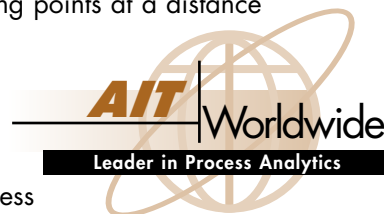


Raman Analyzers

The **RPM™ Series** multi-channel CCD-based Raman analyzers are designed for real-time process monitoring and process development applications. They provide rapid, accurate and stable monitoring of physical properties and chemical composition of liquids, emulsions, slurries and solids.

For process applications, the **RPM 785™** analyzer operates in hazardous plant environments. The **RPM MD™** Rack Mounted analyzer is configured for general purpose control rooms with connection to the hazardous process via fiber optic cables. For applications development, the RPM MD bench top system is used to characterize new methods for on-line process monitoring and control.

- Remote, simultaneous analysis of up to four sampling points at a distance of up to 200 meters using fiber optic sampling.
- NeXCAL™ continuous automatic frequency scale correction provides permanent calibration.
- Operates on the same powerful SpectraRTS™ process software found in the Analect series of on-line and process development FTIR and FT-NIR analyzers. For laboratory use, GRAMS/AI™ is offered.
- DCS communications options including Modbus®, OPC®, Ethernet and analog protocols.
- Comprehensive chemometric software including SpectraQuant,™ MATLAB®, Pirouette® and GRAMS/AI7 are available.
- 21 CFR Part 11 compliance available.



Raman Advantage

- High spectral information content
- Compositional measurements of aqueous solutions
- Non-destructive as well as non-contact sampling
- No sample preparation required
- Sampling through windows, vials, blister packs, and other packaging

RAMAN APPLICATIONS

Petrochemical & Chemical

- Para-Xylene purity
- Toluene recovery
- Polystyrene production
- Polybutadiene structure
- Aqueous solutions

Polymers

- Polymer identification
- Polymer morphology
- Polymer emulsions
- Acid number predictions

Pharmaceutical

- Polymorph transformation
- Tablet identification
- Raw materials testing
- Reaction monitoring

Food & Beverage

- Moisture and protein content

Specifications

Spectrometer	
• Excitation:	Diode Laser 785 nm
• Spectral range:	150-2400 and 2300-3500 cm ⁻¹
• Resolution:	6 cm ⁻¹
• Frequency accuracy:	0.5 cm ⁻¹
• Frequency repeatability:	0.1 cm ⁻¹
Camera	
• Back illuminated deep depletion scientific CCD	
• Standard array size:	1340 x 100 pixels
• Optional array size:	1340 x 400 pixels
Sample / Process Interface	
• Process Probe*	Direct
• Process Probe*	Slip Stream
• Fiber optic connectors	SMA or FC
*choice of probes available	
Process Control Interface	
• Modbus RTU / TCP	
• OPC (optional)	
• Analog (optional)	
User Interface	
RPM 785	
• Integrated Touchscreen - Windows based front panel GUI	
RPM MD	
• Standard Windows PC	
Software	
• SpectraRTS, GRAMS/AI	
• Chemometrics: SpectraQuant, Matlab, Pirouette, Unscrambler, PLS Plus/IQ	
• IQ/OQ documentation	
Utility Information	
RPM 785	
• AC power:	Universal 110/240 Vac, 50/60 Hz, 500 VA
• Purge Air:	Pressure: 4.2 kg/cm ² (60 psig) Flow Rate (Max): 150 L/minute (5.3 scfm)
RPM MD	
• AC power:	Universal 110/240 Vac, 50/60 Hz, 500 VA
Instrument Dimensions	
RPM 785	
• Enclosure:	Width 51 Height 61 Depth 34cm (20x24x13.2in.)
• Footprint:	Width 85 Height 76.5 cm (33.5x30 in.)
• Weight:	43 kg (95 lb)
RPM MD	
• Enclosure:	Width 66 Height 46 Depth 36cm (26x18x14in.)
• Weight:	25kg (55 lb)
Ambient Environmental Conditions	
• Temperature range:	10-30°C (50-86°F)
• Max. Relative Humidity (RH):	95%, non-condensing
Hazardous Area Options	
RPM 785	
• NEC Class I, Division 2, Group B, C and D	
• ATEX / IECEx Zone 2	
RPM MD	
• General Purpose only	
Compliance	
• CE	

SpectraRTS™ Software Drives Your Process Application

Automate many aspects of your process

- Fully integrated development for VBA™ compatible scripting language.
- 3D waterfall display with rotation.
- Easily create instrument configuration files for application development.

Implement calibration tools and programming flexibility

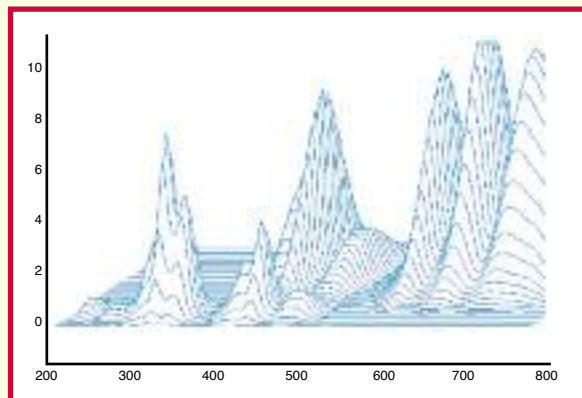
- Apply a wide variety of quantitative analysis routines including: SpectraQuant™, MATLAB® and Pirouette® software.
- Operate the system remotely by using pcANYWHERE.™
- Multi-level password access.
- 21 CFR Part 11 compliant.
- Implement on-line validation methods like ASTM D6122.

Desktop data station with software, standard

- Access the on-line help system for quick reference.

GRAMS/AI™

- An intuitive user interface allows for quick and easy processing of single and multi-dimensional data files.
- Powerful display objects such as contour plots, equations, 3D projection maps, peak tables and search reports.
- 21 CFR Part 11 compliance provides audit trail within each data file to ensure traceability and security of changes.



Three dimensional spectral display



Raman Process Probe

RPM MD Analyzer

Contact our Marketing Dept. **AIT Applied Instrument Technologies** 2121 Aviation Drive, Upland, CA 91786

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International locations—see our website for your authorized representative **AIT Applied Instrument Technologies, Inc.**

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