FleXNet™

Description

Mircom's FleX-Net Series is a powerful intelligent networkable fire alarm solution designed with many levels of flexibility to meet virtually any application of detection, control, notification and emergency communications. Features such as fire detection & alarm, audio/voice evacuation, BACnet, Boolean logic, networking and graphical work stations allow this modular solution to accommodate the simplest systems up to the most complex solutions

With the addition of the Advance Protocol (AP), Fire/CO detection and 520 Hz support on both the addressable loop and through the audio/voice evacuation, Mircom's FleX-Net is poised to take you even farther into the future with expanded capabilities..

Designed for peer-to-peer network communications, the FX-2003-12NDS allows for a maximum of 63 nodes, while providing reliability, flexibility and expandability.

Each base panel consists of one intelligent signaling line circuit (SLC) capable of supporting 159 analog Sensors and 159 addressable modules. In addition the base panel includes Four Style Z/Y (Class A/B) Notification Appliance Circuits and an easy to read and use, large 4 x 20 back-lit alphanumeric LCD display.

The network configuration allows the FX-2003-12NDS control panel to be connected to a Mircom network to provide additional input circuits, visual zones, programmable notification appliance circuits, and relays. The network interface module allows the panels to communicate on a peer-to-peer network via a Proprietary Arcnet Network Communications protocol.

Features

Fire Alarm Control

- 1 SLC loop expandable up to 9
- Each SLC Loop is capable of supporting 159 Analog Sensors and 159 Addressable Modules which can be wired in Style 6 or 7 (Class A) or Style 4 (Class B)
- Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each
- System has the ability to mix CLIP and AP devices on the same loop
- Large easy to use and readable 4 by 20 character Back-lit LCD Display
- English, French, Arabic* and Hebrew* language support (*supported by RAXN-LCDG Annunciator in place of main display)
- Correlatable Switch Inputs which allow for multi-functional outputs
- Four Status Queues for Alarm, Supervisory, Trouble and Monitor
- Auxiliary relay contacts for Common Alarm, Supervisory and Trouble
- Group bypass with built-in false alarm prevention technology
- RS-232 output for remote system printer or CRT
- Two Event History Logs; 6000 event alarm history log and a 6000 event log for all events
- Supports 3 configuration files with "hot swap" support
- Conventional Hardwire Adder Module expandability
- Built-in Walk Test operation
- Canadian Two Stage operation
- Provision for two programmable modules
- Configurable for Coded Operation
- Intelligent Smoke Detector sensitivity levels
- 3D graphical monitoring and control using Mircom's Open Graphic Navigator™
- BACnet support
- Advanced (Boolean) logic functions
- Built-in Ethernet port
- Remote diagnostics via a built-in web server
- Audio/Voice Evacuation with 520Hz capability
- UL listed for Smoke Control
- HVAC Fan and Damper Control

Network Features

- Up to 63 nodes
- Peer-to-peer network communications
- Style 4 (Class B) or Style 6 or 7 (Class A) wiring configuration
- Proprietary Arcnet Network Communications protocol
- Supports copper and/or fiber optic network cable

UL S7010   ULC S7010   7165-1477:111   NYC Fire Dept. COA# 6064   FM APPROVED

CATALOG NUMBER
5941

FleX-Net™ FX-2003-12NDS Network Series Fire Alarm Control Panels
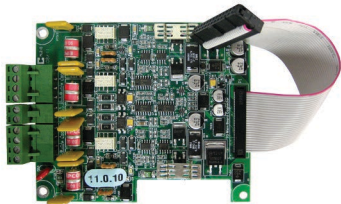

UB-1024DS   DOX-1024DSR

FX-2003-12NDS Compact Network Main Control Unit

The FX-2003-12NDS Compact Network Main Control Unit complete with one Intelligent Signaling Line Circuit (Style 4, 6 or 7), Four Style Z/Y (Class A/B) Notification Appliance Circuits rated at 1.7 Amps each, a 4 line by 20 character back-lit LCD display and a 12 Amp Power Supply. The FX-2003-12NDS provides space for the FNC-2000 Network Controller Module, two internal adder modules and two programmable modules.

