



## DESCRIPTION

The 10-2482, RS485 Network Module provides an intelligent interface between networked Fike panels. The module allows up to 128 CyberCat™ or Cheetah Xi™ panels to be tied together, which allows global operation and monitoring of all points from any panel. Each panel to be tied into the network will need a Network Module installed to participate. The module mounts directly to the associated control panel circuit board using the following mounting hardware provided with the module.

Standoff Hardware Kit, P/N 02-12031

02-3794 Standoff, 1.25" F/F, 6/32 hex (qty. 4)  
02-1589 Screw, 6-32 x 0.375" Phillips (qty. 8)

## COMPATIBILITY

The RS485 Network Module is compatible with the following Fike control panels: CyberCat™ 254, CyberCat™ 1016, and Cheetah Xi™ Systems; however, there are some compatibility issues regarding the firmware revision level of the panel versus the firmware revision level of the network modules being utilized. See "Network Configuration Guidelines" for further details.

## SPECIFICATIONS

Current Consumption:  
50 mA in standby and alarm

Typical Voltage:  
Varies between 0-1 VDC. It should never be a constant voltage or 0 VDC

- P50 Terminal (removable):
- Network (A+, A-, SH, B+, B-)
  - Accepts 12-24 AWG
  - Max wire impedance 110Ω
  - Max capacitance 0.05 uF
  - Max Distance 4,000 ft. (1219 m) between each network panel; 128 devices max.
  - Power-limited and supervised

Recommended Wire:  
Belden 9841; for plenum applications use Belden 89841, Belden 82841 or Belden 82842 or equivalent

Dimensions (LxWxD):  
3.5" x 1.5" x 2" (8.9cm x 3.8cm x 5.08cm)

Weight: 0.10 lbs. (45 grams)

Operating Temp: 32°F to 120°F (0°C to 49°C)

Operating Humidity: 93% RH, non-condensing

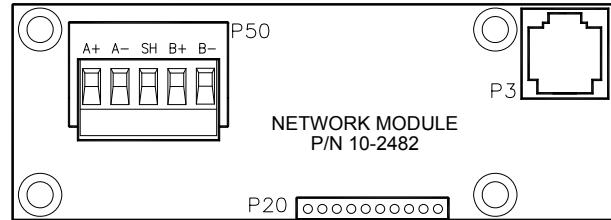


Exhibit 1 RS485 Network Module

## OPERATION

Custom messages from each panel will travel across the network to other panels by default. All network information is displayed in each panel's history. If the network module is programmed to participate in the zone active, it will also activate its local piezo and programmed outputs. Press F1 to locate the panel that created the event.

Switch Operation from each panel will travel across the network to other panels by default (Global switch operation). This allows the associated panel to be reset, silenced, acknowledged, or activation of drill function from any other network panel. If the network module is programmed as "Local" only, the associated panel will only respond to switch commands from the selected panels specified in the system configuration.

The network cabling can be run NFPA Class B, Style 4 or Class A, Style 7. Style 7 network cabling provides the greatest overall system reliability. If a break should occur in the Style 7 network cabling, the network will "mend" itself around the break and continue to operate normally with the network wire trouble noted as "System Trouble". If a break should occur when using Style 4 network cabling, the network will "mend" itself by forming two stand-alone networks. Any isolated panel will revert to stand-alone operation.

## PROGRAMMING

The Network Module can be programmed in the CyberCat™ and Cheetah Xi™ controller configuration or using C-Linx Software. Each network module must be configured as First, Middle or Last Device and can be given a Custom Message for each panel. Switches on each are configured as Global or Local. The Network Module configuration must also include configuration for the proper wiring method used (Style 4 or Style 7) and the zone(s) the networked panel is selected to participate in.

## MOUNTING

Exhibit 2 shows the acceptable mounting location on the main control board for the network module for reference purposes.

