up to 20 program schedules



Aviator 4.3" GUI

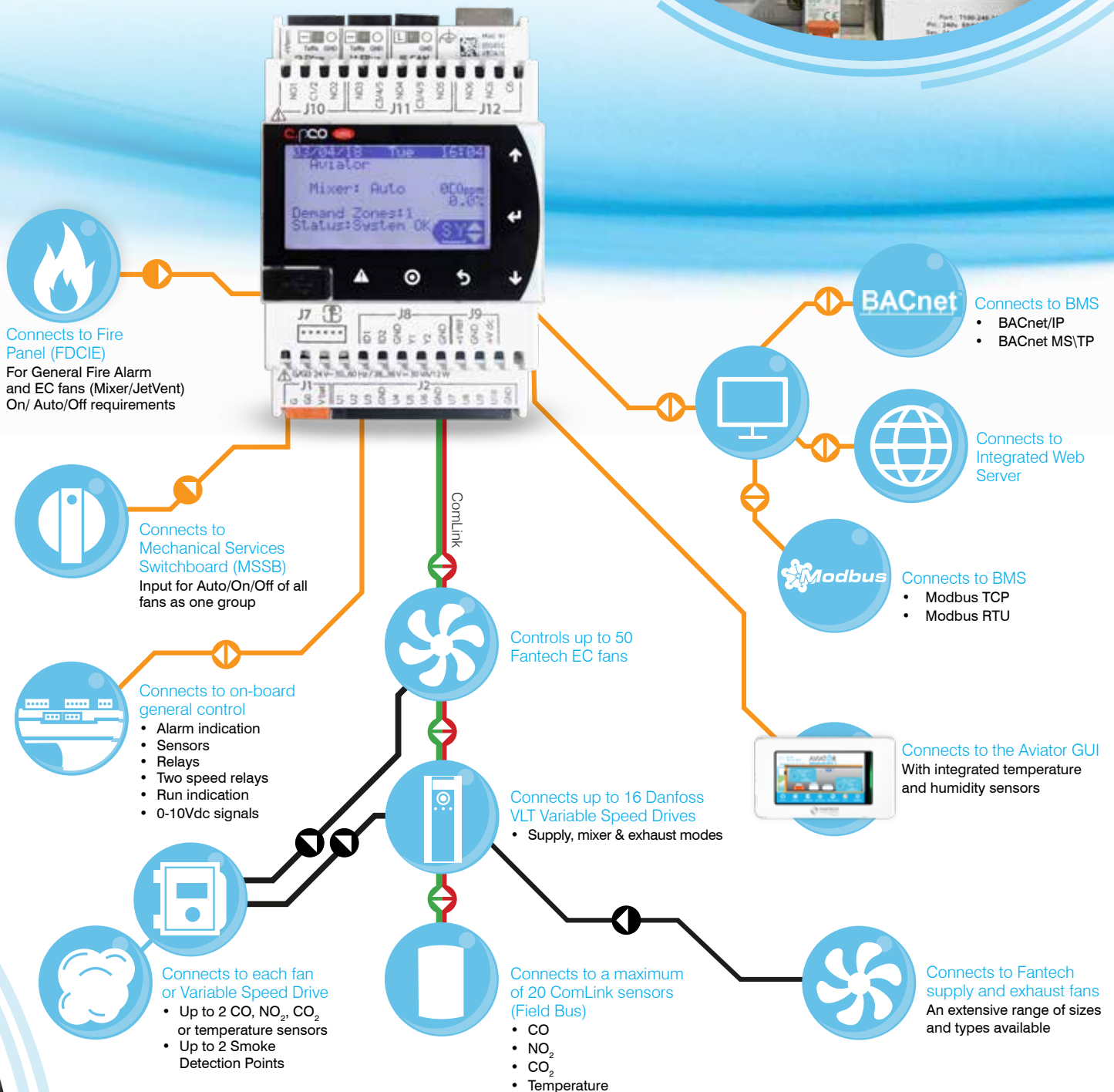
Easy to Use and Navigate

The Aviator 4.3" touchscreen has been designed to be an easy-to-use Graphic User Interface for the Aviator MAX and MINI controllers. Similar to the larger 7" touchscreen model, this Aviator 4.3" GUI can be mounted up to 500m away from the main controller.

