

# MultiLoad II

THE MOST FLEXIBLE AND FEATURED PLATFORM FOR LOAD RACK CONTROL



## MULTILOAD II LOAD RACK CONTROL PLATFORM

CONTROL 1-12 LOADING ARMS PER BAY

UP TO 5 METERS AND 16 ADDITIVES PER LOAD ARM

RATIO, SEQUENTIAL AND HYBRID BLENDING

MODBUS COMMUNICATION WITH KROHNE MASS METERS

WIRELESS COMMUNICATION OPTIONS



**Tiptech  
Systems**

# “Powerful and Flexible Options for Load Rack Control”



## MultiLoad II - Innovative Load Rack Control

Toptech's MultiLoad II suite of products offer the ultimate combination of usability, features and scalability. MultiLoad II was designed to improve the traditional preset model by offering a number of key benefits, such as: ease of use, powerful stand-alone operation, seamless integration with automation systems, near limitless scalability, and powerful features.

### Features

- Full Color LCD Display
- Division 1 and Division 2 Enclosures
- Alphanumeric Keypad
- Integrated Card Reader Options
- Automatic Temperature and Pressure Correction
- Control up to 12 Arms per Bay
- Multi-lingual Support
  - » Mandarin, English, French, Portuguese & Spanish
- Up to 300 Driver IDs/PINs in Stand-alone Mode
- Stores 10,000 Transactions in Stand-alone Mode
- Open Protocol & Modbus-RTU Support
- Modbus Interface with Krohne OPTIMASS Meters

### Color Display:

Every MultiLoad II product comes equipped with a high-contrast, color LCD display . . . no more complaints from drivers who are unable to read the display and cannot preset their load.

### Full Alphanumeric Keypad:

MultiLoad II products are available with full alphanumeric functionality. Custom prompting and driver interfacing is simplified.

### Integrated Card Reader:

MultiLoad II products are available with an integrated card reader. Some preset manufacturers require an external device to be hard-wired to their preset.

### Modbus Mass Meter Interface:

Toptech has designed a direct interface to the OPTIMASS series of Krohne mass meters. This interface allows for multi-dropped meter communications and eliminates the need for expensive pulse converters.

### Multi-lingual Support:

All MultiLoad II units support Mandarin, English, French, Portuguese and Spanish languages. The language settings may be different between the operator interface and the configuration screens.

### MultiLoad II is TWIC Ready:

Unlike many other industry vendors, Toptech products are ready for the Transportation Worker's Identification Credential. TWIC Regulations will affect many terminals in the US, and Toptech products are ready.

### Easy Expansion and Upgrades:

MultiLoad II products are designed to grow with the needs of your facility. MultiLoad II can be expanded by adding external I/O called Flow Control Modules (FCM IIs).

### Stand-alone Operation:

MultiLoad II does not need to interface with an automation system to perform critical functionality, such as: **Driver/PIN Validation (300)**, **Transaction Storage Log (10,000)**, & **Meter Ticket Printing**.

### Eliminate the Need for Smart Injectors:

MultiLoad II products feature advanced additive control logic and perform all of the functions traditionally reserved for smart injection systems.

### Flexible Communications:

All MultiLoad II units offer four communication ports as listed below.

- Serial Ports (3)
  - RS-232 (1)
  - RS-485 (1)
  - Selectable RS232/485 (1)
- 10/100 Mb Ethernet (1)

### Wireless Communication Options:

MultiLoad II can be packaged with two different wireless offerings. One offering is designed for stationary loading applications. The other offering is a hardened solution ideal for mobile loading applications (such as transloading) where vibrations and other harsh conditions may be present. Wireless communications can be used between the Toptech MultiLoad and the host (automation) computer, or to a ticket printer when operating in stand-alone mode.

# “MultiLoad II can be Perfectly Scaled to Address any Application”

The MultiLoad II product suite is designed to be modular and scalable to fit the needs of virtually any loading application. MultiLoad II can be equipped with one of two internal I/O boards or utilize external I/O Modules (FCM IIs) to address the needs of the application.

## MultiLoad II may be Equipped with Two Different Internal I/O Board Options:

### Single Meter: Digital and Analog I/O Board

#### Digital I/O Count (13)

- AC Output (5)
- DC Input (5)
  - Counters (3)
- DC Output (3)
  - Pulse Output (1)

#### Analog Inputs (2)

- 4-wire 100 Ohm RTD Input (1)
- 4-20mA Input (1)

#### Analog Output (1)

- 4-20mA Output (1)

### Two Meter: Digital and Analog I/O Board

#### Digital I/O Count (18)

- AC Input (2)
- AC Output (8)
- DC Input (6)
  - Counters (6)
- DC Output (2)
  - Pulse Output (2)

#### Analog Inputs (2)

- 4-wire 100 Ohm RTD Input (2)

## MultiLoad II Can Utilize External FCM IIs for Modular Design and Simple Upgrades

MultiLoad revolutionized the industry as the first truly scalable preset. To accomplish this, Flow Control Modules (FCMs) are mounted in an external enclosure which is distinct and separate from the preset interface (MultiLoad II RCU). The FCM enclosure houses all of the FCM modules required for a particular loading bay. Each FCM contains its own microprocessor so MultiLoad never becomes overburdened as it is required to address more complex loading scenarios. If I/O needs increase, such as introducing another product meter or additive, one or more FCMs can be snapped into the enclosure for simple and cost-effective upgrades.