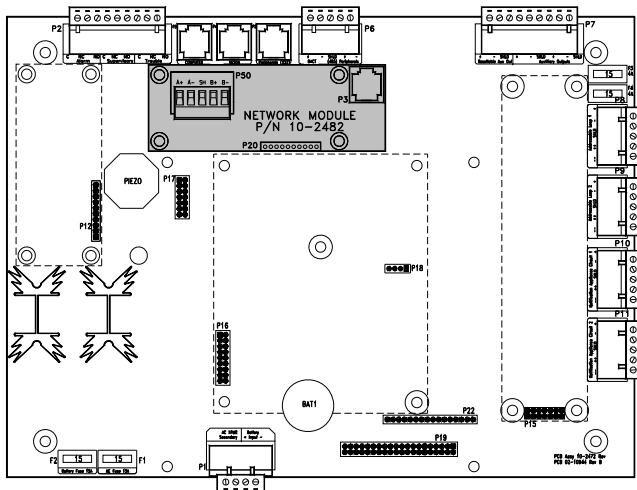


Exhibit 2 Network Module Installation (P20)

### CAUTION

The Network Module circuit board contains static sensitive components. Handle the electronics by the edges only and avoid touching the integrated components. Keep the electronics in the protective static bag it was shipped in until time of installation. Always ground yourself with a proper wrist strap before handling the module(s). If the installer is properly grounded at all times, damage due to static discharge will not occur. If the module requires repair or return to Fike, it must be shipped in an anti-static bag.

## INSTALLATION

1. If the system is already powered, disable critical functions; then power down system.
2. The CyberCat™ and Cheetah Xi™ require removal of the controller to install the Network Module. If the main controller is already installed in the back-box, remove it by disconnecting the field removable terminal blocks and removing the four hex nut/lock washers located in each corner of the board (qty. 4).
3. Carefully unpack the module and check for shipping damage.
4. Secure the F/F standoffs (qty. 4) to the main board by threading the four 6x32 screws through the back of the main board into the standoffs (See Exhibit 3). Make sure that the screws are not making contact with any of the electronic components on the circuit board.

