

Teardown Analysis

Know Exactly What Your Competitors Are Building

Critical Questions Answered

- How competitive are our designs from a technical perspective?
- Where does our competition stand in terms of design sophistication?
- Are our costs in line with those of our competitors?
- How much does it cost our competitors to add certain product features?
- How can we better position and differentiate our products?

Who Should Use This Tool?

- OEMs
 - Market Research Managers
 - Competitive Intelligence Managers
 - Strategic Product Marketing Managers
 - Strategic Design / Technical Managers
 - Strategic Purchasing Management
- Component Manufacturers
 - Strategic Product Marketing Managers
 - Market Research Managers
- Service Providers
 - Strategic Purchasing Management

The teardown analysis service from iSuppli provides complete, detailed analyses of electronic devices such as wireless handsets, digital cameras, PDAs, or laptop computers. iSuppli delivers a complete assessment of all electronic, electro-mechanical, and mechanical components. This iSuppli service is the ultimate competitive benchmarking tool -- providing the highest quality view available of the design and manufacturing of competing device models, as well as the costs to build the equipment.

The teardown analysis is presented online to provide users maximum flexibility in reviewing and using the teardown information. Included are: photo analysis, summary analysis, component cost tables and graphical representation, and a downloadable Bill of Materials (BOM) Excel file.

The screenshot shows the iSuppli iLibrary interface for a teardown analysis of the HTC Magic (Vodafone) Mobile Phone. The page is titled 'Teardown > HTC Magic (Vodafone) Mobile Phone' and includes a navigation menu with options like 'Log out', 'iLibrary Home', 'News', 'Events', 'Profile', and 'Help'. Below the navigation, there is a 'Download Files' section with links to 'High Resolution Photos - HTC Magic - PCB Assemblies [5.4MB]', 'ABSTRACT - Teardown Analysis 2009 [509KB]', and 'Bill of Materials - HTC Magic G2 Mobile Phone [624KB]'. An 'Executive Summary' section is visible, with a sub-section for 'Overview / Main Features'. The summary text describes the HTC Magic (G2) as the first international version of HTC's pioneering Android-powered smartphone, highlighting its dual-band UMTS/HSDPA and quad-band GSM capabilities, a capacitive touch 3.2 inch display, and a signature mini trackball navigation device. A sidebar on the right titled 'Online Teardown Navigation' provides links to 'Overview', 'Main PCB', 'Display Module', 'Touchscreen', 'WLAN & Bluetooth PCB', 'Box Contents', and 'Other - Enclosures / Final Assembly'. An image of the HTC Magic phone is shown on the right side of the page.

For customer-driven projects, iSuppli conducts a preliminary meeting with the client to assess goals; review standard project scope and deliverables; and establish costs and a timeline for delivery. iSuppli can accommodate a wide variety of specific information requirements, which may be beyond the scope of our 'standard' offering, including such services as functional equipment testing, analysis of modules, silicon die analyses, etc. The service fee does not include the cost of the device being analyzed. Customers are responsible for providing the device for analysis.

Teardown Analysis

Deliverables

The teardown analysis is presented online to provide users maximum flexibility in reviewing and using the teardown information.

Included are:

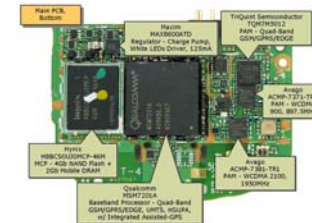
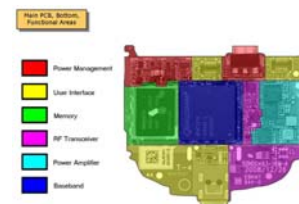
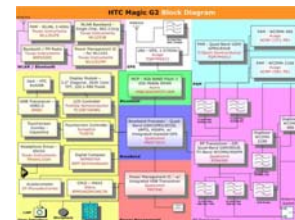
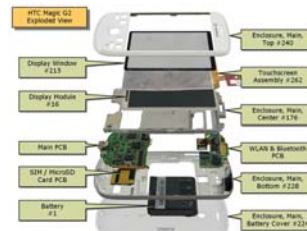
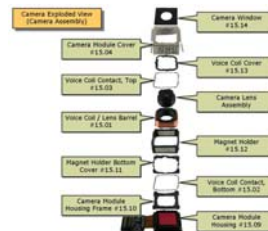
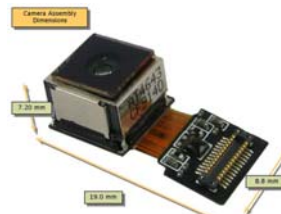
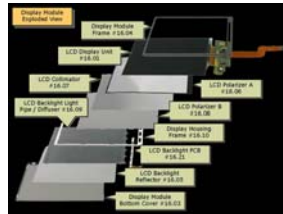
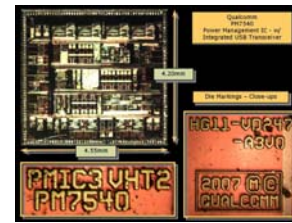
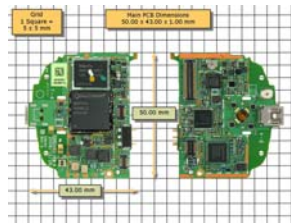
- photo analysis
- summary analysis
- component cost tables and graphical representation
- downloadable BOM Excel file

