

Keysight Technologies: Connecting the Portfolio

Internal ID: S&F-STR-344

Topic: Customer Strategy, Mergers & Acquisitions, Corporate Strategy

Industry: Electronic Equipment & Instruments

Source: Strategy & Finance

Publication date: 5 October 2026

License: Not specified

Case for classroom discussion. Information cutoff: September 19, 2024, 5:00 p.m. Eastern Time.

A portfolio question

On September 19, 2024, Keysight Technologies announced an agreement to acquire Synopsys' Optical Solutions Group, adding optical design and simulation software to a portfolio already expanding through acquisitions. At the same time, Keysight was integrating ESI Group, had completed acquisitions of Riscure and AnaPico, and was awaiting regulatory clearance for its proposed acquisition of Spirent Communications.

The deals touched different products and markets. ESI added simulation capabilities. Riscure expanded automated security assessment. Keysight said AnaPico would broaden its customer base across several markets, though the acquisition disclosure did not describe its products in detail. Spirent would add communications test and assurance capabilities if the transaction closed. The Optical Solutions Group would add software for optical system design, analysis, simulation, and virtual prototyping, subject to closing conditions.

The strategic thread was a larger role for software in helping engineers design, simulate, validate, and test complex systems. But ownership alone would not make the products work together or persuade customers to buy them as a connected offering. Management would need to decide what to combine, what to keep specialized, and how quickly to do it.

Classroom decision exercise: Assume Keysight CEO Satish Dhanasekaran has asked your team to recommend an operating approach for the next 18 months. This is a hypothetical assignment for discussion; Keysight had not disclosed this specific internal request or a final integration plan by the case cutoff. What should Keysight integrate across its expanding portfolio, what should remain under specialist product and engineering leadership, and what evidence should trigger each next step?

The company and its customers

Keysight sells electronic design and test software, instruments, systems, and related services. Its products support work across the product lifecycle, from simulation and design through validation, manufacturing, installation, and optimization. Customers work in communications, industrial automation, aerospace and defense, automotive, semiconductors, and general electronics.

The company reports through two groups. The Communications Solutions Group (CSG) serves commercial communications and aerospace, defense, and government customers. The Electronic Industrial Solutions Group (EISG) serves automotive and energy, semiconductor, and

general electronics customers. Both groups sell software, instruments or systems, and related services. Keysight also provides automated software testing solutions.

Some integration infrastructure already existed. Keysight said that sales, service, marketing, and technology functions were centralized across its segments to gain scale economies and use resources efficiently. Newly acquired businesses were not charged for these shared services until they were integrated into the company's infrastructure. That arrangement could help support cross-portfolio selling and shared customer support; it also meant that segment expenses and margins could change as integration proceeded. [1]

A difficult demand year, with pockets of investment

Keysight's third quarter of fiscal 2024 ended July 31. Revenue was \$1.217 billion, compared with \$1.382 billion one year earlier. CSG generated \$847 million, down 8%; EISG generated \$370 million, down 20%. Commercial communications revenue declined 6%, while aerospace, defense, and government revenue declined 10%. EISG sales fell across its markets.

Management attributed the pressure to lower customer investment, normalization after strong backlog conversion, and a cautious spending environment. In wireless, particularly smartphones, weakness was partly offset by higher investment in AI workload emulation and data-center network infrastructure. Keysight also reported demand for 400G, 800G, and terabit Ethernet test solutions. EISG customers were delaying near-term manufacturing investment but continued engagement around next-generation electric and autonomous vehicles, industrial IoT, digital health, and advanced semiconductor technologies. These descriptions pointed to both cyclical and technology-specific demand; they did not show how long either trend would last. [1, 2]

Exhibit 1. Q3 FY2024 segment snapshot

USD millions, except margins	Q3 FY2024	Q3 FY2023	Year-over-year change
Total revenue	1,217	1,382	–12%
CSG revenue	847	918	–8%
EISG revenue	370	464	–20%
CSG segment operating margin	26.3%	30.0%	–3.7 percentage points
EISG segment operating margin	20.1%	33.9%	–13.8 percentage points