UB-1024DS Universal Backbox

The UB-1024DS Universal backbox houses the FX-2003-12NDS and provides space to mount up to 17 AH batteries. A DOX-1024DS(R) door is ordered separately.
Dimensions (minus built-in trim ring): 26"H x 14.5"W x 4.2"D

DOX-1024DS(R) Door

The DOX-1024DS mounts on the UB-1024DS backbox. The door features the universal CAT-30 lock and is available in a white (DOX-1024DS) or red exterior (DOX-1024DSR).

Adder Loop Controller Modules
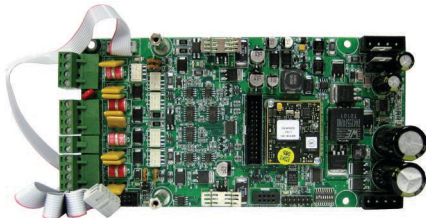
ALCN-792M Quad Loop Controller Module

The ALCN-792M Quad Loop Controller Module provides two Signaling Line Circuits (SLC) to the FleX-Net system consisting of 159 Analog Sensors and 159 Addressable Modules per loop. The ALCN-792M can be expanded with the use of the ALCN-792D Daughter Board Module. The ALCN-792M occupies one module slot.

Fire Network Controller Modules

FNC-2000 Fire Network Controller Module

The FNC-2000 provides network capability to the FX-2003-12NDS panels. One Fire Network Controller Module is required per network node panel. In addition the FNC-2000 provides an interface for adding an optional FOM-2000-SP Fiber Optic Network Adder Module. The FNC-2000 mounts in the FX-2003-12NDS.

FOM-2000-SP Fiber Optic Network Adder Module

The FOM-2000-SP Fiber Optic Network Adder Module allows for the use of fiber optic cabling on the FleX-Net Series panels. It seamlessly connects to the interface on the FNC-2000 Fire Alarm Network Controller Module.
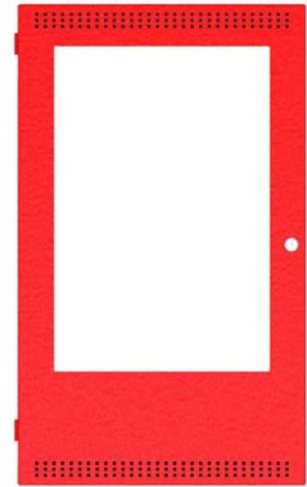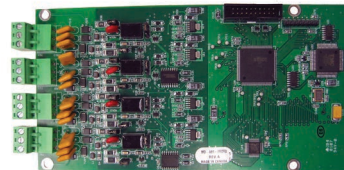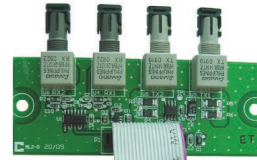

ALCN-792D Daughter board for Quad Loop Controller Module

The ALCN-792D Daughter Board provides an additional two SLC loops when connected to the ALCN-792M Quad Loop Controller Module. The daughter board mounts on top of the ALCN-792M.

Electrical Specifications

|	
Primary Input Power	120V 60Hz / 240V, 50Hz 4 Amps / 2 Amp (primary)
Power Supply Ratings	12 Amps. max. (secondary)
For NAC Circuits	24VDC unfiltered, 10 Amps. max.
Battery Type	24VDC, Gel-Cell/Sealed Lead-Acid
Battery Charging Capability	17-65 AH batteries

Adder Hardwire Modules
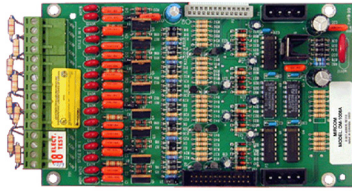
DM-1008A Eight Initiating Circuit Module
The DM-1008A provides 8 Style B (Class B) or 4 Style D (Class A) Initiating Circuits configurable for Alarm, Supervisory or Trouble zones. The DM-1008A occupies one module slot in the FX-2003-12NDS.
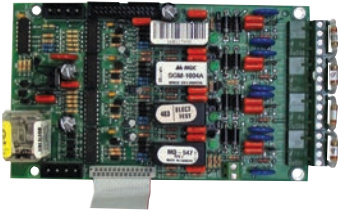
### SGM-1004A Four Notification Appliance Circuit Module
The SGM-1004A provides 4 Style Z/Y(Class A/B) Notification Appliance Circuits configurable as Silenceable or Non-Silenceable. Each NAC circuit is rated at 1.7 Amps. The SGM-1004A occupies one module slot in the FX-2003-12NDS.
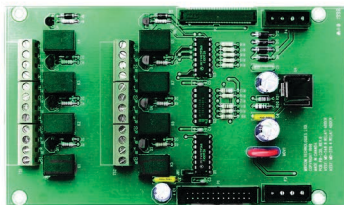
RM-1008A Eight Relay Circuit Module
The RM-1008A provides the FX-2003-12NDS with eight individual configurable relays per module. Each relay provides one Form C contact rated at 28 VDC @1 Amp (resistive load) as well as a Green LED to indicate that the relay is active. The RM-1008A occupies one module slot in the FX-2003-12NDS.

