



SIMPLE • POWERFUL • AFFORDABLE • MES (Manufacturing Execution Software)

May 2016

The KwikTic Advantage

KwikTic's *'Keep It Simple'* design philosophy is the perfect fit for process engineers, assemblers, operators and executives. The system is designed for ease of use and very quick implementation which means your life gets easier, and your return on investment starts on day one.

Scalable Implementation

KwikTic is everything you need and nothing you don't. Sized to your needs the system supports individual processes or site wide needs. You can start small and grow later or outfit your whole facility right from the start.

Full Featured and Powerful

KwikTic touches every major food group in MES automation building greater awareness, process control and accountability. It's design is familiar and intuitive to your team, professional and polished.

Compatible

Whether its PCB, sub-assembly or final assembly KwikTic can help. Serialized or batch build, we're parent-child friendly and we communicate with assembly, inspection and test machines, and your MRP. In addition to our standard functionality, we'll quickly customize specifically for you.

Lowers Your Cost Boosting Profit

Improving quality and saving time means lower cost. KwikTic improves efficiency and drives out cost boosting profitability and maximizes potential.

Affordable

MES isn't just for big companies anymore. You'll be amazed how powerful and cost effective our system is.

It fits into any size budget and delivers the industry's best R.O.I and *'Price to Performance'* ratio.

We even have flexible, no pain, subscription plans.



In This Document

- KwikTic Advantage
- MES Benefits Summary
- Function Overview
- How To Get Started



KwikTic Benefits

- Increase Productivity and Accountability
- Continual Process Improvement
- Simplify-Go Paperless
- Save Time Maximizing Capacity
- More On-time Deliveries
- Competitive Differentiator
- Drive Out Cost

KwikTic Feature Summary

Enable Transparency with Real Time Data

'Real Time' data access and customizable dashboards keep you informed, and 'deep dive' data filtering provides in-depth information to drive decisions.

Paperless Work Instructions

Eliminate cumbersome paper systems, go digital ensuring everyone has current information, changes are immediate and supporting media like PDF, pictures and video are at your teams fingertips reducing build time, improving quality and reducing the skill set required.

Enforced Process Routing

Ensures your products are assembled the way you want them to be-
Built Right The First Time.

Traceability and Accountability

Whether its by bar code or batch, assembly history is traceable and recalled in seconds. Every 'touch' of the product is documented immediately and historic data is easily reported. Auto import of AOI and ICT simplifies and increases defect and re-work management. We can even print your bar code labels.

Reporting Ease and Depth

Reporting is limitless. Zero in by any number of data points like component type, model, date range, defect type, part number and others. Data is easily exported for inclusion into reports eliminating time consuming manual data mining.

Ease of Use and Rapid Implementation

It doesn't get any easier than KwikTic. Adding your products is quick and easy. Product BOM, CAD, pictures and video are imported in less than five minutes

Contact us today to learn how we may help you realize your manufacturing goals.

Getting Started

Getting started is easy, contact us today to talk about your goals and needs.

A simple live demo webinar is all it takes to see how KwikTic can help improve your productivity.