Photo Analysis

- Exploded Disassembly view of Phone, Display, camera modules, etc.
- Main PCB with Grid Reference
- Block diagrams providing a functional analysis of the device analyzed
- Color coded Functional areas
- Major Component ID
- Microscopic Dies shots and marking photos
- Microscopic Display and image sensor photos
- Close up PCB layer photos
- Annotated digital photos (thumbnail or full size view) of all sub-assemblies -- including printed circuit boards -- highlighting regions by function, manufacturers' names, part numbers, etc.
- Copy and paste either sized picture for customized internal editing and analysis

Summary Analysis

- Commentary from iSuppli analysts is provided for each specific assembly level
- Copy and paste text for customized internal reports



Teardown Analysis



Component Cost Tables and Graphical Representation

- Several analysis tables are available by Assembly, Function, Component Family, and Component Type
- Within each table, Percent of Component Cost, Component Cost, and Quantity are calculated and shown for Direct material cost and Conversion cost
- Download tables in Excel for customized internal editing or copy and paste pie charts for customized internal reports

BOM Excel File

- Provides a complete list of all electronic, electro-mechanical, and mechanical components used with line item details including measurements, manufacturer names, part numbers, component and insertion costs. Multiple spreadsheet tabs are provided with :
 - Analysis of insertion, test, assembly and overall manufacturing costs
 - Notes and explanations of costing methodologies

Downloads

- BOM Excel file
- Zip file of high resolution photos



Teardown - Bill of Materials (BOM)

HTC Magic G2

Index	Model #	Cost Type	Assembly	Location	Function	Component Family
1.0	HTC Magic G2	Direct Material Cost	Battery	Battery	Battery	Battery
1.1	HTC Magic G2	Direct Material Cost	Battery	Battery	Battery	Battery
1.2	HTC Magic G2	Conversion Cost	Battery	Assembly	Assembly	Assembly
3	HTC Magic G2	Direct Material Cost	Box Contents	Accessories	Accessories	Accessories
4	HTC Magic G2	Direct Material Cost	Box Contents	Accessories	Accessories	Accessories
5	HTC Magic G2	Direct Material Cost	Box Contents	Accessories	Accessories	Accessories
6	HTC Magic G2	Direct Material Cost	Box Contents	Accessories	Accessories	Accessories
7	HTC Magic G2	Direct Material Cost	Box Contents	Accessories	Accessories	Accessories
8	HTC Magic G2	Direct Material Cost	Box Contents	Literature & Packaging	Literature & Packaging	Literature & Packaging
9	HTC Magic G2	Direct Material Cost	Box Contents	Accessories	Accessories	Accessories
10	HTC Magic G2	Direct Material Cost	Box Contents	Literature & Packaging	Literature & Packaging	Literature & Packaging
11	HTC Magic G2	Direct Material Cost	Box Contents	Literature & Packaging	Literature & Packaging	Literature & Packaging
12	HTC Magic G2	Direct				
13	HTC Magic G2	Direct				
14	HTC Magic G2	Direct				

Teardown - Country of Origin and Test Assumptions for Cost Estimation

HTC Magic G2

Device

Device Mfr.

Model

Lifetime Production Volume (units)

Confirmed, As Marked. All Others Assumed. Variable Assumptions

Country of Origin

Accessory PCBs

Battery

Box Contents

Teardown - Top Cost Drivers

HTC Magic G2

Model #	Cost Type	Component Description	Manufacturer Part Number	Manufacturing Name	Sum of Total Component Cost \$USD	Sum of Qty
HTC Magic G2	Direct Material Cost	Baseband Processor - Quad-Band GSM/GPRS/EDGE, UMTS, HSUPA, w/ Integrated Assist	MSM7201A	Qualcomm	\$29.25	1
		Display Module Value Line Item - 3.2" Diagonal, 262K Color TFT LCD, 320 x 480 pixels	LS032B7LX02	Sharp Microelectronic	\$22.00	1
		Touchscreen Assembly - 2-Layer Clear Polycarbonate, Printed, w/ Integral Flex PCB		Synaptics	\$14.50	1
		MCP - 4Gb NAND Flash - 2Gb Mobile DRAM	H8ECS0UJ0MCP-46M	Hynix	\$12.00	1
		Camera Module Value Line Item - 3-IMP CMOS, 1/4" Format, Auto Focus Lens			\$9.15	1
		Battery - Li-Ion, 3.7V, 1340mAh	SAPP160		\$5.25	1
		MicroSD Memory Card - 2GB		Sandisk	\$4.90	1
		vLAN - Single Chip, 802.11b/g, WiLink 4.0, 90nm	VL125IB	Texas Instruments	\$3.29	1
		10-Layer - FR4 Substrate, Stacked Via (ALNH), Lead-Free, Halogen-Free		Panasonic	\$3.19	1
		Digital Compass & Accelerometer - 3-Axis	AKM8976A	AKM Semiconductor	\$2.55	1
		Grand Total			\$106.07	10

