



1U Configuration



2U Configuration

Falcon FMS

Looking for maximum versatility and expandability? The Falcon Facilities Monitoring System (FMS) delivers. The FMS is a comprehensive monitoring system with extreme versatility that simplifies and consolidates monitoring of numerous types of signals and equipment. The FMS is commonly used to monitor equipment status and summary alarms as well as sensors for current, voltage, temperature, humidity, pressure, flow level, security, hydrogen, and more.

As a Web appliance, the FMS can be accessed, all points viewed, and relay outputs activated with a secure login from any Web browser or, with the optional modem, by dialing directly into the unit.

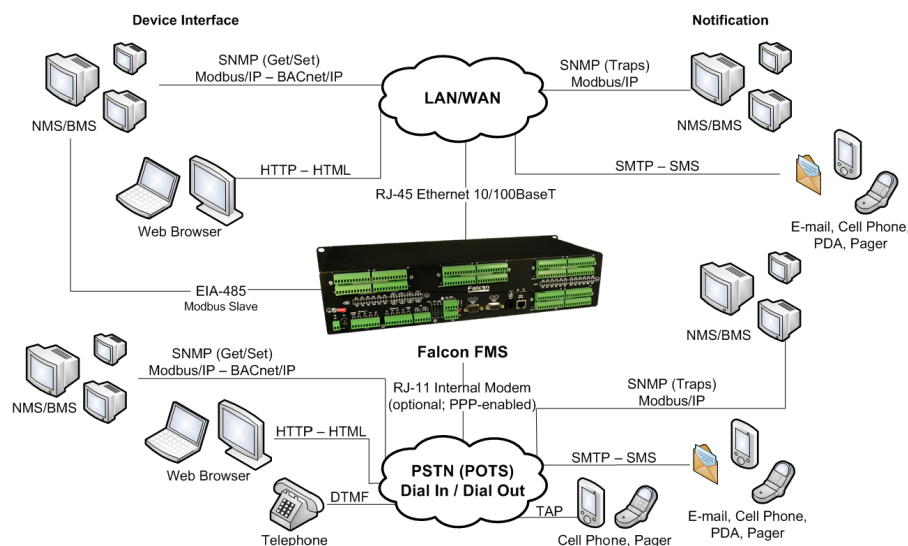
Inherent scalability and reliability make the FMS a proven monitoring appliance in organizations across many industries, including IT, healthcare, telecommunications, government, and education. Constant supervision of critical infrastructure and equipment helps to safeguard against damage and work stoppage.

Features

- Stand-alone, web-enabled appliance
- Highly scalable
- Accommodates digital, analog, and Modbus inputs
- Modbus, BACnet, and SNMP output
- Alarm notification via email, SNMP traps, pager, SMS/PDA
- Trending and extended logging
- Third-party sensor friendly, vendor neutral
- URL links enable web access to other locations and devices
- Support for SNMP V1, V2, and optional V3

Benefits

- Eliminates need for special software or hardware
- Optimizes investment and expands as facility grows
- Provides multiple paths for notification
- Allows for visibility over time without external software
- Integrates to existing site without additional equipment or software
- Provides one integrated view of all facility equipment
- Ensures additional security for Internet communication



