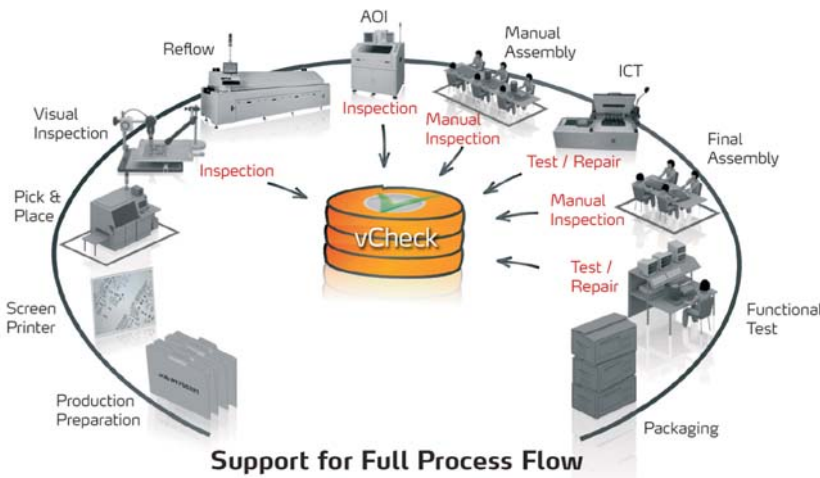


vCheck



vCheck provides support for the full process flow.

Major product benefits

- Helps protect your brand name
- Comprehensive management of all manufacturing quality information
- Complete real time visibility of quality performance
- Faster resolution of repair issues
- Drives Zero defects — no waste
- Increased Inventory Turns — reduced WIP
- Higher Overall Equipment Efficiency (OEE)
- Improved customer satisfaction
- Six-Sigma and TQM support
- Flexibility in choosing inspection and test technology

Overview

vCheck is the quality management system at the core of the Mentor Graphics manufacturing execution suite for dynamic assembly. This system was developed specifically for electronics manufacturers who need to minimize the occurrence of non-quality and drive their manufacturing process to optimal performance by balancing quality, throughput and cost.

Feature Summary

- Automated interfaces to AOI, AXI, and ATE equipment
- Efficient data collection from Manual inspection stations
- Paperless diagnosis and closed loop repair
- Full test history for each board and assembly, including repair loops, is stored in knowledge base
- Knowledge base recommendation for best repair action including Causer operation analysis to speed through failure confirmations
- Multiple alarm levels with programmable thresholds
- Alarm communication via Email or SMS
- Repair actions verification
- Forces 100% testing of a lot if sample testing indicates that the AQL (Acceptable Quality Level) will not be met
- Work In Process tracking of every work order, board and system being inspected, tested, and repaired
- Full box-build genealogy including capture of multi-level BOM from ERP
- Complete device/work order history for field return, warranty management and RMA support
- Automated document delivery of specific test, inspection instructions and process/assembly operations to manufacturing operators
- Optional confirmation that operator has viewed instructions Tools for importing and editing operation plans
- Process route enforcement generates alarms if defective boards or assemblies continue through the process without being successfully repaired
- Full range of quality reports: Yield, Pass/Fail, Defect Pareto, DPM, First Pass Yield, with drill down analysis
- Web based reporting
- Interfaces to ERP systems
- Work Order management, support for manufacturing process and procedures

Keeping an eye on KPIs

vCheck is a fully featured quality system designed to increase profitability and customer satisfaction by making all aspects of quality testing and inspection visible to any decision maker. Your Key Process Indicators (KPIs) are optimized through the use of vCheck's core features:

- Quality Monitoring for manual and automated inspection and test (AXI, AOI, ATE)
- Tracking WIP as the PCB and system move through test, inspection, and repair
- Repair Loop management
- Knowledge based failure corrections
- Quality reporting and drill down analysis
- Process routing enforced by test and inspection results
- Automated alarms and communication tools

Quality in Your Manufacturing Execution

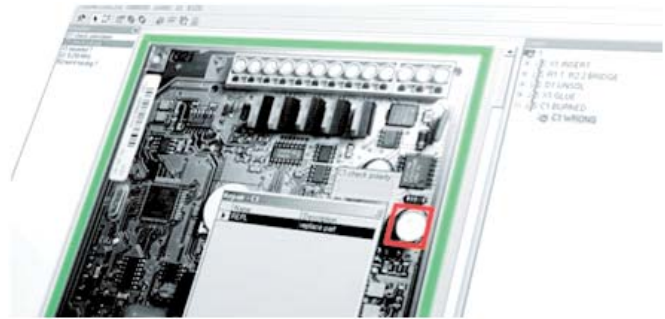
vCheck is designed to function as a stand-alone application, or as part of a larger MES suite. Either way vCheck stands watch over the quality of your operation based on three key technological pillars.

Accurate Real-Time Quality Data Collection

vCheck provides automated interfaces for ATE, AOI, and AXI production gear, plus tools for quality data collection at manual inspection stations. All collected information is captured in one centralized comprehensive database. In addition, vCheck provides essential data capture for WIP tracking at ANY inspection, test, or repair location in the factory.

Quality Analysis and Reporting

vCheck minimizes the time products spend being repaired through its industry leading tools for analyzing and repairing



Complete visual information using photographs overlaid on top of CAD

defects. The foundation of the system is a comprehensive historical knowledge base that guides the operator's actions. For each defect, the system analyzes all similar issues that have been found in the past and recommends the repair action that has been most successful at resolving the defect.

By using the system at all inspection, test and repair stations, vCheck provides full real time visibility to the operation's quality information, and the basis for detailed analysis of historical quality performance. When combined with the WIP tracking capabilities of vCheck, an operation gets a good overview of its inventory flow and bottlenecks enabling it to continuously improve its overall efficiency.

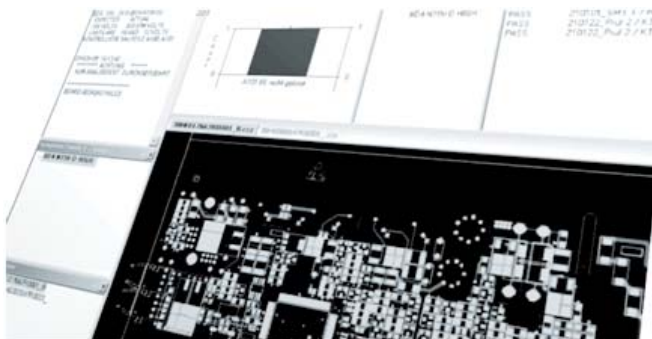
Quality Assurance Tools

vCheck provides production control capabilities through its quality focused enforced routing – making sure that a defective product is repaired before further assembly or being shipped. If an error is detected in the process an alarm is immediately triggered which guides the operator to where the product should be.

vCheck can also trigger alarms due to a fall in performance parameters (such as First Pass Yield), and unmet AQL levels. Alarms can be sent via email or SMS to key operators and higher ranking managers to ensure corrective actions are taken before problems escalate out of control.

System Requirements

- Windows 32-bit systems
- Windows 64-bit systems



Paperless Diagnosis and Repair

To learn more, call Mentor Graphics or visit our web site at www.mentor.com/pcb.

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