- One 4.3" GUI can monitor one Aviator controller
- Main screen summarises the system status and includes highest pollutant sensor monitoring
- Zone screens for each demand control area
- Individual screens for every fan and sensor that is connected
- Service setting & controller remote access screens
- Mechanical Services Auto/On/Off touchscreen control



Aviator MINI Control System Layout



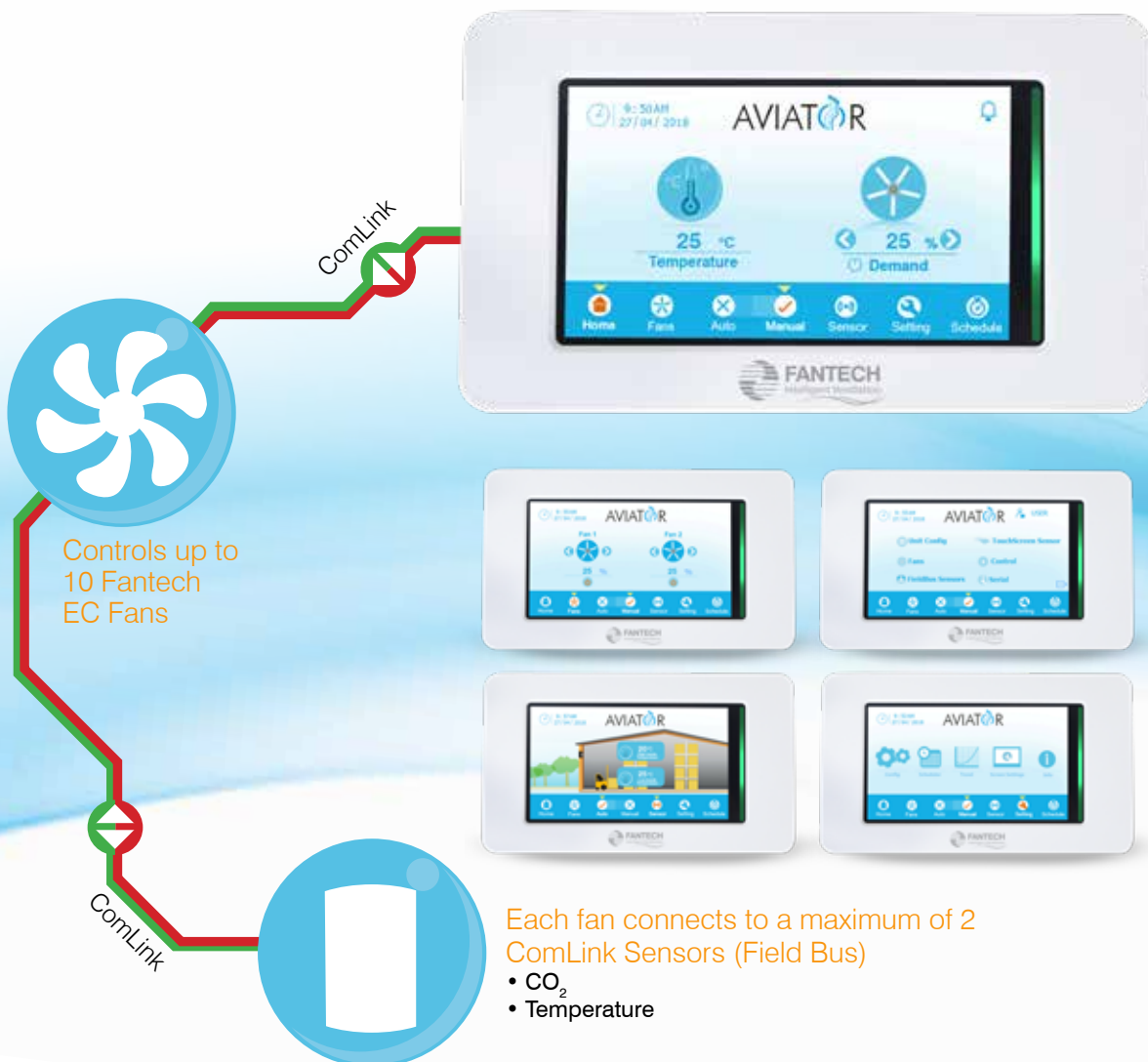
Aviator Touch PRO Controller

Easy to use and navigate

The Aviator Touch PRO features an intuitive graphic interface that makes it easy to use and navigate. It features a high definition 4.3" LCD touchscreen, and is ideal for most small to medium sized ventilation applications such as warehouses and sports pavilions.

It is designed to manage a small network of up to 10 fans and be connected to 2 Sensors. This innovative controller simplifies installation and comes factory preconfigured to suit the needs of specific applications. The Aviator Touch PRO can operate each fan individually or help drive a Demand Control Ventilation system.

- Compatible with CO₂ and temperature sensors
- Can manage one demand control zone
- 7 day scheduler enables set-up of operational periods
- Can be set in Demand Control or manual operation modes
- Includes air quality indicator light on front face
- Adjustable set points



Aviator Fan Interface Module

Add Smarts to an Analogue EC Fan

The Aviator Fan Interface Module is designed to add smarts to a basic analogue EC fan. It enables up to 50 analogue controlled EC fans to be connected to the Aviator MAX or MINI controllers utilising Fantech's ComLink system (RS485). Each fan can be individually speed controlled with RPM status and fault feedback. This module can also have two sensors connected using 4-20mA sensors directly.

- Communication Protocol: Fantech ComLink (RS485)
- Analogue Output: 0-10Vdc fan 1 & 2 control
- Digital Input (Tacho input): fan 1 & 2 monitoring
- Analogue Input for 2 sensors (4-20mA)
- Power supply included to power the interface and 2 sensors





