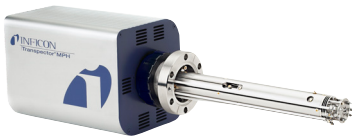


# Gas Analyzers, Mass Spectrometers, RF Detectors, and Sensor Integration Software

## Transpector® MPH Residual Gas Analyzer



- Ultrafast data collection (1 ms measurement time)
- TCP/IP Ethernet connectivity
- Dual filaments
- Field replaceable Electron Multiplier
- Combined anode, cathode and repeller filament kit
- Shorter sensors minimize installed footprint
- Nine-decade dynamic range
- MDPP of  $<5E-15$  Torr
- Increased Signal-to-Noise ratio
- Interchangeable sensors and electronics
- Sensors are assembled, tested and double bagged in a clean room environment
- RoHS compliant

## Transpector CPM Compact Process Monitor



- Quadrupole-based gas analysis system for monitoring complex processes
- Allows 24/7 monitoring to maximize yield and throughput, thereby minimizing costs
- Compact and affordable enough to be installed on every high-pressure vacuum chamber
- HexBlock™ sampling system maximizes performance
- Built-in CDG for process pressure monitoring and vacuum interlock
- Optional calibration reference available for tuning and gas reference
- Long-life closed ion source permits contaminant detection at sub-ppm levels while resisting most corrosive and reactive gases
- Lightweight and easily transportable

## Transpector XPR3/ XPR3L Gas Analysis System



- EM works at PVD process pressures, providing faster, cleaner data collection and eliminating FC to EM transitions for easier interpretation of data.
- Provides economical dual-purpose functionality, process monitoring and base vacuum assurance, by operating from UHV up to 10 mTorr (20 mTorr optional)
- Affordable cost-effective process monitor that enables implementation in scaleable production designs
- Improves process yield, reduces scrap and improves product quality through continuous automatic monitoring of process gas pressures, ratios and possible contaminants or impurities
- Operates across a 1 to 100 amu mass range, protecting your investment and reducing risk by having the ability to detect a broad range of materials, contaminants or byproducts
- Compatible with the FabGuard monitoring and analysis system to provide reliable advanced diagnostics and process control

## Quantus™ LP100 Gas Analyzer



- Convenient field-replaceable plasma cell
- Easy installation using a standard KF25 connection
- Low maintenance
- Excellent detection limits down to low ppm levels
- Operating range of 10 mTorr to 1 Torr
- Long-term reliability: no pumps required
- Low cost of ownership
- Fast 10 Hz sampling frequency
- Support by experienced field-trained INFICON engineers

## FabGuard® Integrated Process Monitor (IPM)



- Real time data from in situ sensors combined with tool data providing the most comprehensive information available for semiconductor wafer process control
- Automated data collection and storage for historical files to enhance SPC data combined from multiple sensors reduces hardware redundancy while allowing all data from an entire tool, process or fab to be integrated for convenient access and analysis
- Single user interface for all tool data reduces learning curve
- Classification of faults for quicker response to problems, minimizing downtime
- Overall impression of tool/process health to aid preventive maintenance personnel
- Powerful visualization tools for data mining and statistical process control

## FabGuard Explorer Gas Analysis Software



- One-click access to:
  - Leak check/data acquisition
  - One-click recipe creation
  - Maintenance run templates
- FabGuard Explorer provides multi-sensor support: Transpector MPH RGAs, Transpector 2 RGAs, RFS100 RF Sensors, and the Quantus Gas Analyzer
- Vacuum Diagnostics tool quickly identifies gas species in the vacuum system
- Run Summary attaches full sensor and data acquisition information to each run, which helps to determine whether data abnormalities are caused by alterations of sensor parameters
- Tagging function makes high-level process analysis easy
- Auto Tune functions keep the sensor in working order
- Windows 7 compliant

## Sion™ RF Detector

### FOR PLASMA ARC DETECTION

- Identification of micro arcing for reduced wafer scrap and improved yield.
- Easy retrofit to existing tool set
- Non-invasive sensor installation
- High-speed data collection (250 kHz)
- Integrated data management with FabGuard

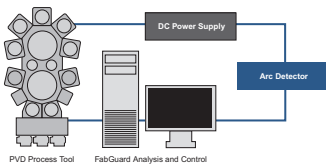
### FOR ENDPOINT CONTROL

- Easy drop-in replacement for OES-based instrument for more accurate endpoint control
- Eliminates chamber clean under- and over-etching, reducing cost of time and materials
- Reduces required clean gas flow levels and cost
- Increases tool uptime by eliminating chamber window maintenance and replacement



## ADC100 DC Arc Detector

- Software integration to the tool through FabGuard Sensor Integration and Analysis System
- Data collection at 250 kHz per channel
- Custom cables connect to most DC generators
- Detects arcs quickly with pre-defined analysis tools
- Endpoint detection capability
- Worldwide application support
- Etch applications
  - Wafer metrology modeling (etch rate)
  - Active power control of the true process chamber delivered power
  - Chamber matching (RF fingerprint)



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