Graphics Software
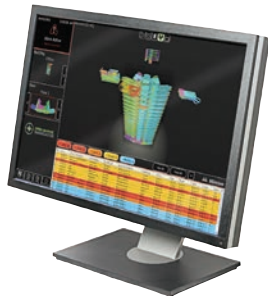
### Open Graphic Navigator (OpenGN)
Open Graphic Navigator (OpenGN) is a centralized fire alarm management system that provides building or campus monitoring. As a powerful integration tool, OpenGN allows operators to monitor remote sites from multiple workstations or smart phones located anywhere in the world. OpenGN displays monitored buildings and campuses in both 2D and 3D representations, and is highly customizable.

Adder Auxiliary Modules
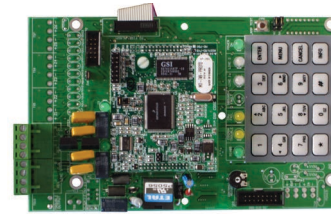
UDACT-300A Digital Alarm Communicator Module
The UDACT-300A Digital Alarm Communicator Module allows the FX-2003-12NDS to transmit addressable point information to a central station. The UDACT-300A occupies one module slot in the FX-2003-12NDS.
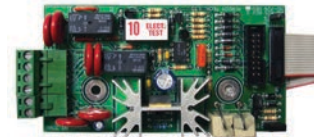
PR-300 Polarity Reversal/City Tie Module
The PR-300 Polarity Reversal/City Tie Module provides the system with a supervised City Tie (24 VDC/200 mA max.) and Polarity Reversal connection (24 VDC (open circuit), 8 mA max. (shorted)). The PR-300 occupies one module slot in the FX-2003-12NDS.

Programmable Modules

FDX-008 Fan Damper Control Module
The FDX-008 Fan Damper Control Module provides individually programmed circuits which can be used for fan or damper control. The FDX-008 connects to the main panel or the RAXN-LCD and occupies one display position in the FX-2003-12NDS, BB-1000 or BB-5000 Series enclosures.
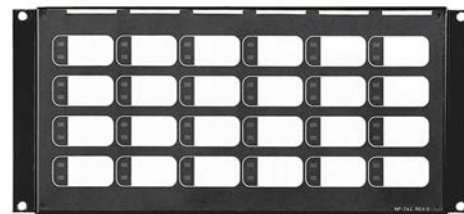
IPS-2424DS Programmable Input Switches Module
The IPS-2424DS provides 24 programmable switches that can be configured for ancillary functions such as zone bypass or added common control functions. The IPS-2424DS connects to the main panel or the RAXN-LCD when mounted remotely. The IPS-2424DS occupies one display position in the FX-2003-12NDS, BB-1000 or BB-5000 Series enclosures.

Remote LCD Annunciators
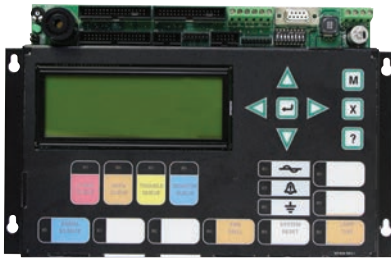
RAXN-LCD Remote LCD Annunciator
The RAXN-LCD Remote LCD Annunciator is equipped with a 4 line x 20 character back-lit LCD display that provides the same functions as the main display on the fire alarm control panel. The RAXN-LCD occupies one display position in the BB-1000 or BB-5000 Series enclosures.