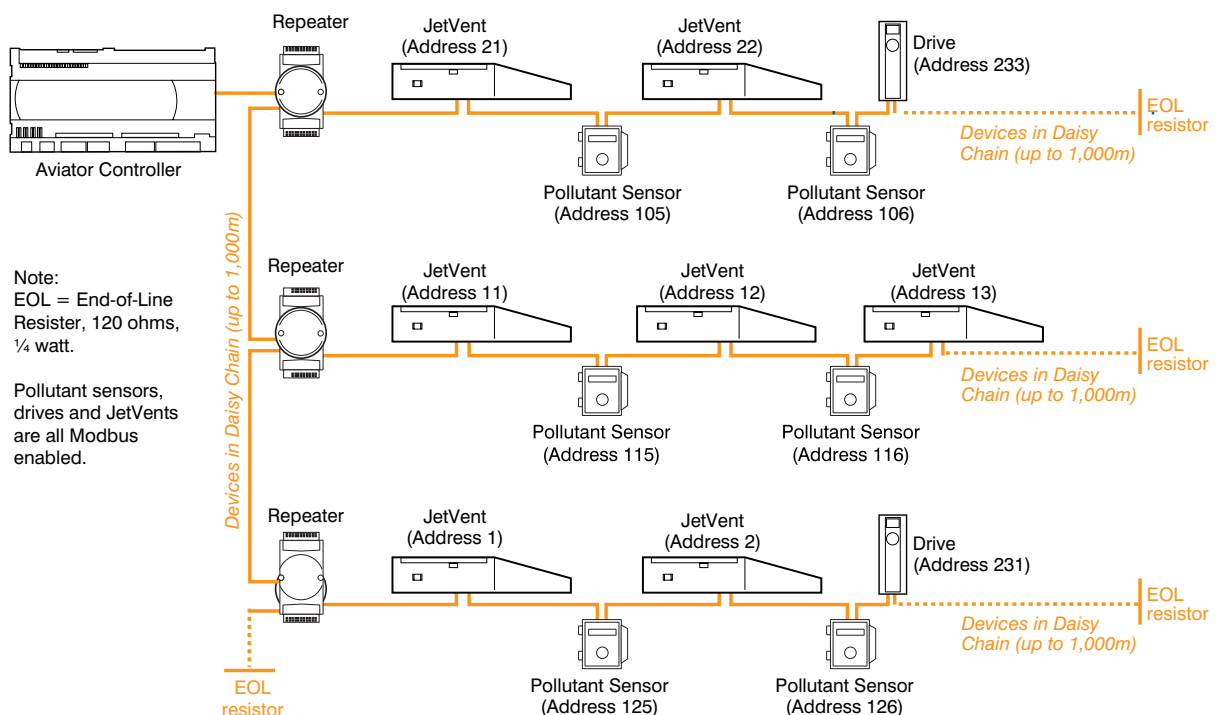
ComLink Repeater Module

Boost your RS485 Communication Network Distance

The ComLink Repeater Module is required to boost an existing RS485 communications network if greater than 1000 metres in distance or more than 32 connected devices. The module can also be used where the ComLink line branches off, such as a multi-level car park where one repeater is used per level for better noise suppression and a good quality communication signal.

- Automatic RS485 data flow control
- Surge protection RS485 data line
- Transmission speed up to 115.2 Kbps
- Use multiple modules to match the network distance and device amount
- LED indicator to monitor status

Example of 3 carpark levels



Select the Aviator Control System

	Description	Product Code
1 Select the controller	Aviator Max	DCV-CU-MAX1
	Aviator Mini	DCV-CU-MINI1
2 Select the BMS connection	Via Modbus TCP or RTU	N/A (std on controller)
	Via BACnet MSTP or IP	DCV-CPCO-LICENSE
3 Select an EC fan	Modbus onboard Interface Module Not Required	N/A (std on fan)
	Basic Interface Module Required	DCV-CU-FCPSU
4 Select a VSD	Danfoss VLT Micro VSD	FC51..
	Danfoss VLT HVAC Basic VSD	FC101..
	Danfoss VLT HVAC VSD	FC102..
5 Select the required sensors	4-20mA CO	DCV-LPT-TCO
	4-20mA NO ₂	DCV-LPT-END
	4-20mA Temperature	DCV-RHP-3N44
