![ASC International logo]

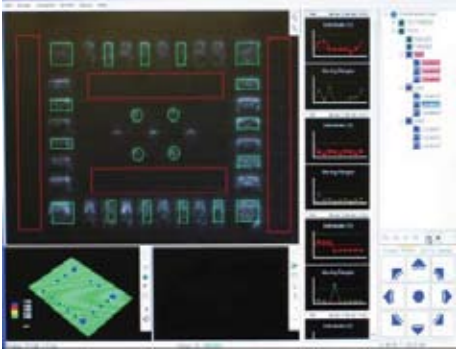**PRODUCT AND SPECIFICATION**

# *VisionPro AP212*

**3D SOLDER PASTE INSPECTION**



*VisionPro AP212* incorporates high resolution, fully automated PCB positioning with sophisticated true **3D** sensor technology to provide the most repeatable and accurate solder paste inspection system in its class. The *AP212* eliminates operator handling issues associated with offline manual measurement techniques. Integrated SPC run charts and custom data reports makes the *AP212* an exceptional value for the electronics manufacturer concerned with finding a reliable SPI solution to improving production yields.

*System Features:* Best in Class Gage R&R • Best In Class Accuracy • Automatic Calculation of 7 Distinct Characteristics including Height, Area, Volume and Standard Deviation • Real-Time Integrated SPC with Defect Error Review • Custom Data Reports with Data Tag Analysis • True 3D Color - Photo Realistic Profiling • Offline Programming
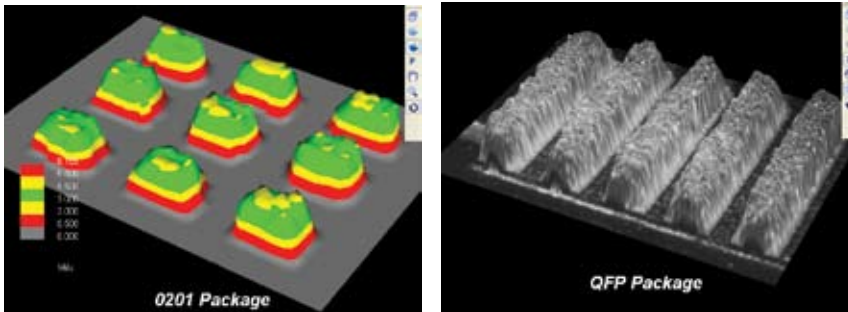
## Automated Measurements



To obtain measurements on the **AP212**, the user programs the board to measure the desired locations. The user then selects the board from the board assembly list, verifies fiducial alignment and clicks run. Measurements are automatically recorded, SPC charts updated and a Pass / Fail with error review message is displayed upon completion of the script.

## Advanced Defect Analysis

The optional Siemens® Criterion SPC software is a powerful tool that helps operators control the critical stencil printing process. Data collected by the **AP212** is instantly charted by the Criterion Software. Calculations crucial to understanding printing performance are reported.



## True 3D Color - Photo Realistic Profiling


0201 Package


QFP Package

The **AP212** allows operators to obtain 3D color profiles for fast and accurate paste analysis. Operators may use these profiles to help them determine what corrections are needed in their solder paste printing process, thereby improving yields.

### System includes:
• Standard 300mm x 300mm High Resolution Positioning System • 2.5 GHz+ CPU and 20"+ LCD Monitor • LED Light Source for Maintenance Free Operation • Hardware /Software Reference Manuals • Online Service and Support

### Options:
• Siemens® SPC Software • NIST Calibration Standard • Up to 12" x 20" Extended Positioning System • Extended Warranty Plans • Large FOV Sensor

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## MECHANICAL SPECIFICATIONS

### VisionPro 212

#### System Specifications — AP212

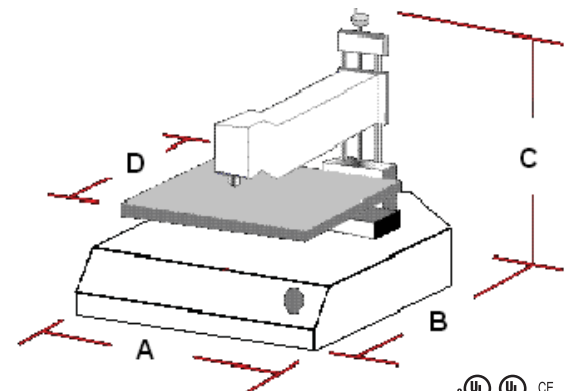| | |
|---|---|
| Maximum Object Thickness | 5.1 cm (2.0 inches) |
| Standard Work Surface (WxL) | 41 x 53 cm (16 x 21in.) |
| | (Custom Size Available) |
| Throat Depth (Sensor to Rear support) | 38 cm (15 inches) |
| System Computer | 2.5 gHz, 1.0 Gb ram, Windows XP / 7 |
| Electrical Requirements | 100 - 240 VAC, 50 - 60 Hz, 2 Amps |
| Ambient Operating Temperature | 5 to 38 C (40 to 100F) |
| Ambient Operating Humidity | <90% Non Condensing |
| System Weight | 36 Kg (80 lbs) |
| System Weight (CRATED) | 59 Kg (130 lbs) |
| | (Not including PC & Monitor) |
| Measurement Capability | Height, Volume, Area, Width, Length, 3D Defect Analysis |
| SPC Charting/ Data Reports | Integrated |
| Work Instruction | Built In |

#### Sensor Specifications

| | |
|---|---|
| Measurement Principal | 3D Phase Shift Moiré |
| Camera (Pixel) | 640 x 480 Color CCD |
| Lateral Resolution | 4.3 um (.17 mils) |
| FOV Size | 2.8 mm x 2.1 mm (110 mils x 83 mils) |
| Z Resolution | 1.78 um (.07 mils) |
| Measurement Range | 365 um (14.4 mils) |
| Illumination | LED Based White Light |

#### Inspection Performance

| | |
|---|---|
| Inspection Speed | 1 Second FOV 3D |
| Static Repeatability | 1 um (.04 mils) |
| Gage R & R (+/- 50% tolerance on PCB) | <10% |
| Height Accuracy on cal target | 1 um (.04 mils) |
| Minimum Paste Deposit Size (X,Y) | 51 um (2 mils) |

#### Optional Large FOV: AP450

| | |
|---|---|
| Camera | 1280 x 1024 Color CMOS |
| Lateral Resolution | 6.8 um (.27 mils) |
| FOV Size | 8.7 mm x 6.2 mm (343 mils x 242 mils) |
| Z Resolution | 1.78 um (.07 mils) |
| Measurement Range | 488 um (19.2 mils) |



**Dimensions**
A: 56cm (22")  B: 61cm (24")  C: 43cm (17")  D: 36cm (14")

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## VisionPro -  Light Years Ahead