



## Electronic Control Systems Vansco Controllers

Catalog HY33-5000/US  
North American Product Offering



ENGINEERING YOUR SUCCESS.

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For safety information, see Safety Guide at [www.parker.com/safety](http://www.parker.com/safety) or call 1-800-CParker.

## VMM (Vansco Multiplexing Modules)

The VMM modules are general purpose controllers for vehicle and other applications. All VMM modules are 100% compatible with other Parker Vansco multiplexing modules.

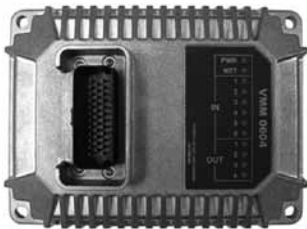
VMM modules communicate with other VMM modules, or may

communicate with an IQAN master, over a CAN bus using J1939 protocol.

The VMM modules are auto-programming when placed in a compatible existing system, and have status LEDs that indicate the condition of inputs, outputs, power,

and network activity.

The VMM modules monitor their outputs continuously for fault information. Detected faults include short circuits (to ground or power), over currents and open load. In the event of a fault, the units will disable the output(s) that are faulted.

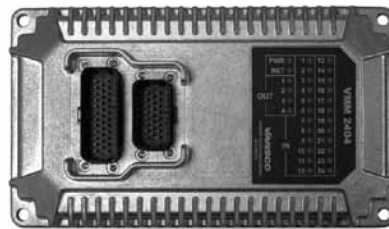


### VMM0604

The VMM0604 has 6 general purpose inputs capable of being configured for active high or active low signals. Additionally they may be used for reading analog voltages, or as 6 frequency inputs (2 AC coupled and 4 DC coupled).

The VMM0604 has 4 high-side outputs with a max current of 2.5A and max PWM frequency of 500 Hz. There are 4 low-side outputs capable of current sensing. Outputs can drive any type of vehicle load including relays, solenoids, fans, etc.

Description	Ordering PN
VMM0604	0836001ECD



### VMM2404

The VMM2404 is available in 2 versions. The unit has 15 general purpose inputs capable of being configured for active high or active low signals. The inputs may also be used for reading analog voltages in 4 programmable ranges. The 0837001 is capable of a 0-32 Vdc analog range. It can be used with 0-5 Vdc input signals, but will have low resolution. The 0837002 is capable of a 0-16 Vdc analog range and provides high resolution of 0-5 Vdc input signals. Additionally, these inputs may be configured as 15 frequency inputs (2 AC coupled and 13 DC coupled). The unit also has 9 dedicated digital inputs.

The VMM2404 has 4 high-side outputs with a max current of 2.5A and max PWM frequency of 500 Hz. There are 4 low-side outputs capable of current sensing. Outputs can drive any type of vehicle load.

Description	Ordering PN
VMM2404	0837001ECD
VMM2404	0837002ECD



### VMM3120

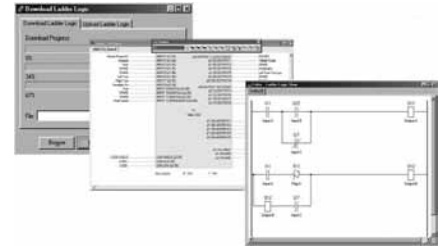
The VMM3120 has 17 digital inputs. The digital inputs are used for reading active high signals. Two of the inputs may be used for power control. In addition, it has 10 inputs capable of reading analog voltages, and 4 frequency inputs (2 AC coupled and 2 DC coupled).

The VMM3120 has 16 high-side outputs with a max current of 2.5A and max PWM frequency of 500 Hz. There are 4 low-side outputs capable of current sensing. Outputs can drive any type of vehicle load including relays, solenoids, fans, etc.

## VMM (Vansco Multiplexing Modules)



## VMMS ladder logic software



### VMM1210

The VMM1210 has 8 programmable digital inputs, all of which are capable of doing power control, and reading active high, or active low inputs. In addition, it has 4 inputs capable of reading analog voltages, frequency values or digital active low inputs.