	4-20mA Temperature Outdoor	DCV-RHP-3S11
	4-20mA CO ₂ & Temperature	DCV-CDT-2N44
	0-10Vdc POT Controller	DCV-POT10K-WM
	Modbus RTU CO	DCV-GSTC-C
	Modbus RTU NO ₂	DCV-GSTC-N
	Modbus RTU CO ₂ & Temperature	DCV-CDTA-2N000
6 Select the required accessories	Touchscreen 7" GUI	DCV-CU-GUI7TS
	Touchscreen 4.3" GUI	DCV-CU-GUI
	Expansion Module (Max Only)	DCV-CU-EXPENSION1
	Modbus Repeater	DCV-CU-REPEATER1
	Smoke Sensor	JIEC-SMOKESENSOR
	Smoke Ceiling Base Plate	JIEC-SMOKEBASE



Aviator to BMS Integration

The Aviator can be easily mapped to a Building Management System (BMS) via the MAX or MINI controller.

The system offers a user friendly interface, webpage control via Ethernet, and a range of high level interface (HLI) options for Building Management Systems (BMS) including BACnet IP, BACnet MSTP, Modbus RTU, and Modbus TCP.

The Factory installed license (point 3) using BACnet IP is the best option as all of the variables are presented to the BMS with correct labels making the mapping very easy.



Fantech Pty. Ltd.

Victoria: (+61 3) 9554 7845
New South Wales: (02) 8811 0400
South Australia: (08) 8294 0530
Northern Territory: (08) 8947 0447
Queensland: (07) 3299 9888
Western Australia: (08) 9209 4999
A.C.T. (02) 6280 5511
New Zealand: (09) 444 6266



For sales enquiries contact:

Specifications and design subject to change without notice.