MX6000 Series
Multi Function Controller

- Single Ethernet 100Mb interface expands into six RS485 buses
- Directly controls up to six continuous particle counters
- Provides RS485 bus for Series 8000 Air Samplers
- Provides RS485 bus for Series 2000 Environmental modules
- Provides RS485 bus for Alarm Message Displays
- Provides RS485 bus for Watchdog Module

- Six independent RS485 communications interfaces
- Real Time Clock
- Micro SD card support
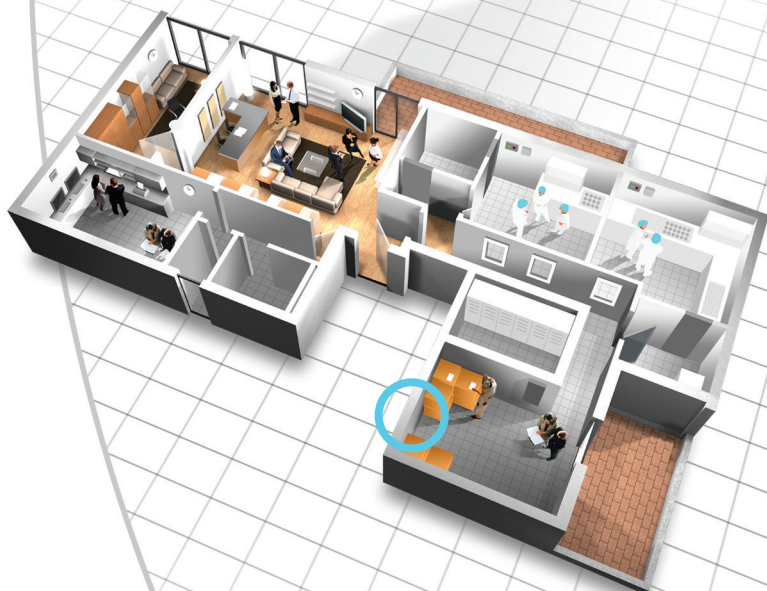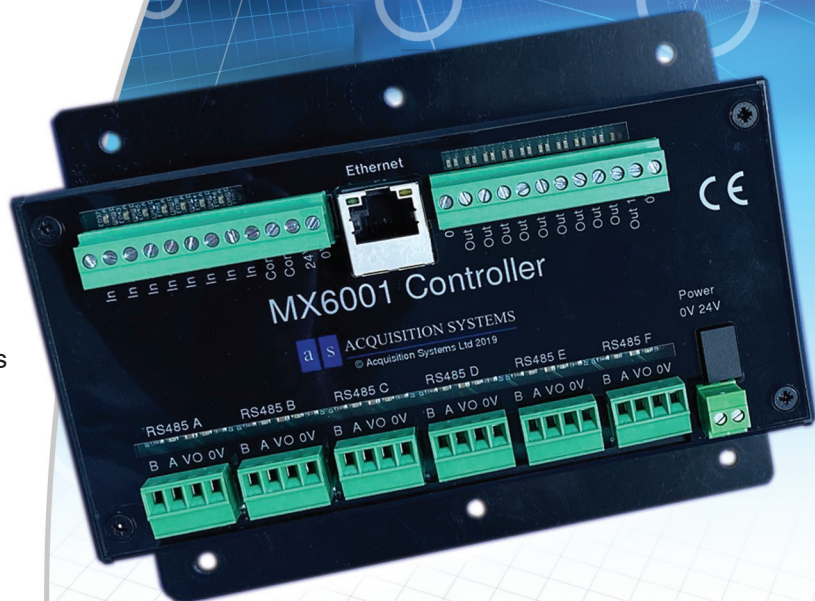- High performance ARM® processor

The MX6000 series provides unparalleled flexibility and functionality in a single compact module. By simply connecting a single Ethernet cable from the host PC and supplying 24Vdc power, this powerful module provides all the functionality to drive 'swappable' particle counters, alarm message displays, environmental inputs, Air Sampler controllers, a beacon stack and watchdog subsystems simultaneously.