The VMM1210 has 8 high current (10 A max) high-side outputs. It also has two low current (3 A max) outputs capable of driving either high-side or low-side loads, and that can also be arranged in an H-Bridge configuration. Outputs can drive any type of vehicle load including lights, relays, solenoids, fans, etc.

Description	Ordering PN
VMM1210	0736007ECD

### VMM1615

The VMM1615 has Wake on CAN. It has 7 digital inputs; 5 of the inputs are used for reading active high/low signals, 1 input is used for reading active high signals, and 1 input is used for active high power control. In addition, it has 8 inputs capable of reading analog voltages, and 1 DC coupled frequency input.

The VMM1615 has 12 high-side outputs. 6 are high current (10 A max) outputs, 4 of the high-side outputs are capable of accurate current sensing. It also has 1 low-side output that is capable of current sensing and 2 solid state relay outputs. These outputs can drive a variety of load types.

### VMMS

VMMS is a ladder-logic based programming tool that allows users to define the logic for their VMM system as well as perform real-time diagnostics.

The installation files are available from our website, along with the registration and request forms needed to obtain a licence, which will be keyed to your specific customer ID.

VMMS ladder logic software is available in 3 versions.

#### Creative

Creative level provides full access to create and edit ladder logic applications.

#### Productive

Productive level has advanced diagnostics, log access, I/O forcing, viewing, printing, and upload/download capabilities.

#### Active

Active level has basic diagnostics, viewing, and upload/download capabilities.

## CM (Controller Modules), J1939 Slave Units



### CM0410

The CM0410 is a general purpose input / output controller that includes a single CAN interface, 4 inputs, 1 high side current measurement pass-through, and 10 high-side outputs. The outputs have open circuit strobes and digital feedback for error checking. The main function of the product is to provide a means of controlling relays through J1939 messages on the CAN bus.

A current sense pass thru supports open bulb detection and 5 of the outputs have some limited solenoid PWM control.

The CM0410 is a CAN slave module only and supports no standalone operation. A PC based configuration tool allows you to specify things like input configurations and update rates for the messages presented on the CAN bus.

Description	Ordering PN
CM0410	1014001ECD

### CM2904

The CM2904 is a small CAN slave module that has standard pre-loaded software for a J1939 network (with proprietary CAN messages) for expanding the system I/O.

The module can take measuring data from buttons, switches, potentiometers and/or joysticks.

The CM2904 outputs can control proportional valves using current mode (current closed-loop) or PWM mode (voltage open-loop) signals. The analog inputs accept 0-8V signals from input devices or sensors. There are 2 sensor supply circuits; 1 is 5 Vdc and the other is 8 Vdc.

The CM2904 is recommended for in-cab applications in tractors, forest machines, and construction equipment.

Description	Ordering PN
CM2904	88CM2904

## CM (Controller Modules), Master Units

The CM modules are general purpose controllers for vehicle and other applications.

CM modules may communicate with other CM modules, VMM modules, or may communicate with an IQAN master over a CAN bus

using J1939 protocol.

The CM modules are programmed using C or Matlab simulink tools. Most CM modules have status LEDs that indicate the condition of inputs, outputs, power, and network activity.

The CM modules monitor their outputs continuously for fault information. Detected faults include short circuits (to ground or power), over currents and open load. In the event of a fault, the units can disable the output(s) that are faulted.



### CM0711

The CM0711 is a rugged CAN controller. Several modules in the system can be identified using addressing IDtag inputs built into the wire harness.

The CM0711 is able to control proportional valves using current mode (current closed-loop) or PWM mode (voltage open-loop) signals. The module has 7 high-side outputs with error detection, and 4 low-side outputs. The analog inputs accept 0-5V signals from input devices or sensors. Digital inputs can also be configured to measure 2 frequency or 1 directional frequency inputs. High-side outputs may alternatively be used as digital inputs for switches.