### FCM II is Offered in Six Different Varieties

1

4: AC OUT  
4: DC IN  
1: RTD  
1: 4-20mA IN  
1: 4-20mA OUT

2

4: AC OUT  
4: DC IN

3

6: AC OUT

4

6: AC IN

5

6: DC OUT

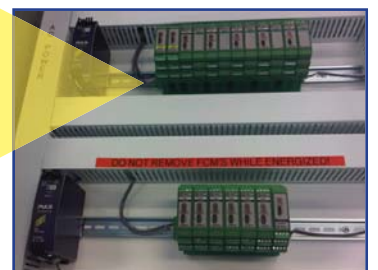
6

6: DC IN

When utilized, FCM II modules handle all interfacing between MultiLoad II and load rack hardware such as: Meters, Pumps, Valves, and Additive Injectors.

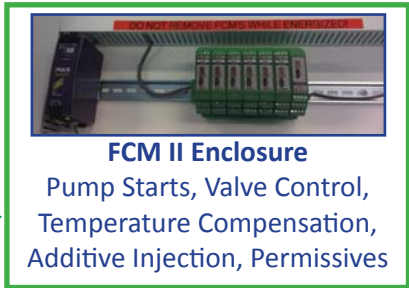
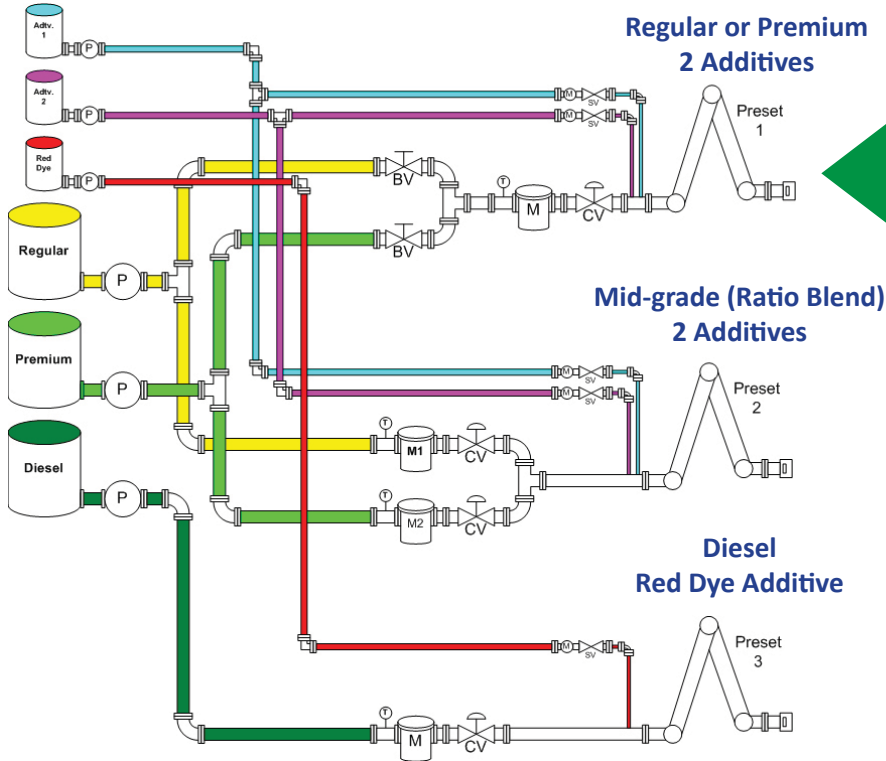


FCM II Module



FCM Enclosure

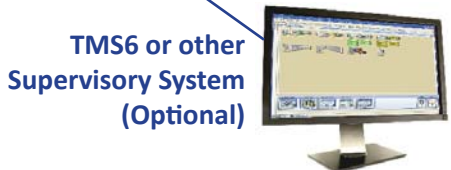
# Utilizing Distributed I/O to Address Complex Applications



RS-232



Ethernet or Serial



## MultiLoad II Enclosure Options (Driver/Operator Interface)



Small SMP Enclosure (Division 1)



EXL Enclosure (Division 1)



Division 2 Enclosure

### Features

- Numeric Keypad
- 4" (Diagonal) Color Display

### Dimensions

- 8.5" x 8.5" x 5.5"
- 219mm x 219mm x 139mm

### Compliance Information

- Class I, Division 1, Groups C & D
- Inmetro Certified
- ATEX Group IIB, Category 2G

### Features

- Cell Phone Style Alphanumeric Keypad
- 5.7" (Diagonal) Color Display
- Integrated Card Reader Option

### Dimensions

- 11.5" x 11.5" x 6"
- 289mm x 289mm x 151mm

### Compliance Information

- Class I, Division 1, Groups C & D
- Inmetro Certified
- ATEX Group IIB, Category 2G
- IECEx Group IIB, Category 2G

### Features

- Full Alphanumeric Keypad
- 8.4" (Diagonal) Color Display
- Integrated Card Reader Option

### Dimensions

- 18" x 12.25" x 5"
- 459mm x 311mm x 125mm

### Compliance Information

- Class I, Division 2, Groups C & D
- CE Marked
- ATEX Group IIB, Category 3G



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