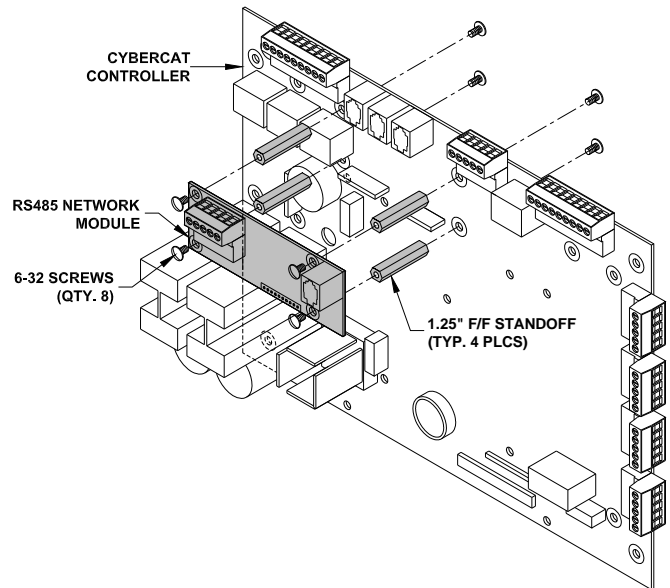
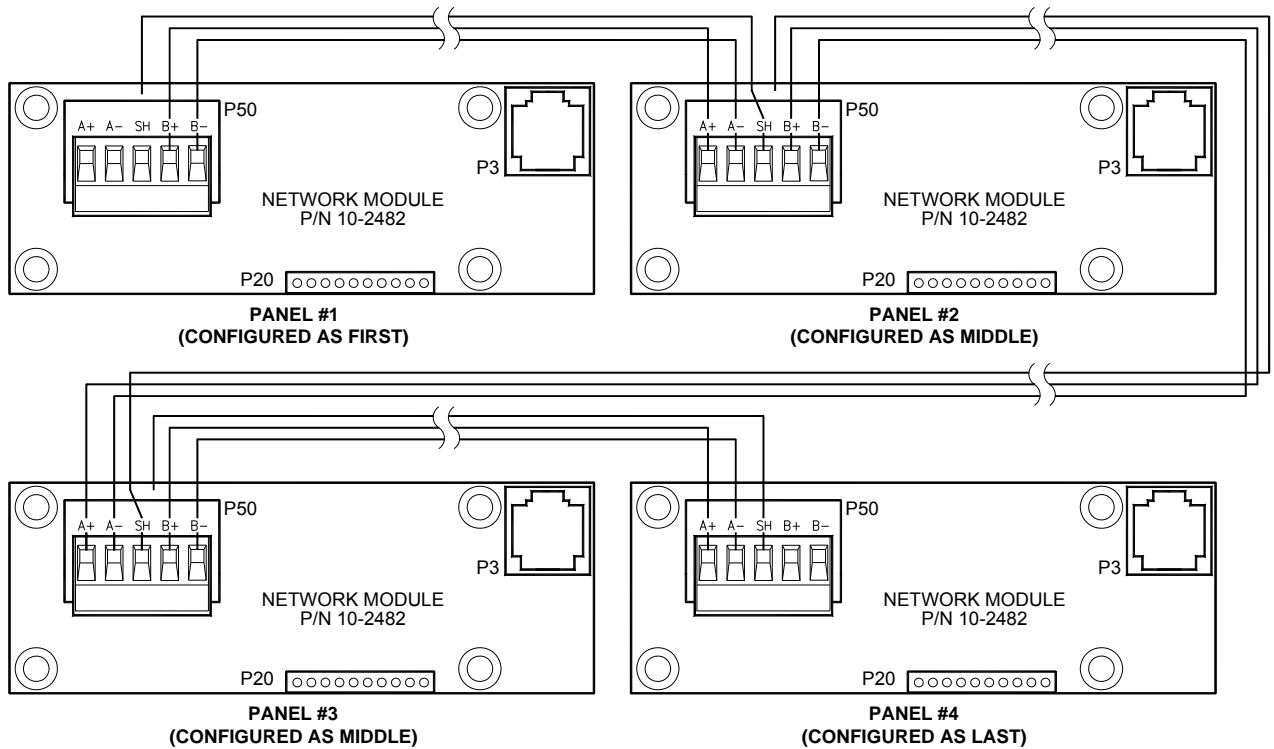
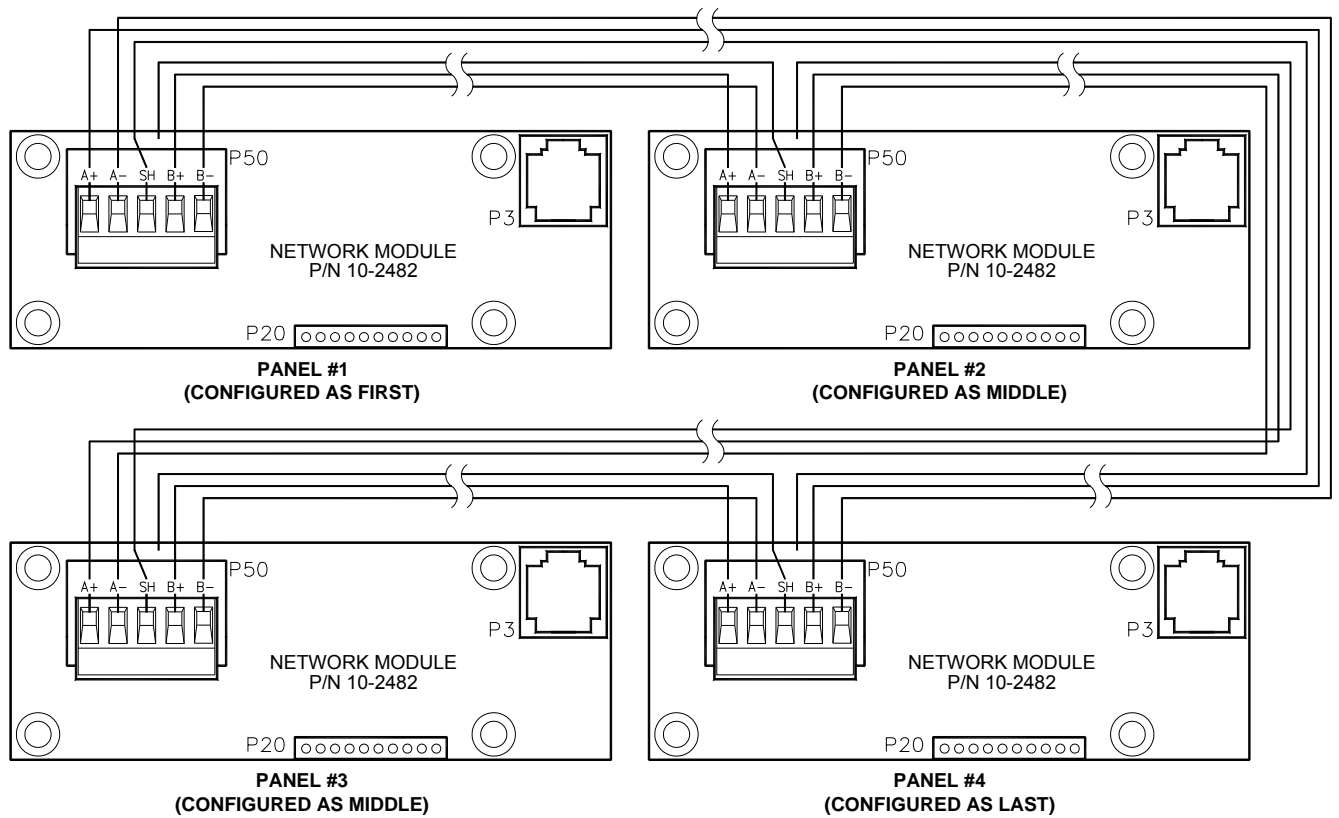