The CM0711 has a software development kit (SDK) that allows customers to develop their own software.

Description	Ordering PN
CM0711	88CM0711



### CM2115

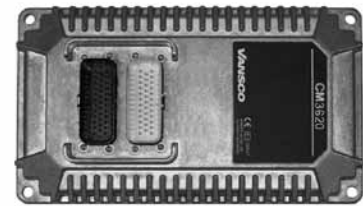
The CM2115 is an input/output controller that can be used to monitor system sensors and drive system loads. It can be used in any systems where hydraulic control, lighting control, or general electrical control is required.

The CM2115 can monitor up to 21 multi-purpose inputs; 2 of which are able to be configured as frequency inputs. The CM2115 can control up to 15 outputs; 12 high-side outputs (6 capable of 10A), 1 low-side output and 2 SSR outputs.

The CM2115 has two CAN ports for communication through a J1939-based Controller Area Network (CAN). By creating custom CAN messaging in software the CM2115 can be used in any CAN 2.0B application.

The CM2115 has four Deutsch 12 pin DT series connectors for interfacing with system wire harnesses.

Description	Ordering PN
CM2115	0935024ECD



### CM3620

The CM3620 is an input/output controller that monitors digital, analog, and frequency inputs, and controls solid-state switched outputs.

The CM3620 can monitor up to 36 inputs; 22 digital inputs, 10 analog inputs and 4 frequency inputs. The CM3620 can control up to 20 outputs; 16 high-side outputs and 4 low-side outputs.

The analog inputs, frequency inputs, and high-side outputs can be configured to function as digital inputs.

The CM3620 is designed to communicate through a J1939-based Controller Area Network (CAN). By creating custom CAN messaging in software the CM3620 can be used in any CAN 2.0B application.

The CM3620 has two 35-pin Ampseal connectors that are used to interface with the inputs, outputs, and CAN communication.

Description	Ordering PN
CM3620	0916021ECD

## CM (Controller Modules), Master Units



### CM3626

The CM3626 is a general purpose input / output controller that can be used to monitor system sensors and drive system loads. It can be used in any systems where hydraulic control, lighting control, or general electrical control is required.

The CM3626 can monitor up to 36 multi-purpose inputs; 4 of which are able to be configured as frequency inputs. The CM3626 can control up to 26 outputs; 18 high-side outputs and 8 low-side outputs.

The CM3626 has two CAN ports for communication through a J1939-based Controller Area Network (CAN). By creating custom CAN messaging in software the CM3626 can be used in any CAN 2.0B application.

The CM3626 has five Deutsch 18 pin DT series connectors for interfacing with system wire harnesses.

Description	Ordering PN
CM3626	0991001ECD

## Accessories, Communication

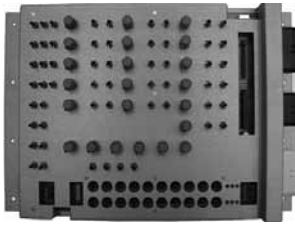


### USB-DLA

The Data Link Adapter (DLA) provides the link between a PC and the controller network. Information from the engine and transmission is converted and transferred from vehicle ports (J1939, J1708) to computer port (USB). The USB-DLA kit is supplied in a high density polyethylene, blow-molded case. The kit includes cables to interface with either J1939, or J1587/1708 diagnostic ports. There are also cables for Deutsch or Cannon connector types used in vehicle communication buses, 2 “Y” adapters, a CAN bus terminator, and a USB cable to connect the DLA to your laptop computer.

Description	Ordering PN
USB-DLA kit	0779A06ECD

## Accessories, Controller I/O Board



### Controller I/O board

The Controller I/O Board (CIOB) is a general-purpose simulation board that is used to test logic. The CIOB has various connectors that connect to inputs, outputs, power, and CAN. It has 20 bulbs and 6 LEDs that (through application software) can indicate if your application simulations are working.

