



# **I-Mark™**

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## **OEM Controller V84i**

### **I-Mark™ V84i Product Release**

Matthews expands our line of drop on demand valve ink jet controllers with the release I-Mark V84i.

Our objectives for this new control unit are:

- Replace our existing I-Mark V80i controller with a controller capable of operating the 8000 Series printheads.
- Incorporate the features and functionality brought to the market with our I-Mark V84 controller, in this new model.
- To expand the OEM market into higher speed applications with the 8000 maxi heads.

## Product Description

The new V84i is introduced as a controller specifically designed for OEM's (original equipment manufacturers), machine builders and integrators who benefit from incorporating an ink jet printing system into their base product.

The I-Mark V84i drives Matthews complete line of drop on demand printheads

- Series 8000 – maxi, midi, mini
- Standard valve printheads – 64mm, 28mm, 14mm, 32mm
- Series 3000 heads (only if required to support an existing installation)

Each I-Mark V84i independently drives from one to four printheads, for a total of 32 valves. Systems are available with one 32V, two 16V, one 16V with two 7V, or four 7 valve heads.

Production lines speeds up to 780 feet per minute are handled, printhead dependant.



An IP42 environmental rating tolerates most industrial environments. The small modular footprint fit neatly into production environments where real estate is a challenge.

Like the I-Mark V84, the unit accepts one encoder input per controller, with the ability to use up to four separate trigger inputs. The additional triggers may offer flexibility to some integrators to print a unique message in several areas of their process.

Comparing capabilities of the V84i to the V80i, we gain several enhancements including:

- ❖ more message storage (100 vs. 64)
- ❖ more text fields (250 vs. 128)
- ❖ more shift codes (32 vs. 8)
- ❖ cascade counters
- ❖ additional bar code types (Code 128 B and Code 128 C)
- ❖ chimney style fonts
- ❖ two push buttons, one to switch from ink to cleaner using the printheads 3-way valve (if available), and the second to flush the fluid through the valves
- ❖ RS232, or RS485 setting

The command format to program the V84i is an ASCII protocol designed to be used with host computers, PLC's with ASCII capability, or dumb terminal devices. As an example, programmers can assign the printers a node address on their RS485 network, and the V84i will respond to commands sent via the network, just as any other device on the network. The protocol is well documented in an easy to use reference manual. There are several differences between V84i and V80i commands, so customers upgrading from the V80i to the V84i will find it necessary to make programming changes. With many



Multiple V84i controllers in PLC enclosure

more functions available in the V84i software, opportunities to enhance the program should be considered.

If a Matthews supplied interface solution is desired, Matthews will provide a custom quote for the application.

Matthews offers the I-Mark I-Mager logo manager is offered to simplify creating bitmaps and downloading to the V84i

Supplying power to the controller would be the responsibility of the OEM or systems integrator. We do, however, offer two power supply options. Our desk top version is sufficient for most installations. As an option, the OEM power supply will support two controllers, includes an internal cooling fan and has convenient mounting holes. It is necessary to mount the OEM version in an environmental enclosure.

As is our standard policy, Matthews will continue to support customers with replacement V80i controllers, although all new installations are guided to the I-Mark V84i.



Desk top power supply



OEM power supply

## **Target Markets**

The I-Mark V84i OEM Controller is purposely designed for OEM and System Integrator applications. Similar in functionality to the I-Mark V84, except supplied without a keyboard or interface, the unit relies on outside interface support. Systems integrators have the option to use touch screen interfaces, power supplies, PLC's and other hardware with the I-Mark V84i as they use with their base machine. The machine builder is able to eliminate redundant components, ultimately reducing overall cost, and enhancing their product line to include a marking system. In some applications, the ink jet marking is used, not exclusively for identification, but the mark serves as a specific process within the application of the machine. The OEM has complete control of what the printer will do, and controls ownership of the turnkey solution.

OEM applications for the I-Mark V84i include packaging and food processing equipment, automotive plants, material handling equipment, conveyor systems, forming-coating and converting lines, steel forming machines, and wood processing saws.

Additional applications for the Matthews I-Mark V84i controller include a highly structured, networked printing system, configured with one I-Mark V84i controller on each production line in a manufacturing facility, all commanded from one common network. Each controller is assigned a "node address" by the programmer, meaning it may be independently addressed, the same as any other component, printer or not, on the production floor. Up to 32 I-Mark V84i controllers can be networked together.

Offering the I-Mark V84i controller as a solution for a PC based system, with one PC driving multiple controllers, on multiple production lines, is a "*Matthews Integrated Solutions Group*" product. Matthews has a solid long standing reputation as a supplier for custom turnkey solutions. The V84i provides us with yet one more controller from which to configure the exact solution for a particular customer.