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System Design

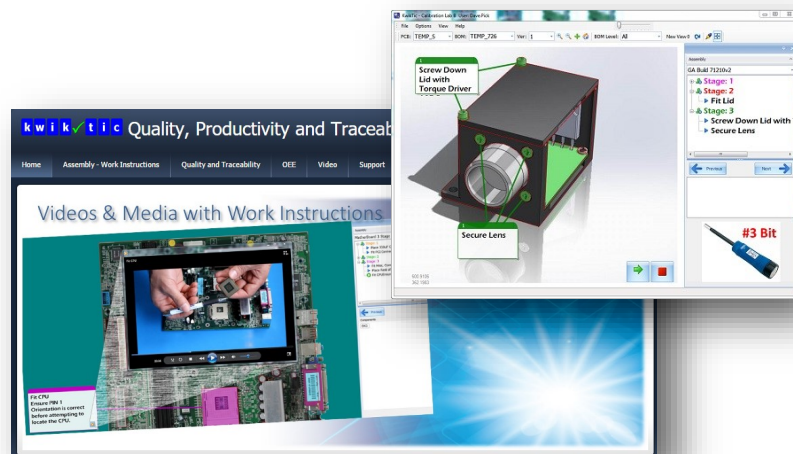
Broad Bandwidth and Practical

- The right fit for small to mid-size customers wanting higher levels of control and performance, and large companies searching for flexibility, customization and lower cost
- High powered, full functionality, easy to use-affordable
- Designed by process engineers for the shop floor user
- PCB assembly, sub-assembly and box build
- Use standalone or integrated to MRP
- Scalable to individual processes, assembly lines or complete facilities, and you can grow as you go
- Easy to get started, fast to implement, results in days, not months
- One single data base; MS SQL server
- Windows 7, 8, 10 recommended
- Can be integrated to MRP/ERP
- Industry 4.0 compatible
- Wizards and Pull Down menu's make it easy to use and intuitive
- Flexible licenses provide convenient access everywhere in your facility-no dongles required
- Full featured functionality right out of the box

Keep It Simple

KwikTic is designed to make it easy to meet today's and tomorrow's challenges.

We help you solve problems, improve productivity, eliminate paper, understand what's happening, build with confidence, enable compliance and enjoy peace of mind.



Suitable for mechanical or PCB assembly



Digital Work Instructions

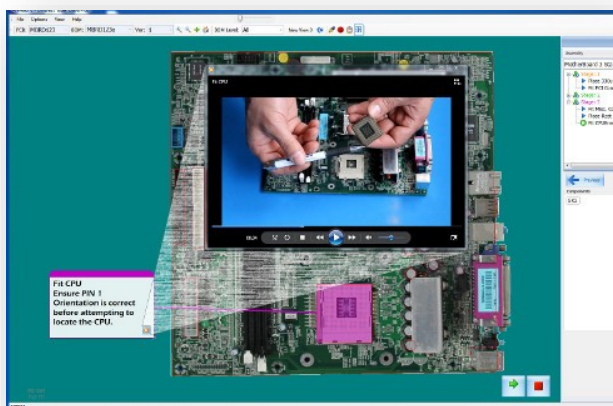
Build It Right The First Time

- Import BOM, CAD and pictures to program your product in minutes. Compatible with all modern CAD formats. Overlay CAD onto product pictures correlating location, reference designators and part numbers.
- Version control ensures assembly information is always up to date, and producing new work instructions is easy by simply importing a new BOM. Instructions are generic to a product and references the part numbers from the new BOM.
- Create work instructions within the application—point and click, copy and paste from popular applications like MS Word to automatically create them for you, or download them from your MRP
- Attach media to supplement instructions including pictures, PDF's, documents, video and others
- Easily accommodates panelized PCB's
- Digital documents are easily stored in a centralized location and recalled for use anywhere on site eliminating physical storage and hunting for them when you need them. They also ensure everyone has current documents
- Editing, adding variants and revision control are easily managed
- Export centroid files for use with other machines on the assembly line like component placement machines
- Integrate work instructions with light guided parts bins to assist the assembler in selecting the part from the right pick location

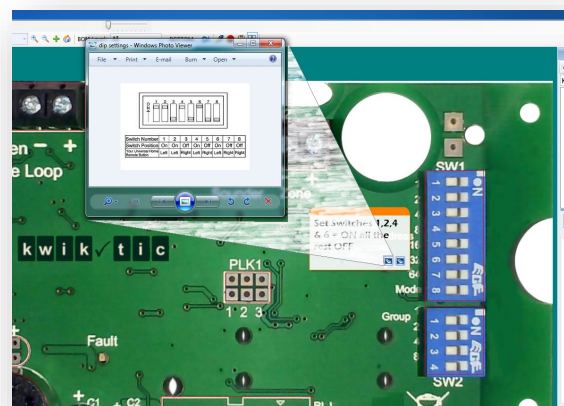
Go Paperless

Digital Work Instructions train and guide assemblers step by step.

We eliminate cumbersome paper systems, ensure everyone has current information, changes are immediate, embedded media is at your fingertips reducing build time, improving quality and reducing the skill set required.