RAXN-LCDG Remote Graphic LCD Annunciator
The RAXN-LCDG Remote Graphic LCD Annunciator is equipped with a 24 line x 40 character back-lit graphical LCD display that is used to display 9 events per page. Each event is displayed over 2 lines with 40 characte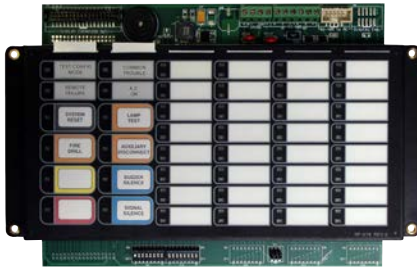rs per line allowing emergency information to be displayed in an easy to read format. The RAXN-LCDG occupies one display position in the BB-1000 or BB-5000 Series enclosures.

Remote LED Annunciators


RAM-1032TZDS Main Remote LED Annunciator
The RAM-1032TZDS Main Remote LED Annunciator provides common annunciator functions and 32 points of LED annunciation. The RAM-1032TZDS has indicators for A.C. On, Common Trouble and Signal Silence and controls for System Reset, Lamp Test, Fire Drill, Buzzer Silence and Signal Silence. The RAM-1032TZDS occupies one display position in the BB-1000 or BB-5000 enclosures.

RAX-1048TZDS Programmable LED Annunciator Module
The RAX-1048TZDS Programmable LED Annunciator Module provides 48 programmable bi-colored LEDs. The RAX-1048TZDS connects to the main panel or either the RAXN-LCD or RAM-1032TZDS when mounted remotely. The RAX-1048TZDS occupies one display position in the FX-2003-12NDS,BB-1000 or BB-5000 Series enclosures.

Graphic Annunciator Driver Modules
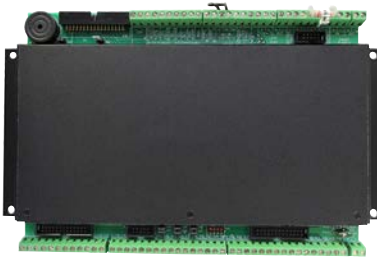
MGD-32 Master Graphic Driver Module
The MGD-32 Master Graphic Driver Module provides common control inputs for the common control switches such as System Reset, Signal Silence, Auxiliary Disconnect, Fire Drill, Lamp Test, Acknowledge and General Alarm. The MGD-32 can also drive up to 32 supervised outputs. These output points are capable of driving LEDs or incandescent lamps. The MGD-32 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures. An external power supply is required for incandescent lamps and lamp test.

AGD-048 Adder Graphic Driver Module
The AGD-048 Adder Graphic Driver Module can be used with the MGD-32 to support an additional 48 supervised outputs. The AGD-048 mounts in a graphic annunciator wallbox or in the BB-5000 enclosures.

Dimensions for Annunciator Module Enclosures

Model	Dimensions
BB-1001	9"H x 12.75"W x 1.2"D
BB-1002	18"H x 12.75"W x 1.2"D
BB-1003	26.4"H x 12.75"W x 1.2"D
BB-1008	33"H x 22.5"W x 1.25"D
BB-1012	45"H x 22.5"W x 1.25"D

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Typical FleX-Net™ FX-2003-12NDS Networked System Configuration