Source: Keysight FY2024 Q3 Form 10-Q, MD&A pp. 31-35; Q3 results release. Segment operating margins are issuer-defined measures that exclude stock compensation, acquisition amortization and integration, restructuring, interest, and other items. Figures are rounded. The company attributed lower margins to lower revenue, unfavorable mix, and higher spending, including costs from acquired businesses; the table alone does not isolate the effect of acquisitions. [1, 2]

Cash and investment decisions added another constraint. At July 31, cash and cash equivalents were \$1.632 billion. For the first nine months of fiscal 2024, operating cash flow was \$693 million, down from \$1.030 billion a year earlier. Keysight estimated 2024 capital spending at approximately \$150 million, primarily for capacity expansion and technology investment. Its third-quarter filing also said it had repurchased \$289 million of stock over nine months. Spirent

was to be financed with a new bridge facility according to Keysight's transaction presentation. The cash balance, cash-flow period, planned capex, and an acquisition financing commitment were different measures and dates; they did not by themselves establish the capacity or return of a new investment. [1, 3]

Five transactions, three different statuses

Keysight's portfolio expansion combined completed purchases and conditional agreements. The disclosed net-of-cash consideration for the three completed acquisitions below totals \$1.130 billion. That sum is derived from separately reported deal amounts and does not measure their enterprise value or comparable returns.

Exhibit 2. Acquisition timeline at the case cutoff

Business	Status on September 19, 2024	Disclosed consideration / strategic description
ESI Group	Acquired in November 2023; remaining shares acquired in January 2024	\$935 million net of acquired cash; added simulation capabilities. For the nine months through July 31, ESI contributed \$119 million revenue and a \$47 million net loss attributable to Keysight shareholders.
Riscure	Acquired February 21, 2024	\$78 million net of acquired cash; expanded automated security assessment for semiconductors, embedded systems, and connected devices.
AnaPico	Acquired June 12, 2024	\$117 million net of acquired cash; Keysight said it would expand its customer base in chipset, device, automotive, aerospace, defense, and government markets. The acquisition note did not specify product capabilities.
Spirent Communications	Recommended offer agreed March 28; Spirent shareholders approved the transaction May 22; regulatory conditions remained	199 pence cash per share plus a 2.5-pence special dividend; approximately \$1.463 billion fully diluted equity value. Keysight planned a new bridge facility.
Synopsys Optical Solutions Group	Definitive purchase agreement announced September 19; conditional	Price and target financials were not disclosed. Closing was subject to regulatory review and completion of Synopsys' proposed Ansys acquisition.

Sources: Keysight FY2024 Q3 Form 10-Q, Note 2 pp. 8-11 and MD&A p. 36; Keysight March 28 Spirent release and transaction presentation pp. 2-3; Spirent 2023 Annual Report; Keysight September 19 Optical Solutions Group release. The ESI loss includes purchase accounting and other effects that the cited filing does not isolate into a normalized standalone operating result. [1, 3-6]

ESI and the limits of early performance data

Keysight completed the ESI Group acquisition for \$935 million net of cash acquired. The 10-Q reported \$119 million of incremental ESI revenue for the first nine months of fiscal 2024 and a \$47 million net loss attributable to Keysight shareholders. The same filing recorded \$447 million of amortizable intangible assets and \$47 million of in-process research and development. It assigned ESI goodwill to both CSG and EISG based on expected benefits and synergies.

These figures showed the scale of the acquisition and its early accounting contribution, but they did not establish a normalized ESI margin or whether simulation was generating cross-sell. The disclosure did not separately reconcile standalone economics, purchase accounting, integration allocations, and customer-level returns. [1]

Spirent: an attractive adjacency with a weak recent year

Spirent supplied testing and assurance products primarily for communications. Keysight described the proposed combination as a way to complement automated test and assurance capabilities in networks, cybersecurity, and positioning; expand its serviceable market; and offer more solutions across communications, automotive, and aerospace and defense. The company estimated up to \$1.5 billion in new serviceable available market and said the acquisition should become accretive to gross and operating margins after integration, driven by SG&A efficiencies. Those were management's estimates and expectations. The materials did not give a reconciled synergy bridge, buyer return hurdle, or downside case. [3]