Instructional video within work instruction



Switch setting document within work instruction



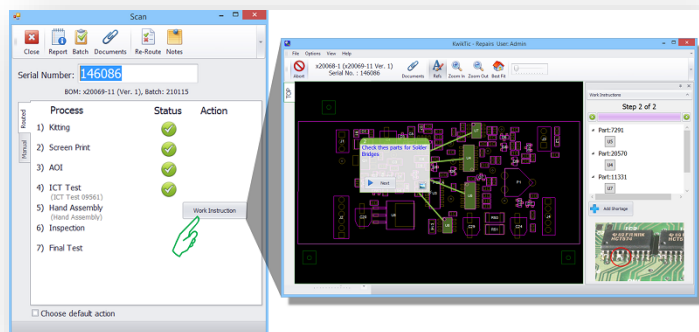
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Enforced Assembly Routing

Ensures Correct Process In Use

- Create product routing in minutes within the application, or synchronize them with your MRP
- Every step and activity is immediately documented and can be viewed and reported in real time or historically
- Collect test and inspection data throughout the process manually or automatically
- Programmed target time for each assembly step is compared to actual time to measure and improve productivity, and eliminate bottlenecks
- KwikTic Batch manager sets up production orders by batch or serial number, or import schedules from your MRP system
- Serial number association easily manages assemblies within assemblies (parent-child relationship)
- Part shortages can be reported and re-ordered from the work station to the stock room to maximize up-time and throughput
- Set user rights limiting accessibility and activities to qualified people. Activities documented by user name.
- See the status of all your products in just a couple of clicks
- Compatible to any kind of assembly mechanical , PCB or box build

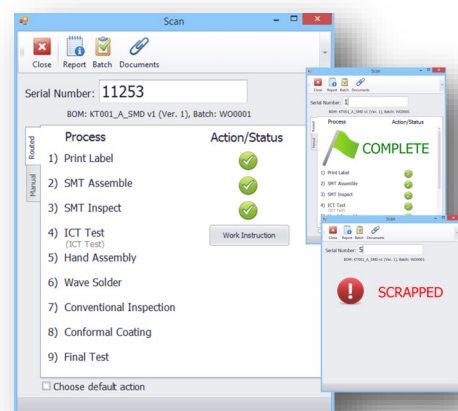


Process routing with work instruction access button

The Right Path

Enforced assembly routing ensures your products are assembled the way you want them to be — built right the first time.

Increased process control improves quality, builds confidence and greater customer satisfaction.



Samples of routing messaging



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Traceability and Accountability

Real Time and Historic

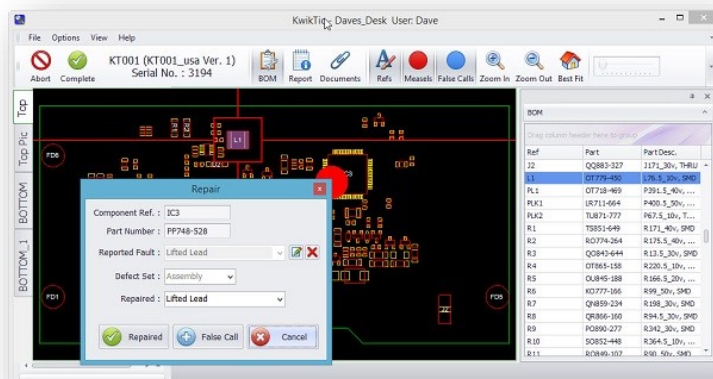
- Suitable for tracking material, assembly, inspection and test steps
- Compatible to both batch and serialized processes
- Every touch of the product is documented immediately
- Access material, product and assembly details in *Real Time*
- Especially good at managing test and repair loop. Shows historic reasons for component failure to improve repair times.
- Serial number association documents assemblies within assemblies (parent-child relationship)
- Enter serial numbers manually, by hand held or fixed bar code scanners. The system can generate bar code labels.
- Enter notes and use local hand held cameras to attach pictures to assembly steps and record them into product history and reporting
- Seamlessly import test and inspection data directly from other equipment like AOI and ICT
- Complete in-depth reporting capability including serial number, product, date range, others
- User name (operator) reported with all activities