Node 1
FX-2003-12NDS in a UB-1024DS
backbox with a DOX-1024DSR door

RS-485

RAXN-LCD in a BB-1001R

Ethernet

OpenGN Graphics Software

Class 'A' (Style 7) wiring

Node 5
FX-2003-12NDS in a UB-1024DS backbox
with a DOX-1024DSR door

Node 2
FX-2003-12NDS in a UB-1024DS backbox
with a DOX-1024DSR door

Class 'B' (Style 4) wiring

RS-485

RAXN-LCD in a BB-1001R

Node 4
FX-2003-12NDS in a UB-1024DS backbox
with a DOX-1024DSR door

Node 3
FX-2003-12NDS in a UB-1024DS backbox
with a DOX-1024DSR door

RS-485

RAXN-LCD and
two RAX-1048TZDS
in a BB-1003R

Current Consumption

Model Number	Description	Standby	Alarm
FX-2003-12NDS	Network Compact Main Control Unit (12 Amp)	0.310	0.733
ALCN-792M	Dual Analog Loops	0.130	0.145
ALCN-792M/D	Quad Analog Loops	0.130	0.145
FNC-2000	Fire Network Controller Module	0.190	0.0190
FOM-2000-SP	Fiber Optics Module	0.015	0.015
DM-1008A	8 Initiating Circuit Module	0.080	1 zone active: 0.125 2 zone active: 0.170 4 zone active: 0.275 6 zone active: 0.370 8 zone active: 0.465
SGM-1004A	4 Notification Appliance Circuit Module	0.060	0.258
RM-1008A	8 Relay Circuit Module	0.025	0.150
FDX-008	Fan Damper Control Module	0.015	0.035
UDACT-300A	Dialer Module	0.045	0.120
PR-300	City Tie Module	0.035	0.300
RAX-1048TZDS	Adder Annunciator Chassis	0.022	1 zone active: 0.026 2 zone active: 0.030 3 zone active: 0.035 4 zone active: 0.039 48 zone active: 0.262
RAM-1032TZDS	Adder Annunciator Chassis	0.050	32 zone active: 0.300
MGD-32	Main Graphic Driver Module	0.035	1.6
AGD-048	Adder Graphic Driver Module	0.035	# of LEDs x 4mA
IPS-2424DS	Programmable Input Switches Module	0.010	0.015

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Ordering Information

Model	Description
Network Fire Alarm Control Panel	
FX-2003-12NDS	Network Compact Main Control Unit with 12 Amp power supply. Mounts in the UB-1024DS backbox.
UB-1024DS	Universal black backbox. Requires DOX-1024DS(R) door.
DOX-1024DS	White door for UB-1024DS backbox
DOX-1024DSR	Red door for UB-1024DS backbox
Network Controller Modules	
FNC-2000	Fire Network Controller Module
FOM-2000-SP	Fiber Optic Network Adder Module
Adder Loop Controller Modules	
ALCN-792M	Network Quad Loop Controller Module
ALCN-792D	Daughter board for ALC-792M Quad Loop Controller Module
Adder Hardwire Modules	
DM-1008A	Eight Class B (Style B) or 4 Class A (Style D) Initiating Circuit Module
SGM-1004A	Four Class A/B (Style Z/Y) Notification Appliance Circuit Module (Rated at 1.7 Amps per circuit)
RM-1008A	Eight Relay Circuit Module c/w eight form C relays (Rated for 28 VDC @ 1 Amp max. per relay)
Adder Auxiliary Modules	
UDACT-300A	Digital Alarm Communicator Transmitter/Dialer Module
PR-300	Polarity Reversal and City Tie Module
Remote Annunciators	
RAXN-LCD	Remote LCD Annunciator
RAXN-LCDG	Remote Graphic LCD Annunciator
RAM-1032TZDS	Main Remote LED Annunciator c/w 32 Bi-Colored LEDs
RAX-1048TZDS	Programmable LED Annunciator Module c/w 48 Bi-Coloured LEDs and 48 Trouble LEDs
Programmable Modules	
IPS-2424DS	Programmable Input Switches Module c/w 24 selector switches and 24 bi-coloured LEDs
FDX-008	Fan Damper Control Module
Enclosures for Remote Annunciators / Programmable Modules	
BB-1001	Remote Enclosure. Houses one module. Add suffix "R" for red door.
BB-1002	Remote Enclosure. Houses two modules. Add suffix "R" for red door.
BB-1003	Remote Enclosure. Houses three modules. Add suffix "R" for red door.
BB-1008	Remote Enclosure. Houses eight modules. Add suffix "R" for red door.
BB-1012	Remote Enclosure. Houses twelve modules. Add suffix "R" for red door.
Graphic Driver Modules	
MGD-32	Main Graphic Driver Module c/w 32 Supervised Outputs
AGD-048	Adder Graphic Driver Module c/w 48 Supervised Outputs
Graphics Software	
CONNECT-1	License for single node/panel, comes with XML Adapter software, up to 10,000 devices/objects
CONNECT-5	License for up to (5) nodes/panels, comes with XML Adapter software, up to 50,000 devices/
CONNECT-10	License for up to (10) nodes/panels, comes with XML Adapter software, up to 100,000 devices/objects
ENTERPRISE-120	License for up to (120) nodes/panels, comes with XML Adapter software, unlimited devices/objects
Accessories	
MGC NTWK SRVC KIT	New installation or service kit comprised of common cables, inserts and hardware.

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