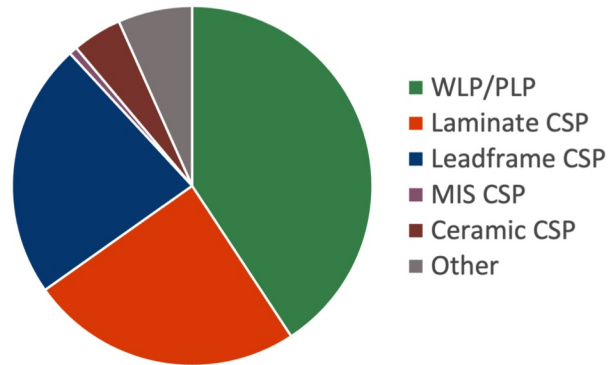


Samsung Galaxy S26 Ultra

Teardown from TechSearch International, Inc.



135 Packages Examined



Contents and Highlights

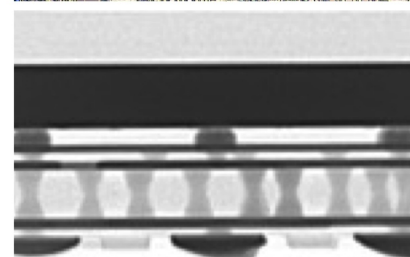
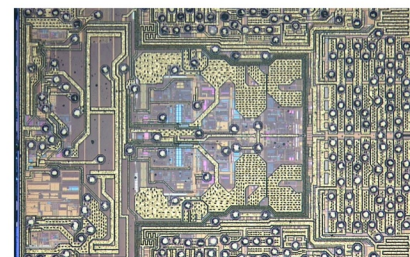
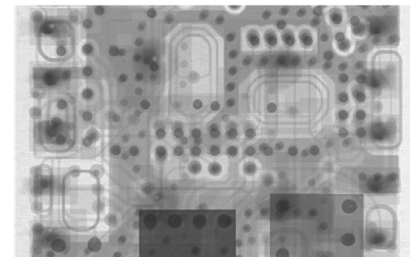
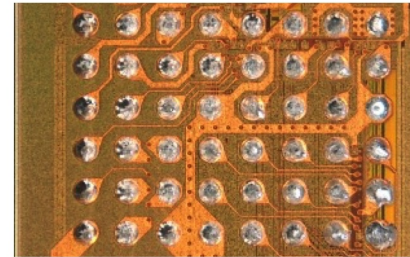
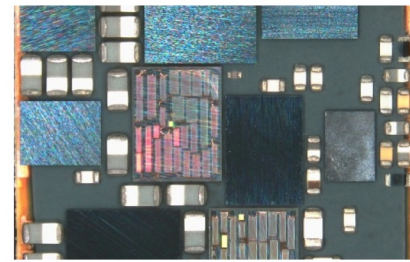
- 197-page report with package quantity summaries, high-resolution photos and x-rays, package dimensions, part numbers and descriptions, and extensive package construction analysis including decapsulation and examination of die extracted from packages
- 21 additional slides with detailed evaluations of technologies used to make new chips like:
 - Qualcomm Snapdragon 8 Elite Gen 5 AP, including die size, bump type, and bump pitch
 - Micron 96Gb LPDDR5X DRAM with eight die arranged in four stacks of two
 - Qualcomm QPM8395 LB FEM with second-gen ultraSAW TFAP filters that use Cu pillars
 - Qualcomm QXM1093 and QXM1096 Wi-Fi FEMs and FastConnect™ 7900 SoC
 - ConvenientPower CPS4059 wireless power receiver, Southchip SC8583 battery charger, and NXP SN330 NFC controller

Teardowns backed by 39 years serving as the industry's trusted source for semiconductor packaging trend analysis

- Examination of all chips with emphasis on assembly and packaging technologies
- Superb quality photographs and x-ray images
- Both the packages and the die within are identified and characterized
- Detailed construction analysis of key chips and packages



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Pages from the report and slides

Samsung Galaxy S26 Ultra

SM-S948U

category Smartphone (high-end)

released Feb 2026



Package quantities (by package type)

WLP/PLP	
Laminate CSP	
Leadframe CSP	
MIS CSP	
Ceramic CSP	
Other	
TOTAL	135

Die quantities (by die interconnect type)

RDL/WLP	
Flip chip	
Wire bond	
Clip	
Ribbon	
TOTAL	61

Total area (mm²)

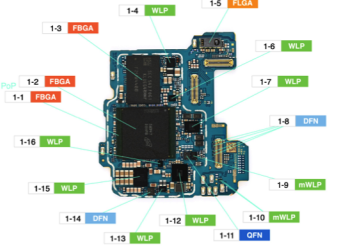
Bare die solutions	included	excluded
Package area		

Package = Any device that has completed final packaging steps, includes all other packaged devices as well as finished packages mounted inside other packages/modules. Connectors/modules not covered in packages. Bare die solutions = Finished devices received directly on boards or flex circuits (e.g., chip on board, chip on flex, chip on substrate, etc.)