A single physical Ethernet port expands into six physical RS485 serial buses. The RS485 buses appear within the host PC as virtualised COM ports and behave like local COM ports on the PC. Perfectly matched to enVigil FMS and enVigil PnP, this single module combines the functionality of an Ethernet Serial Device Server, multiple particle counter controllers and an alarm beacon interface. Available in two versions; one with screw terminals for the six RS485 buses and one with RJ45 connectors for the RS485 buses.
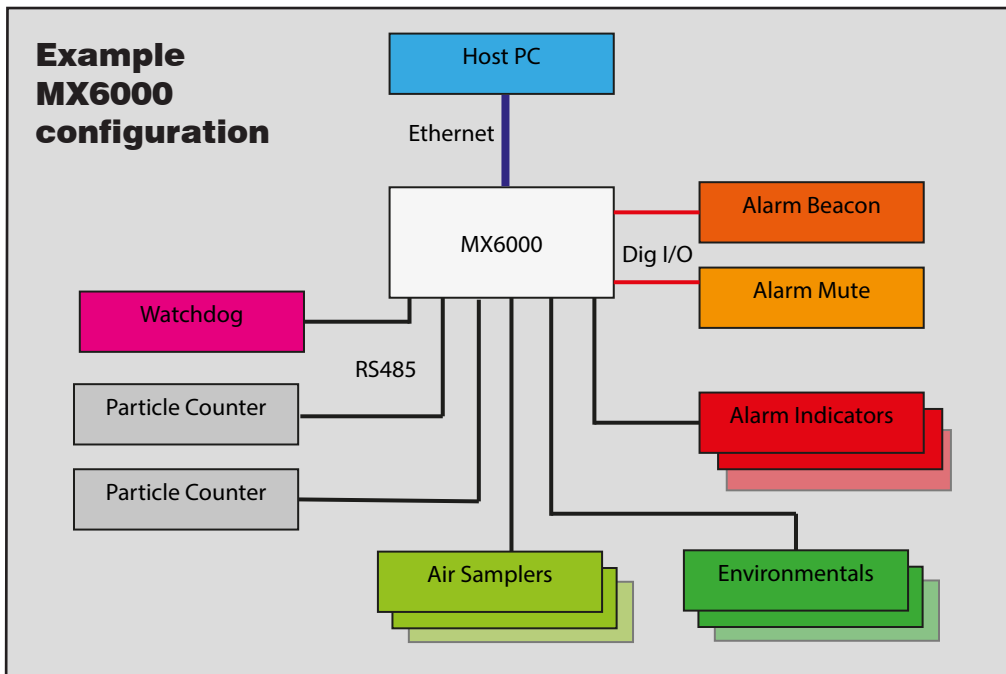
The MX6000 series supports up to six particle counters directly and offer an pass-through mode to additional MX6000 modules that act as expanders each supporting up to six particle counters. The pass-through mode automatically recognises serial protocol requests for particle counters beyond its local capability and transparently redirects them via Ethernet to the appropriate MX6000 module.

The on-board real-time clock and Micro SD storage make it possible for data to be logged local to the MX6000 during communications loss or failure of the host PC and results retrieved later via FTP.

MX6000 is configured using a utility that defines global settings such as IP address and selects the 'task' or function associated with each RS485 port.

Example MX6000 configuration

MX6000 Series Multi Function Controller Specification

- Digital Outputs
    6 outputs to drive contactors or solenoid valves for particle counter vacuum control
    4 outputs to drive alarm beacon red, amber, green and sounder
    All outputs provide 24Vdc current limited to 500mA

- Digital Inputs
    6 inputs to act as 'Run' demand for particle counters
    1 input to act as 'Mute' for alarm sounder
    All inputs are opto-isolated inputs (200V isolation)

- RS485 Interaces
    Six independent 2-wire RS485 Interfaces via RJ45 connectors (MX6000) or screw terminals (MX6001)
    Switched 24Vdc current limited supply for particle counter

- Ethernet interface
    Ethernet interface to host PC (100Mb)

- Power supply
    24Vdc ±10%, 50mA typical, plus loads being driven

- Additional features
    Real-time clock with battery backup
    Micro SD card socket supporting up to 2GB Micro SD cards for non-volatile configuration

- Flange mounting enclosure (High Impact Polystyrene, UL94-HB)
    W: 154mm
    H: 108mm including mounting flanges
    D: 20mm excluding connectors, 31mm including connectors
    Fixing centres: 118mm horizontally, 93mm vertically)

- Environmental
    Operating temperature 0 to 50°C
    Storage temperature -20 to 60°C

Ordering Information

- MX6000 Multifunction Controller Module with RJ45 connectors for RS485 interfaces
- MX6001 Multifunction Controller Module with screw terminals for RS485 interfaces