Nordson YESTECH’s advanced megapixel technology offers high-speed device inspection with exceptional defect coverage. With high resolution and telecentric optics, M1m inspects bond wires, die placement, SMT components and substrates, all within a footprint less than 1 sq. meter. The M1m can be put in-line with your wire bonders or off-line to support several bonders. A magazine loader/unloader is available for off-line operations.

Programming the M1m is fast and intuitive. With CAD data input, a complete recipe can be completed in less than 1 hour*. The offline programming option allows the engineer to create complete recipes at any remote location, without affecting production.

The M1m utilizes several image processing algorithms to perform a multitude of inspections historically performed manually by operators using eyepiece microscopes. Real-time color, normalized gray scale correlation, pattern matching and binary “blob” analysis are just a few of the tools used to automate the process.

Nordson YESTECH’s M1m also provides you with SPC data, defect reports, offline defect classification, offline rework capability and even archived images of every device you inspect. In addition, Nordson YESTECH also provides free software upgrades for the life of the system.

Features:
- Megapixel color imaging
- High magnification top-down viewing camera
- Quick set-up
- High speed
- High defect coverage
- Low false failure rate

Automated Inspection for:
- Missing / damaged wires
- No stick / off pad
- Epoxy defects
- Die defects
- Bump / ball defects
- SMT defects
- Contamination

* Programming time varies depending on complexity of the assembly.
Specifications

Model
M1m

Inspection Capabilities
Throughput:
75-125 sq. mm / sec.
Maximum Inspection area:
350mm x 250mm x 25mm XYZ (14 x 10 x 1 in.)
Device Types:
JEDEC, MCMs, Hybrids, FlipChip, BGA, microBGA, MEMs, waffle packs
Defects Detected:
Wires: missing, damaged, no stick, off pad, club foot, lifted
Die: missing, wrong, polarity, chipped, cracked, contamination
Part: position, missing, wrong, polarity, skew, tombstone
Epoxy: contamination, insufficient, excessive, bridging
Solder: contamination, insufficient, excessive, bridging

Software
Algorithms:
Color, OCV, OCR, barcode recognition, both image and rule-based algorithms
Data Requirements:
ASCII Text, X-Y position, part #, ref. #, polarity
Aegis, Unicam, Fabmaster, YESTECH CAD Utility
Operating System:
Windows 7
Off-line Software:
Optional - Rework, Review and Program Creation
Optional - Real-time local and remote

Hardware
Material Handling:
SMEMA, dual direction auto width conveyor, pass / fail signals, board clamping
Conveyor Length:
876mm (34.5 in.)
Conveyor Height:
950mm + / - 35mm (37.5 + / - 1.3 in.)
Proprietary Fusion Lighting™ multiangle LED
Imager:
5 megapixel color camera (1.15 to 9 micron pixel size)
Resolution 2448 x 2048; 3 micron pixel size standard
Optics:
Proprietary high resolution, low distortion with coaxial illumination
Optional
Magazine Loader / Unloader:
Optional
Large FOV secondary Camera:

Facilities
Power:
100-240 VAC, 50/60 Hz, 10 amps
Air input:
60 to 90 PSI (0.4 to 0.6 Mpa), 2 CFM
Footprint:
876mm x 1010mm x 1400mm (34.5 x 40 x 55 in.)
Weight:
770 kg (1700 lbs)