### Overlays

Parker has module specific overlays that can be used on the CIOB to identify channels.

### Controller I/O overlays

Description	Ordering PN
VMM0604 overlay	0913505ECD
VMM2404 overlay	0913506ECD
VMM1615/ CM2115 overlay	0913509ECD
CM0711 overlay	1019501ECD
CM3626 overlay A	0974516ECD
CM3626 overlay B	0974517ECD

## Cables

Parker has cables and harnesses for all VMM and CM modules.

### Development cables

Description	Ordering PN
VMM0604 cable	0836701ECD
VMM2404 cables	0837701ECD
VMM3120/ CM3620 cables	0885707ECD
VMM1615/ CM2115 cables	0913708ECD
CM2904 cables	88JCM2904K1
CM0711 C1 cable	5030217
CM0711 C2 cable	5030218
CM3626 cables	0974727ECD

### Controller I/O harnesses

Description	Ordering PN
VMM0604 I/O hrns	0913704ECD
VMM2404 I/O hrns	0913705ECD
VMM1615/ CM2115 I/O hrns	0913709ECD
CM3626 I/O hrns (for use with 2x CIOB units)	0974726ECD

## Connectors

Parker has connectors for all VMM and CM modules.

### Connectors

Description	Ordering PN
VMM0604/VMM2404/VMM3120/ VMM1615/ CM2115 kit	0935023ECD
CM0410 kit	1014010ECD
CM2904 kit	88JCM2904K2
CM3626 kit	0974010ECD

*\*- Universal kit includes:  
 1x 23 pin housing (black)  
 1x 35 pin housing (white)  
 1x 35 pin housing (black)  
 93 contacts*



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**Terms of Sale with Warranty Limitations****Offer of Sale**

**1. Definitions.** As used herein, the following terms have the meanings indicated.

- Buyer:** means any customer receiving a Quote for Products from Seller.
- Goods:** means any tangible part, system or component to be supplied by the Seller.
- Products:** means the Goods, Services and/or Software as described in a Quote provided by the Seller.
- Quote:** means the offer or proposal made by Seller to Buyer for the supply of Products.
- Seller:** means Parker-Hannifin Corporation, including all divisions and businesses thereof.
- Services:** means any services to be supplied by the Seller.
- Software:** means any software related to the Products, whether embedded or separately downloaded.
- Terms:** means the terms and conditions of this Offer of Sale or any newer version of the same as published by Seller electronically at [www.parker.com/saleterms](http://www.parker.com/saleterms).

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**DISCLAIMER OF WARRANTY: THIS WARRANTY IS THE SOLE AND**

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**6. Claims; Commencement of Actions.** Buyer shall promptly inspect all Products upon receipt. No claims for shortages will be allowed unless reported to the Seller within ten (10) days of delivery. Buyer shall notify Seller of any alleged breach of warranty within thirty (30) days after the date the non-conformance is or should have been discovered by Buyer. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.

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**10. Security Interest.** To secure payment of all sums due, Seller retains a security interest in all Products delivered to Buyer and, Buyer's acceptance of these Terms is deemed to be a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest.

**11. User Responsibility.** The Buyer through its own analysis and testing, is solely responsible for making the final selection of the Products and assuring that all performance, endurance, maintenance, safety and warning requirements of the application of the Products are met. The Buyer must analyze all aspects of the application and follow applicable industry standards, specifications, and other technical information provided with

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**14. Limitation on Assignment.** Buyer may not assign its rights or obligations without the prior written consent of Seller.

**15. Force Majeure.** Seller does not assume the risk and is not liable for delay or failure to perform any of Seller's obligations by reason of events or circumstances beyond its reasonable control ("Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery from carriers or suppliers, shortages of materials, or any other cause beyond Seller's reasonable control.