Spirent reported \$474.3 million revenue in 2023, down from \$607.5 million in 2022. Adjusted operating profit fell to \$45.2 million from \$129.5 million. It reported a \$293.7 million year-end order book and \$108.1 million cash. Its annual report attributed the lower revenue largely to delays in telecom customer expenditure amid inflation and slower growth, while describing progress in positioning and financial services. The order book provided a demand indicator but did not guarantee revenue conversion or margins. Spirent's adjusted operating profit was its own non-GAAP measure and was not directly comparable with Keysight segment operating income. [4, 5]

Spirent shareholders approved the offer in May, but the deal remained subject to regulatory and other conditions at the case cutoff. Students should evaluate the proposed transaction as conditional; they should not assume completion or later remedies. [1, 3]

Optical simulation: a new software adjacency

The September 19 agreement with Synopsys would add optical system design, analysis, simulation, and virtual prototyping software. Keysight said those capabilities complemented its positions in RF and microwave electronic design automation and physics-based computer-aided engineering, and that combining design software with hardware test could help customers predict real-world performance and shorten development time.

The agreement was conditional, including on regulatory review and the successful closing of Synopsys' proposed acquisition of Ansys. Keysight did not disclose the purchase price, the target's revenue or margins, customer overlap, expected synergies, or an integration plan. Its strategic rationale suggested how the portfolio might fit; the public information did not quantify the economics. [6]

The integration choice

Keysight could organize around a more unified engineering workflow, using common platforms and commercial teams to connect simulation, design, test, security, and assurance. This could help customers move between stages and make the full portfolio easier to sell. It could also create greater demands on product roadmaps, pricing, customer support, and specialist teams while near-term spending was already weakening.

A more federated approach could preserve acquired product identities, engineering methods, and customer relationships while allowing technical interoperability and shared account coverage where customer needs justified them. This could reduce disruption and protect specialist knowledge, but it could also slow cross-selling and leave overlapping functions or fragmented customer experiences.

Between those positions, Keysight could integrate in stages. It might begin with a small number of customer workflows or product connections, retain specialist product ownership, and expand common selling or infrastructure only when customer adoption, employee retention, product delivery, and incremental economics support doing so. A staged approach would require management to define in advance what evidence counted as success and what would cause it to pause or change course.

Keysight itself had identified risks in integrating products, infrastructure, pricing, contracts, service, and support, as well as retaining key employees and customers. It also warned that expected synergies or growth might not materialize. The company had not disclosed a public set of integration metrics or customer-level adoption data. [1]

Assignment

Prepare a recommendation for Keysight's senior leadership team as of September 19, 2024:

1. Choose an operating approach for integrating the acquired and proposed businesses. Specify what should be shared and what should remain specialized.
2. Sequence the first 18 months of work, distinguishing completed acquisitions from transactions that remain conditional.
3. Identify three to five measures that should determine whether integration should expand, pause, or change direction.
4. State the most important assumptions and information you would request before committing to a full financial case.

Do not assume a single correct integration model. Support your recommendation with the information available at the cutoff and identify the evidence that could change your view.

Sources

1. Keysight Technologies, Form 10-Q, quarter ended July 31, 2024, filed August 30, 2024, SEC accession 0001601046-24-000061: Business and segment descriptions pp. 3-8; Note 2, acquisitions pp. 8-11; MD&A segment overview, revenue, margins, and cash requirements pp. 31-37; risk factors, acquisitions and debt pp. 42-44. [SEC filing](#).
2. Keysight, "Reports Third Quarter 2024 Results," August 20, 2024, financial summary, segment results, and outlook. [Company release](#).
3. Keysight, "Recommended Cash Offer by Keysight for Spirent Communications PLC," March 28, 2024; "Keysight's Proposed Acquisition of Spirent Communications plc," transaction presentation, pp. 2-3. [Company release](#), [presentation](#).
4. Spirent Communications, Annual Report 2023, financial review summary and strategic report. [Company annual report](#).
5. Spirent and Keysight, formal recommended acquisition announcement, March 28, 2024, filed as exhibit to SEC accession 0001140361-24-011447. [SEC exhibit](#).
6. Keysight, "Advances Software-Centric Solutions Strategy with Planned Acquisition of Synopsys' Optical Solutions Group," September 19, 2024. [Company release](#).