Exhibit 3 Network Module Mounting

5. Re-install the main board by aligning the four mounting holes with standoffs in the enclosure back-box. Secure in place with the four #6 hex nuts and lock washers.
6. Insert the module into the P20 header making sure that header pins are properly aligned. Secure the module to the F/F standoffs using four 6/32 screws.
7. Prior to connecting the network field wiring, power up the controller. Once each board has been successfully powered up with no troubles, power down and connect the field wiring.
8. Run and connect wiring between network nodes (See Exhibit 4 or 5). Verify that the wire run between each network device does not exceed the circuit wiring specifications for the network module.
9. Power the panel back up and complete the installation and checkout procedures for the system.



**Exhibit 4 Network Wiring Diagram – Style 4**



**Exhibit 5 Network Wiring Diagram – Style 7**

**Note:** No T-tapping is allowed on network circuit.

## NETWORK CONFIGURATION GUIDELINES

The following guidelines should be adhered to when configuring the panel network to insure proper operation:

1. The panel network should be built incrementally. This can be done by starting with a 2-panel, Style 4 network. After ensuring that the 2-panel network is operating correctly, add panels one at a time to the network, ensuring that each panel operates correctly prior to adding the next. If Style 7 wiring is required, it can be included/excluded at any point during the network installation.
2. **All panels in the network must have the same firmware version for proper operation.**
3. **All panels must use network cards with the same firmware revision level for proper operation.**
4. For network panels with firmware **Version 3.0 or lower**:
  - For Style 4 or 7 networks consisting of 5 or fewer panels, any revision network module can be used.
  - For Style 4 or 7 networks consisting of 6 or more panels, the 10-2482 network module with Revision F hardware and firmware Version 1.10 or higher must be used.
5. For network panels with firmware **Version 3.1 or higher**:
  - For Style 4 networks consisting of 5 or fewer panels, any revision network module can be used.
  - For Style 4 networks consisting of 6 or more panels or Style 7 networks, the 10-2482 network module with Revision F hardware and firmware Version 1.10 or higher must be used.
6. The FIRST panel should be used to do system-wide resets of other network panels. Set the network switch operation for Panel 001 to LOCAL. The network switch operation for all other panels should be set to LOCAL with ID 001 checked on the network switch ID.
7. The FIRST panel should be used to perform system wide supervision of the network. Set the panel supervision for panel ID 001 to include all panels on the network.
8. The FIRST panel (Network address 1, panel 001) should have its Network Module Type set to FIRST.

9. If the Digital Alarm Communicator Transmitter (DACT) is used in the system, it should be connected to the FIRST panel for complete network supervision.
10. All network panels must be wired and addressed in ascending order with the FIRST panel assigned to network address 001.

## TROUBLESHOOTING

If you are experiencing network problems, verify first that the wiring between the network module terminals is correct (See Exhibit 3 and 4). Next verify that the maximum wire impedance and capacitance along each wire run falls within the specifications for the wire type used.

Panel network troubles indicated on CyberCat™ or Cheetah Xi™ Controller include:

### NETWORK WIRE TROUBLE

Press F1 to obtain the location of the cable fault. Line 1 will indicate the REPORTING network connection (Isolated, First Dev, Middle, Last Dev). Line 2 will indicate the CONFIGURED network connection. Go to each networked panel and determine location for wiring trouble.

### NETWORK NO RESPONSE

Some wire faults, or failure of the network micro will cause the micro on the network card to stop communicating with the main board. Repair wiring or replace network card.

### NETWORK CLASS-A TRBL

A network card configured for Style 7 wiring has sensed an open in the cable back to main panel.

### PANEL MISSING

The main panel detects no communication from a panel it has been configured to supervise

**Note:** The FIRST panel may be reset twice after a wire break is repaired to ensure that all network panel event histories are cleared.