**16. Waiver and Severability.** Failure to enforce any provision of these Terms will not invalidate that provision; nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of these Terms by legislation or other rule of law shall not invalidate any other provision herein and, the remaining provisions will remain in full force and effect.

**17. Termination.** Seller may terminate any agreement governed by or arising from these Terms for any reason and at any time by giving Buyer thirty (30) days prior written notice. Seller may immediately terminate, in writing, if Buyer: (a) breaches any provision of these Terms (b) appoints a trustee, receiver or custodian for all or any part of Buyer's property (c) files a petition for relief in bankruptcy on its own behalf, or one if filed by a third party (d) makes an assignment for the benefit of creditors; or (e) dissolves its business or liquidates all or a majority of its assets.

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**21. Entire Agreement.** These Terms, along with the terms set forth in the main body of any Quote, forms the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. In the event of a conflict between any term set forth in the main body of a Quote and these Terms, the terms set forth in the main body of the Quote shall prevail. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter shall have no effect. These Terms may not be modified unless in writing and signed by an authorized representative of Seller.

**22. Compliance with Laws.** Buyer agrees to comply with all applicable laws, regulations, and industry and professional standards, including those of the United States of America, and the country or countries in which Buyer may operate, including without limitation the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.S. Anti-Kickback Act ("Anti-Kickback Act"), U.S. and E.U. export control and sanctions laws ("Export Laws"), the U.S. Food Drug and Cosmetic Act ("FDCA"), and the rules and regulations promulgated by the U.S. Food and Drug Administration ("FDA"), each as currently amended. Buyer agrees to indemnify, defend, and hold harmless Seller from the consequences of any violation of such laws, regulations and standards by Buyer, its employees or agents. Buyer acknowledges that it is familiar with all applicable provisions of the FCPA, the Anti-Kickback Act, Export Laws, the FDCA and the FDA and certifies that Buyer will adhere to the requirements thereof and not take any action that would make Seller violate such requirements. Buyer represents and agrees that Buyer will not make any payment or give anything of value, directly or indirectly, to any governmental official, foreign political party or official thereof, candidate for foreign political office, or commercial entity or person, for any improper purpose, including the purpose of influencing such person to purchase Products or otherwise benefit the business of Seller. Buyer further represents and agrees that it will not receive, use, service, transfer or ship any Product from Seller in a manner or for a purpose that violates Export Laws or would cause Seller to be in violation of Export Laws.

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# Sales Offices

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### Mexico

#### Parker Hannifin de México

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## Europe

### Europe Hydraulics Group

#### Parker Hannifin Corporation

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## Latin America

### Brazil

#### Hydraulics Division

#### Parker Hannifin Ind. e Com. Ltda

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## Mobile Sales

### Mobile Sales Organization and Global Sales

850 Arthur Avenue  
Elk Grove Village, IL 60007 USA  
Tel: 847-258-6200  
Fax: 847-258-6299

## Industrial Sales

### Great Lakes Region

3700 Embassy Parkway  
Suite 260  
Fairlawn, OH 44333 USA  
Tel: 330-670-2680  
Fax: 330-670-2681

### Southern Region

1225 Old Alpharetta Road  
Suite 290  
Alpharetta, GA 30005 USA  
Tel: 770-619-9767  
Fax: 770-619-9806

### Chicago Region

1163 E. Ogden Avenue  
Suite 705, #358  
Naperville, IL 60563 USA  
Tel: 630-964-0796  
Fax: 866-473-9274

### Pacific Region

8460 Kass Drive  
Buena Park, CA 90621  
Tel: 714-228-2510  
Fax: 714-228-2511

### Eastern Region

100 Corporate Drive  
Lebanon, NJ 08833 USA  
Tel: 908-236-4121  
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## Asia Pacific

### Asia Pacific Headquarters

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### Australia Headquarters

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### China Headquarters

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### Korea Headquarters

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## South Africa

### Parker Hannifin Africa Pty Ltd

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