Product Handbook

SMART CLEANROOM CONTROLS

AUTOMATE OPERATIONS

EXTEND ASSET LIFE

SAVE TIME

REDUCE ENERGY CONSUMPTION

LOWER OPERATING EXPENSES

ENVIRCO®

Innovators in clean air technology

About ENVIRCO®

ENVIRCO® is a recognized worldwide leader in clean air products for the semi-conductor, microelectronics, medical device, pharmaceutical, biotechnology, hospital and laboratory markets. For more than 50 years, ENVIRCO® has been an innovator in clean air technology, enjoying a history of developing cutting-edge product breakthroughs that continues through today. Its reputation for product innovation and high quality has positioned ENVIRCO® to be at the forefront of many industry firsts, including the first low-power Fan Filter Unit (FFU) and the first commercial cleanroom. Whether an organization's needs involves the production of medical devices, pharmaceuticals, university research, nanotechnology science, semiconductors or other advanced technologies, ENVIRCO® products provide clean air environment that ensures the integrity of a sample or material. Within a medical and/or operating room setting, ENVIRCO® continues to build upon its reputation as the industry's first manufacturer of a laminar flow surgical suite, providing infection control to hospital rooms and staff and preventing the spread of airborne contaminants.

ENVIRCO's complete product line is rigorously tested and is renowned for providing an economical and energy efficient method for implementing a cleanroom environment, boasting ease of installation, operation and maintenance. Above all, ENVIRCO® products deliver high performance.

Service & Support

The ENVIRCO® combination of innovation and high quality clean air products is surpassed only by the company's superior service it offers customers to ensure the ENVIRCO® product/system they purchase meets their needs. Highly trained and experienced engineers provide superior life cycle support, from system design and installation to final performance testing and follow up.

Learn how ENVIRCO® cleanroom products and air filtration systems can help companies improve their bottom line by maximizing product yield, improving patient care and hospital staff safety and ensuring the integrity of laboratory research. Call 1.800.884.0002, email info@envirco.com, or visit www.envirco.com for more information.

ENVIRCO®

Innovators in clean air technology

Introduction

ENVIRCO® offers a complete family of control solutions providing machine intelligence to monitor and control clean room environments of all sizes - from small to very large.

Features

Various fan filter unit control options

» Single FFUs
» Mulitple FFUs organized in a zone
» Multiple zones, each independently managed
» Animated ceiling grids with touchscreen displays

Simplified setup and more flexible cleanroom operation

» Automated room-side fan speed setup and control
» EC motor control with RPM monitoring
» Automatic controls with integrated clock calendar
» Closed-loop runtime fan speed monitoring and control
» Remote control from outside cleanroom or off-site

Lowers clean room energy cost and operating expense

» Clock calendar sequenced FFU power ON/OFF
» Monitor and adjust airflow as needed
» Asset life extension from smarter FFU use
» Central monitor of particle counters, pressure transducers

Expanded and extended cleanroom control

» Door interlocking
» Event logging and reporting
» Automatic occupancy sensing
» Automatic alarms from multiple causes and fault sensors
» Performance logging supports as-needed maintenance
» Connectable to overall building management systems

Advanced Controls

ACC7152 Touchscreen

» 12.1" touchscreen display
» Controls up to 400 FFUs
» Ethernet option available
» Animated ceiling grid
» Closed Loop available
» Facility Optimization included
» Up to 24 PID loops

ACC7050/52 Touchscreen

» 5.7" touchscreen display
» Controls up to 400 FFUs
» Ethernet option available
» Animated ceiling grid
» Closed Loop available
» Facility Optimization included
» Up to 24 PID loops

Extended Controls

ACC7020/22 Console

» 2.4" monochrome display
» Keypad entry
» Supports 25 groups
» Controls up to 200 FFUs
» Ethernet option available
» Facility Optimization included

Small Auto Controllers

ACC7015/7016

» 2.4" LED display
» Keypad entry
» Supports five groups
» Controls up to 50 FFUs
» Designed for small systems
» Facility Optimization included