Transparency

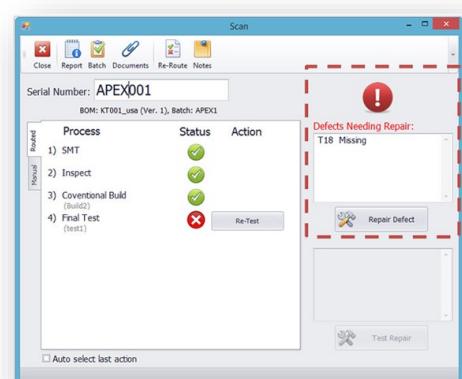
Demands for higher levels of traceability and accountability are increasing across multiple market segments.

No longer is the requirement associated with just the traditional high reliability automotive, medical and military segments.

Regardless of your industry or customer need KwikTic's solution provides the transparency to meet the demand.



Defect validation page comparing defect reported to defect found, location on PCB, part number, description, reference designator



Each time a product is handled current status is obvious to the user, including any outstanding issues



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Test and Repair

Smart, Efficient and Controlled

- All data is effortlessly collected with single point and click GUI (graphical user interface) or automatically
- Logs individual names of people involved in the process
- Import defect data from sources like AOI, ICT and visual inspection
- Validate the reported test or inspection fault description and permit the re-work operator to change the fault. For example from 'bent lead' to 'solder bridge', or 'wrong polarity' to 'false call', increasing accuracy and pinpointing the real fault. Record both original and validated defect.
- Record corrective action for reporting and future re-work use
- Provide the repair person with the history of previous corrective action and highest probability solution to simplify and shorten the repair process
- Record user specific data like soldering iron temperature, type of solder paste used, voltage reading, etc
- Easily capture 'before and after' pictures as proof of repair
- User authority settings only allow qualified people to do the repair work or change the defect repair status
- Records all repair data for reporting like defect type, reported and actual fault, corrective action, repair time
- Easily generate reports like worst offenders, faults by part number, percentage of failure and many others

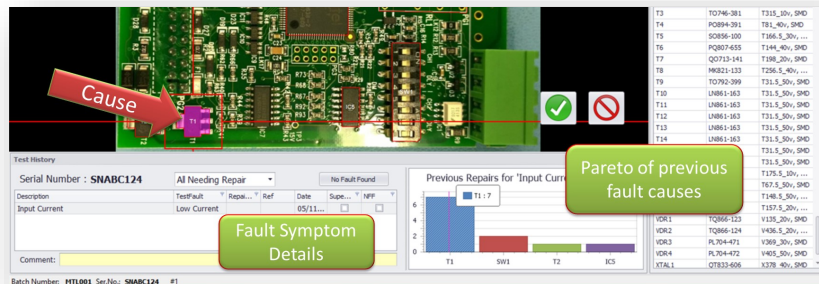
Smart Repair

KwikTic is especially good at managing the repair loop.

Eliminate the need for sticky notes and paper arrows, and the head scratching associated with product repair.

KwikTic provides a smart, fast, 'point and click' user experience.

And with KwikTic's paperless data trail we'll transform your re-work process into a quick, tight, accountable process, and lower the skill set required to perform re-work.



Shows common reasons for failures requiring lower skilled workers, speed up test diagnostics and reduce re-work time