FMS Communications Interface

Monitoring & Notification

FMS Specifications

Power	1U FMS: 24VDC Model: 24VDC (±10%), 1A max., power supply included; 48VDC Model: 36-72VDC, 0.5A max. 2U FMS: 24VDC Model: 24VDC (±10%), 2.5A max., power supply included; 48VDC Model: 36-72VDC, 1.25A max.
Inputs Analog/Digital Internal Temperature/Humidity Keypad	8 Configurable as 4-20mA (12-bit A/D conversion) or Dry Contact NO/NC (<25mA) ±0.5°F (@ 25°C), ±4°F (@ -40° to 185°F); ±3%RH (@ 20% to 80%RH); (Internal Temperature/Humidity optional) Standard 3x4; 3000VAC RMS optically isolated; 20 User Access Codes (also accessible via phone/DTMF through modem)
Outputs Relay Sensor/Accessory Power	2 Dry Contact, Form C, 1A @ 24VDC, 0.5A resistive @ 120VAC (controllable via user programmable logic) 24VDC (±10%) @ 300mA max. (power for external sensors and/or devices)
Expansion Cards EXP-A-24 or EXP-A-48 EXP-C-24 or EXP-C-48	1U accommodates 1 expansion card; 2U accommodates up to 4 expansion cards 24V Falcon requires EXP-x-24 option cards; 48V Falcon requires EXP-x-48 option cards 12 analog inputs (jumper selectable for 4-20mA, 0-5VDC or 0-10VDC) and digital inputs (non-isolated, individual ground only); 8 Form C Relay Outputs, 1A @ 24VDC, 0.5A resistive @ 120VAC 24 Digital Inputs, 3000VAC RMS optically isolated (common ground or individual ground)
Communication Ports Ethernet RS-232 RS-485 (selectable as RS-232) Modem (RJ11 Telco; optional)	10/100BaseT, RJ45 connector; 500VAC RMS isolation DB9 female connector; 9600 baud; 3000VAC RMS optically isolated; 15kV ESD protection Two-wire half duplex; terminal block (selecting RS-232 switches to DB9 male connector); 1200, 2400, or 9600 baud configurable; 3000VAC RMS optically isolated V.34bis/33.6 kbps; DTMF capable; PPP-enabled; FCC Part 68 approved; 1500VAC RMS isolation barrier; 2100V peak surge protection)
Protocols TCP/IP; UDP/IP; ICMP/IP; FTP; NTP; HTTP/HTML; SNPP; Telnet SNMP SMTP (email) Modbus Modbus/IP BACnet/IP Terminal Emulation TAP (Pager)	IPv4 1.1/4.0; up to 10 URL links to other IP addressable cameras/devices; webpages comply with Rehabilitation Act of 1973, sections 504 and 508, US Dept. of Education (website accessibility for computer users with disabilities) V1: MIB-2 compliant; NMS Manageable with Get, Set, and Traps; V2c: Traps or Informs Supports Client Authentication (plain and login); compatible with ESMTP Servers RTU transmission protocol; function codes: slave - 03; master - 01,02,03,04 Modbus Slave; TCP/IP transmission protocol; Reads up to 628 registers and converts to SNMP and BACnet Reads up to 106 instances and converts to SNMP and Modbus VT100 compatible Telocator Alphanumeric Protocol v1.8
Alarm Notification Pager (Modem) – Optional Email (Ethernet, Modem PPP) SNMP Traps (Ethernet) Escalation	15 text, numeric, or alphanumeric pager numbers; each digital and analog alarm (HighLimit and LowLimit) can notify any 5 of the 15 pagers 8 email recipients; email sent on Alarm and Return To Normal; each alarm can notify any or all of the 8 email recipients V1 and V2c: 8 Community Strings; V3 (optional): 4 users, 4 Trap Destinations Additional notification to 1 of the 15 pager numbers when the initial page results in a Failure To Acknowledge status
Health Check/Self-Monitoring	Self resetting; captured in Event Log
Internal Hardware Real Time Clock Memory	Battery backed; ±1.53 min/month accuracy 16MB RAM; 128K NVRAM; 16MB Flash
Logging Capabilities Alarm Log Event Log Web User Access Log Digital Status Log Trending of Analog Inputs	Last 256 Alarms Last 100 Events (e.g., Acknowledgement By Code, System Boot, Page Successful, etc.) Last 100 HTML Accesses (User, Date, and Time) Last 100 Digital Status entries 244 entries per time frame, per channel. High, low, and average values logged over specific minutes, hours, and days.
Extended Trending (Analog Inputs)	3,840 entries over 32 inputs, physical or over Modbus. Logging at defined, user-selectable intervals.
Login Security Web Browser Access (Ethernet, Modem PPP) Terminal Emulation Access (Modem)	1 Administrator plus 7 Users individually selectable for Read Only, Read/Write or Administrator 1 Administrator (password for Modem access)
Front Panel Interface	1 on/off power switch. Red and green LEDs indicate status, network link, network activity, and modem activity
Operating/Storage Environment	Operating temperature: 32° to 158°F (0° to 70°C). Humidity: 5% to 95% RH, non-condensing. Altitude: 15,000ft (4,572m) max. Storage temperature: -40° to 185°F (-40° to 85°C)
Dimensions and Weight	<u>1U FMS</u> : 16.8"W x 1.8"H x 7.9"D (427mmW x 46mmH x 201mmD); 6 lbs. (2.72kg) <u>2U FMS</u> : 16.8"W x 3.5"H x 7.9"D (427mmW x 89mmH x 201mmD); 10 lbs. (4.54kg).
Mounting	<u>1U FMS</u> : Rack mount, or wall mount (brackets required); WMB wall mount brackets (not included) <u>2U FMS</u> : Rack mount, or wall mount (brackets required); WMB2U wall mount brackets (not included)
Certifications	CE; ETL listed: conforms to UL STD 61010A-1, EN STD 61010; certified to CAN/CSA C22.2 STD NO. 1010.1; RoHS compliant



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