Small Manual Controllers

ACC1 Small System Series

» Seven-segment LED display
» Designed for small systems
  » ACC1-25 controls up to 25 FFUs
  » ACC1-125 controls up to 125 FFUs
» Menu-driven configuration options
» Communication, unit control, and system monitoring in one easy-to-use package

MDR16 Remote Mount

» Controls up to 16 FFUs
» Manual automatic control input
» LED provides visual feedback of FFU indexing as percentage of speed
» Internal jumper configurable control options
» Exclusively compatible with MAC10 IQ & LEDC FFUs

Single FFU Controllers

IR Remote

» Handheld controller for point and control - one FFU at a time
» Remotely adjusts outputs of ECM motor
» Maintains a constant airflow
» Flow index lamp flashes motor output
» Red status lamp motor power indicator
» Lamps/sensors may be mounted or remoted

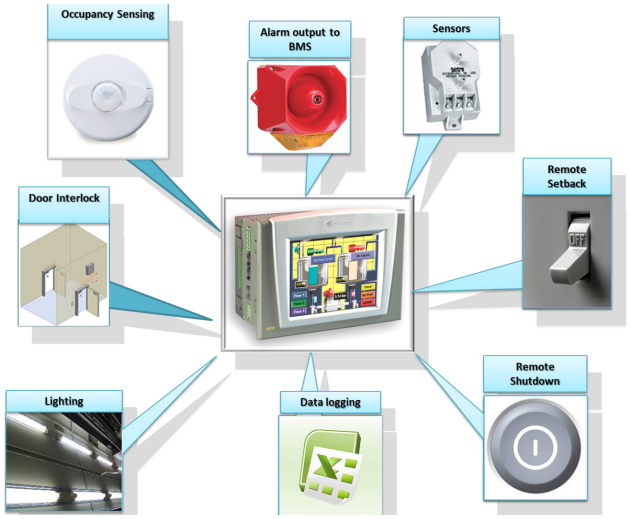
Capabilities

ENVIRCO Controls Functional Matrix		Interfaces and FFU Capability				Most Popular Features					Remote & Auto Control			Extended Features							Advanced Features		
		Serial Interfaces MODBUS-RTU	Max # of FFUs	Max # of Groups	Ethernet	Alarm Outputs	Set Speed Unit/Global	Communication Alarm	ECM RPM Monitoring	Fan Performance Alarm	Remote Shutdown	Remote Setback	Clock Calendar Conrol	Door Interlocking	Animated Ceiling Grid	Occupancy Sensor	Pressure, Temp Humidity	Particle Counters	Lighting Control	Exhaust Air Control	Data Logging	Building Management I/O	Closed Loop Auto Controls
Advanced Controllers	ACC7152 12.1" Touchscreen	2	400	50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ACC7052 5.7" Touchscreen	2	400	50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ACC7050 5.7" Touchscreen	2	400	50			✓	✓	✓	✓			✓	✓	✓						✓		
Extended Controllers	ACC7022 2.4" Mono Display	1	200	25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓			
	ACC7020 2.4" Mono Display	1	200	25		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓				
Small Auto Controllers	ACC7016 2.4" LED Display	1	50	5		✓	✓	✓	✓	✓	✓	✓	✓										
	ACC7015 2.4" LED Display	1	50	5			✓	✓	✓	✓		✓	✓										
Small Manual Controllers	ACC1-125	1	125	1		✓	✓	Compatible with control card equipped FFUs															
	ACC1-25	1	25	1		✓	✓	Compatible with control card equipped FFUs															
	MDR16	0	16	1		✓	✓	J-Box sized controller exclusively compatible with MAC 10 IQ & LEDC FFUs															
Single FFU Controllers	IR Remote	0	0	N/A		✓	Handheld remote controller compatible with MAC 10 IQ & LEDC FFUs, one at a time																
	Remote DC CB	1	1	N/A		✓	Standalone control board and electrical control box for MAC10 IQ & LEDC FFUs																
	Remote AC CB	1	1	N/A		✓	Standalone control board and electrical control box for MAC10 Original only FFUs																

I/O Options

ENVIRCO Consoles have multiple input and output options available for a cleanroom builder to implement at a low cost. The actual sensors are supplied by the customer.