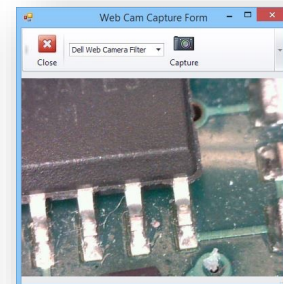


Image captured and logged at re-work stage



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Reporting

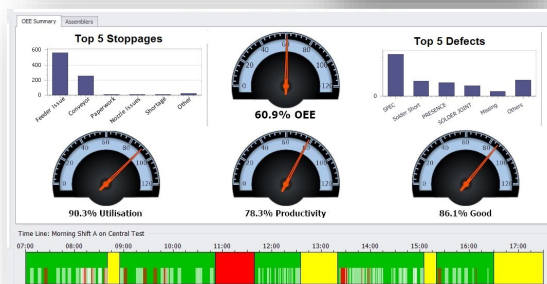
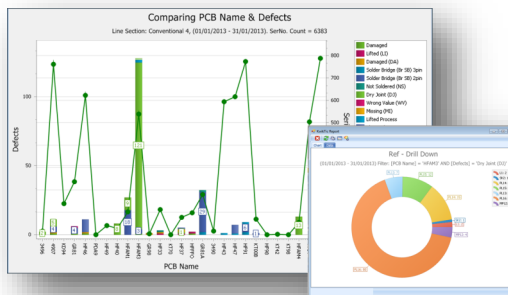
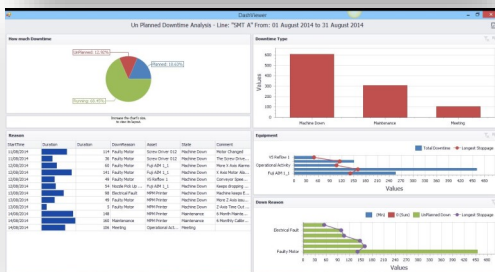
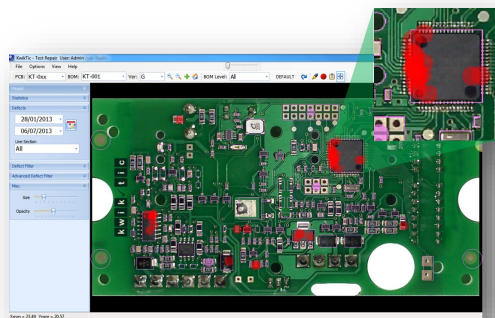
In God We Trust—All Others Bring Data

- Flexible report generation and drill down is limitless. Quickly identify and understand issues and trends
- Simply scan or type a serial number to view detailed history in seconds.
- Twenty standard reports allow you to sort and filter data with literally hundreds of combinations
- View data spreadsheet style, by chart, line or pie, and even by a 'Measles' graphic allowing you to quickly zero in on targets
- View trends and comparisons, problem areas, biggest offenders, date range, productivity, line and asset utilization, defect, traceability, first pass yields, operator performance, downtime, OEE, DPMO, and others
- Standard and custom dashboards provide quick, intuitive, 'At a glance' updates
- Reports are generated in seconds, and easily exported in common formats like JPG, PDF, Excel and others making inclusion into your internal and external reports easy

Useable Data

KwikTic provides a suite of relevant reports to help you quickly understand what's happening.

We include more than twenty standard reports with multiple filters to provide 'Real Time' and historic information helping you understand and improve business performance.





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Sample 'Real Time' Build Report

Standard report generated simply by typing a serial number or scanning a bar code label

Standard serial number report—product name, model, revision, product, group, image

Complete process history, list of all activities, time stamp, assembly step, user name

All test and inspection data automatically imported including calibration results

Serial Report

SP10752

PCB Name: KT-012

Product: KT-001-A2

Version: 3b

Group A: Sensor Interfaces

Group B: PCB

Panel Info: Pos 5 : 3 x 2

Activities

22/11/2012 12:16:41

SMT Inspect :SMT 1

Alan.Lewis

Panelised

26/11/2012 08:24:45

SMT Inspect :Reflow

Judy.Peters

Inspect/Repair

26/11/2012 08:27:47

SMT Inspect :SMT Inspection

John.Smith

Inspect/Repair

Defects

C93

Missing

Reported as: Many Bridges

Repairs

C93

Many Bridges

Reported as: Many Bridges

03/12/2012 10:52:38

Station Programming

Simon.Nelson

Test

Test Results (All Passed)

Cal Upload

16

stt456MK4_PCB_SelectCodeVersion

CODE_VERSION

1.47

LCC

103

03/12/2012 10:52:39

Station CAL UL Test

Ian.Edwards

Test

Test Results (All Passed)