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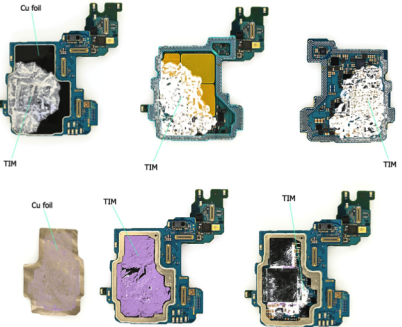
Samsung Galaxy S26 Ultra

ASSEMBLY 1 — Main board 1 side 1



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Thermal Materials on Main Board



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Samsung Galaxy S26 Ultra

PACKAGE QUANTITY DETAILS

Board-level assembled packages

WLP/PLP	
Laminate CSP	
Leadframe CSP	29
MIS CSP	
Ceramic CSP	
Bare die on fgb/b	
Other	
TOTAL	129

Package-level assembled packages

WLP/PLP	
Laminate CSP	
Leadframe CSP	2
MIS CSP	
Ceramic CSP	
Other	
TOTAL	6

Board-level

WLP	
mWLP	
FO-WLP	
FO-PLP	
FBGA	
FLGA	
CSP-L	
QFN	
DFN	
MIS CSP	
CSGA	
CLGA	
CSP-C	
FC	
WB	
Other	
TOTAL	129

Package-level

WLP	
mWLP	
FO-WLP	
FO-PLP	
FBGA	
FLGA	
CSP-L	
QFN	
DFN	
MIS CSP	
CSGA	
CLGA	
CSP-C	
FC	
WB	
Other	
TOTAL	6

Board-level = Packaged devices mounted to boards, flex circuits, etc. during electronics assembly
Package-level = Pre-packaged devices assembled inside other encapsulated packages or modules
L = Laminate substrate; C = Ceramic substrate; fgb/b = flex/glass/board

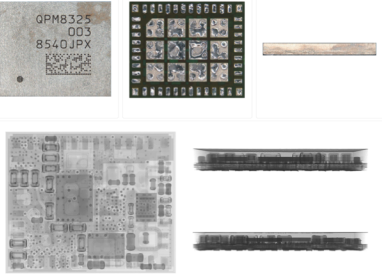
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ASSEMBLY 5 — Main board 2 side 2

5-5 1 Qualcomm RF FEM (LB) QPM8325 RF Analog

FLGA (Laminate CSP)	4.93 mm x 5.91 mm	0.63 mm	0.617 mm	46, 0.4 mm	Flip chip, Shielding (conformal)
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Comet Yxlon provided equipment for X-rays

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Packages with Conformal and Compartmental EMI Shielding

	Galaxy S25 Ultra	Galaxy S26 Ultra
RF front-end module	5 (1 with compartments)	1 (1 with compartments)
5G mmWave module	1	
TOTAL	6	



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Samsung Galaxy S26 Ultra

PACKAGES BY SUPPLIER LOCATION

Supplier HQ

China	17
Europe	
Japan	
Korea	
N America	
SE Asia	
Taiwan	
Other	
unknown	
TOTAL	135

Geographic quantities based on headquarters location of chip suppliers; includes bare die solutions

Chip Type

Analog/Mixed-signal	396.5 mm²
RF analog	
Logic	
Memory	
Sensor-Actuator	
Image sensor	
Discrete	
Opto	
RF Passive	
IPD	
Other	
unknown	
TOTAL	

Measured width x length; includes bare die solutions

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Samsung Galaxy S26 Ultra

ASSEMBLY 5 — Main board 2 side 2

Component Details Die count: 9

5-5-1 1 Qualcomm RF LNA	5-5-2 1 Qualcomm Dual Bi-V RF PA
5-5-3 1 Qualcomm RF switch	5-5-4 1 Qualcomm RF switch
5-5-5 1 Qualcomm TP-SAW filter	5-5-6 1 Qualcomm TP-SAW filter

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List of Packages

PKG	QTY	MANUFACTURER	DESCRIPTION	CHIP TYPE	PACKAGE	SIZE (mm)	CONTACT	PITCH	QFN	PuP	Underfill	Flip chip
1.1	1	Qualcomm	SM8550-AD	Snapdragon 8 Elite Gen 5 4nm AP with X65 modem	FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.2	1	Micron	MT81P100AM-CH0K-C02	96Gb LPDDR5X DRAM	FBGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.3	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.4	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.5	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.6	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.7	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.8	4				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.9	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.10	2				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.11	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.12	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.13	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.14	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.15	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
1.16	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
2.1	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
2.2	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
2.3	4				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
2.4	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0
2.5	1				FLGA	12.20 x 13.79 x 0.90	496	0.4	0	0	0	0

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For pricing, please contact us at tsi@techsearchinc.com