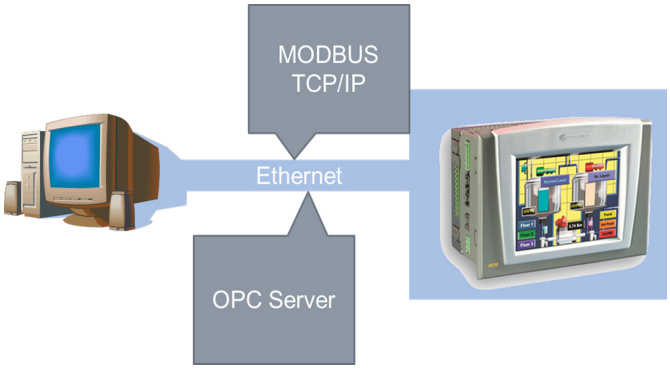
- Room control
- Occupancy sensing
- Remote setback
- Remote shutdown
- Alarm output to BMS
- Door interlock
- Analog sensors
  - 0-10VDC
  - 4-20mA
- Lighting control
- Data logging
- Clock calendar



Ethernet Options

ENVIRCO Consoles allow several Ethernet options to integrate with building management systems.

- Modbus TCP/IP
- OPC Server
- Remote Operator
- BACnet I/P (requires ACGW003)



Closed Loop Control Options

ENVIRCO touchscreen consoles **ACC7050/2 and ACC7152** can provide the following:

- Up to 24 Loops
- Input from either:
- Analog sensor directly into the Console
  - 0-10VDC
  - 4-20mA
  - 0-20mA
- Connected to AirCare Motor controller
  - 0-5VDC

Typical sensors include but not limited to:

- Pressure
- Temperature
- Humidity
- Particle count
- CLIMET CI-3100
- TSI 7301 and 7501
- LIGHTHOUSE 3104

Particle counters can also be tied using MODBUS RTU or MODBUS TCP (sensors supplied by others).

Panel Box Options

Material	Item No.	Size	For Units
Polycarbonate Wall Mount	ACPNL01	10x8x2	ACC7020/22
	ACPNL02	12x10x4	ACC7050/52
	ACPNL04	14x12x6	ACC7152
Steel Flush Mount	ACPNL03	16x12x4	ACC7050/52
	ACPNL05	24x20x4	ACC7152
Stainless Steel Wall Mount (Pharma)	ACPNL06	14x12x6	All Consoles
Stainless Steel Flush Mount (Pharma)	ACPNL07	20x14x4	All Consoles

Clean air solutions built for you.

MORE INFORMATION AVAILABLE AT WWW.ENVIRCO.COM

Industrial

Cleanroom Products

- MAC 10® Original
- MAC 10® IQ™
- MAC 10® IQ™ LAF
- MAC 10® LEAC™
- MAC 10® LEAC2™
- MAC 10® LEDC™
- Ducted Ceiling Module: DCM & DCM-RSR
- AC or DC Control Systems
- MAC-T Ceiling Grid System

Hospital & Healthcare

Hospital & Healthcare

- IsoClean® and IsoClean with Ultraviolet Light
- Hospi-Gard AirCeil®
- Hospi-Gard® Room Pressure Monitor

Enviramedic Products

- Horizontal Flow Enclosure (HOR)
- Horizontal Flow Surgery Room (HCF)
- Vertical Flow Surgery Isolator (VOR)

Pharmaceutical

Pharmaceutical & Medical Device

- Unimodule M2 Vertical Laminar Flow Workstation
- METD 100% Exhausted Vertical Flow Workstation
- Laminar Downflow Module

Laboratory & Research

Laboratory & Research

- Unidirectional Flow Horizontal Flow Bench (LF)
- Table Top Horizontal Flow Clean Bench (TT)
- EnviraLab Sterility Module (ESM)

ENVIRCO® MAC 10® is a registered trademark of ENVIRCO®, USA. Specifications subject to modifications or changes without notice. US patents 4,560,395 and 5,470,363. Other patents issued and pending in foreign countries.

Provided by Your Local ENVIRCO® Representative:

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