Cal Upload and Sens Test

17

PCB_DFU_DeviceFound

PROGRAM_TYPE

FULL_PROGRAM

18

PCB_BootLoaderProgrammed

PROGRAM_TYPE

FULL_PROGRAM

19

PCB_BootLoaderVerified

PROGRAM_TYPE

FULL_PROGRAM

20

PCB_ApplicationProgrammed

PROGRAM_TYPE

FULL_PROGRAM

26

PCB_ApplicationVerified

PROGRAM_TYPE

FULL_PROGRAM

27

PCB_LanguagesProgrammed

LANGUAGE_SET

SET0001

LANGUAGE_VERSION

1.13

21

PCB_StartFinalise

GAUGE

456 MK4

PROGRAMMING_DATE

03/12/2012 10:56:09

PCB_SERIAL_NO

ML18552

FRONT_MAT

Ferrous

PROBE_TYPE

Separate

22

LightSensorTest

LIGHT_SENSOR_OFF_VALUE

761

LIGHT_SENSOR_ON_VALUE

1054

LIGHT_SENSOR_DIFF_VALUE

293

LIGHT_SENSOR_LIMIT

50

28

PCB_BluetoothTest

BT_ADDRESS

00:0B:CE:09:5A:E6

BT_PIN

25777

CHECK_BUILD_VERSION

False

29

PCB_TemperatureSensorTest

TEMPERATURE_SENSOR_VALUE

24.87

TEMPERATURE_SENSOR_LOW_LIMIT

10

TEMPERATURE_SENSOR_TOP_LIMIT

40

25

stt456MK4_PCB_ProgrammingComplete

Defect and repair status logged including user name, shows both repaired and reported defects

Defect photos attached to report, photo's correlate to bridges reported in defect log

Can also show associated serial numbers of child or parent assemblies / components



Financial Impact

Build More Good Product Per Hour

- There are many ways KwikTic will impact your business and assembly floor including shorter cycle times, higher yield, reduced re-work, more production time and on-time shipments.
- Return on Investment typically in six to twelve months, or less
- Here's an example of financial impact:

Product: 25 user licenses, \$45k investment

Modest performance gains: 1 second reduced cycle time, 0.5% yield increase, convert 1 hour additional production time, product cost \$66, product sell price \$71

Capacity increase of 5.5%

Profit increase of 5.4%

Return on investment in less than one year

Your Bottom Line

Even small improvements in efficiency can have a dramatic impact on financial performance.

Productivity and profitability go hand in hand.

Let us run your numbers to see how KwikTic's solution can impact your business.

KwikTic Financial Impact Scenario		
Number of shifts	1	
Investment (USD)	\$ 45,000	
Variable: Average cycle time reduction (seconds)	1	
Variable: Yield improvement (percentage)	0.50%	
Benefit: Capacity increase (percentage)	5.48%	
Benefit: Profit increase (percentage)	5.4%	
Return on Investment Payback	11.2 (months)	
Assumptions	KwikTic NO	KwikTic YES
Purchase Price (\$ USD)	0	45,000
Average line cycle time (seconds)	35	34
Yield first pass (%)	93.0	93.5
Hours per week	40	40
Unused time (set-up, changeover, etc.)	4	3
Unit rework cost (\$)	15	15
Selling price of Customer product	71	71
Depreciation (%)	0	100
Years of depreciation	5	5
Maintenance / year	500	100
Financial Impact		
Number of Units/ year	192,549	203,718
Unit cost (\$)	66	66
Unit Profit (\$)	5.00	4.95
Total Profit (\$)	894,851	943,280
Total increase in profit (\$)		48,429
% Increase in profit		5.41%
ROI (in years)		0.929



Financial R.O.I modeling tool designed to determine the effect of variables on manufacturing environment. Especially good with PCB assembly



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United Kingdom and Europe

KwikTic HQ
Dave Pickavance
+44 (0)7852 293999
dave@kwiktic.com

North America Manager

Jeff Mogensen
508.878.8267
jeff@utopiasalespartners.com
www.kwiktic.com

Local Representative



MurrayPercival "We know how..."

Murray Percival Company
800.405.1730
orders@murraypercival.com