
# MARCH ModVIA

Plasma Treatment for Printed Circuit Board Assembly

The ModVIA™ system builds on the success of the MARCH VIA product series to support printed circuit board manufacturing with outstanding plasma treatment uniformity.

## The ModVIA system provides the following:

### Industry-Leading Efficiency and Plasma Uniformity

- PCB panels are processed in separate plasma cells to deliver high etch rates with excellent treatment uniformity.
- The system is self-contained and requires minimal floor space. The chassis houses the plasma chamber, control electronics, 40 kHz RF generator, pump/blower package, and automatic matching network. Maintenance access is available from either front or rear access panels.

### Application Flexibility

- Three electronic mass flow controllers (MFCs) are standard, enabling optimal gas control. An additional MFC is available as an option.
- The system accommodates many process gases to meet specific requirements (typical process gases may include Ar, $O_2$, $N_2$, and CF4).
- The system accommodates various panel sizes and can process low-volume, high-mixture products, ideal for small to medium-sized businesses or R&D institutions.

## Key Application Details

- The ModVIA incorporates the same High Flux Electrode (HFE) design found in the MaxVIA™ plasma systems. The HFE design with a temperature-controlled cooling loop delivers superior plasma treatment uniformity for PCB panel, desmear, and etchback applications.
- Designed to process rigid and flexible PCB panels of various shapes and sizes for through-hole, blind via, etchback, and desmear applications.
- Upgrade the system from four plasma cells to a maximum of eight as production volumes increase.
- The plasma chamber is constructed of durable, high-quality aluminum.
- Low CF4 gas consumption for desmear, etchback, and panel treatment applications contributes to the lowest cost of ownership in its class.

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# ModVIA

## Specifications

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| **Enclosure Dimensions** | W x D x H – Footprint | 1652 W x 1747 D x 2445 H mm (65 W x 69 D x 97 H in.) |
| | Net Weight | 1776 kg (3915 lbs.) |
| **Chamber** | Available Cells | 5 cells, expandable up to 8 maximum |
| **Electrodes** | Configuration | Temperature Controlled Power-Power |
| | Working Area | 1118 D x 660 H mm; (44 D x 26 H in.) |
| **RF Power** | Standard Wattage | 5 kW |
| | Frequency | 40 kHz |
| **Gas Control** | Available Flow Volumes | 2000 or 5000 sccms |
| | Maximum Number of MFCs | 4 |
| **Control System** | Interface | EPC control with PC-based touchscreen interface |
| **Vacuum Pump** | Standard Purged Pump Package | 530 cfm |
| | Cooling Water Flow | 9.5 slm |
| | N2 Pump Purge Flow | 14 slm |
| **Facilities** | Power Supply | 208 VAC, 50 A, 3-Phase + Ground; 50/60 Hz |
| | Process Gas Fitting Size & Type | 6.35 mm (0.25 in.) Swagelok |
| | Process Gas Purity | CF4 = 99.97%; $O_2$ = 99.996%; N2 = 99.99%; Ar = 99.999%; $H_2$ = 99.999% |
| | Process Gas Pressure | 1.03 bar (15 psig) min. to 1.38 bar (20 psig) max., regulated |
| | Purge Gas Fitting Size & Type | 6.35 mm (0.25 in.) Swagelok Tube |
| | Purge Gas Purity | $N_2$ = 99% |
| | Purge Gas Pressure | 1.03 bar (15 psig) min. to 1.38 bar (20 psig) max., regulated |
| | Pneumatic Valve Fitting Size & Type | 6.35 mm (1/4 in.) Swagelok |
| | Pneumatic Gas Purity | CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm |
| | Pneumatic Gas Pressure | 5.52 bar (80 psig) min. to 6.89 bar (100 psig) max., regulated |
| | Exhaust Fitting | NW 40 @ Utility Panel |
| **Compliance** | USA | EH&S/Ergonomics |
| | International | CE Marked |
| **Ancillary Equipment** | Gas Generators | Nitrogen |
| | Facilities | Chiller, Scrubber, Transformer |

# ModVIA

## System Packages

Nordson Electronics Solutions builds the future of electronics reliability all across the globe. We're proud of the decades of service and solutions we've provided to enhance component reliability. No matter where you are, you've likely manufactured or purchased a product made reliable with our equipment. The ModVIA offers industry-leading throughput and reliability for printed circuit board assembly applications, designed to last and provide cutting-edge capabilities.

Explore the ModVIA system packages.

For more information, contact us at info-electronics@nordson.com.

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| **Essential** | Uniformity and repeatability. | This essential 40 kHz plasma treatment system delivers high process repeatability and uniformity and accommodates all common gases, including CF4, oxygen, nitrogen, and argon. |
| **Productivity** | Advanced throughput and yield. | Accelerate throughput and yield with a power-power electrode configuration that allows both sides of the substrate to receive exceptionally uniform etchback treatment. Balanced vacuum, gas flow, and temperature management technologies enhance optimal performance. |

For more information, visit our website to find your local regional office or representative.

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