

Texas Instruments: When Should Modular Capacity Become Installed Capacity?

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Management perspective: Haviv Ilan, President and CEO at the cutoff

Case convention: The decision assignment is hypothetical. It does not describe a private meeting or an approved capital plan. [S1]

Decision

In October 2026, Texas Instruments (TI) was entering a new phase of its manufacturing program. The company had spent heavily on U.S. fabrication sites and was now describing a more modular approach: build or prepare the physical space, then install equipment and ramp production as customer demand justified it. The next several years could still require substantial investment, but the location and timing of the next dollar were not obvious.

The decision was not simply whether to build another fab. TI's latest commentary suggested that an increasing share of near-term capital spending could go to assembly and test (A&T), while front-end wafer capacity had existing cleanrooms and shells available. But equipment must be matched to products and processes, and capacity at one stage does not automatically relieve a bottleneck at another.

Decision assignment: Recommend a rule for TI's 2027-30 capacity investment. Specify which evidence should trigger front-end equipment, A&T expansion, both, or neither; how much capacity risk TI should carry internally versus through outside suppliers; and what evidence would cause management to change course. Any forecasts, hurdles or numerical scenarios you introduce must be labeled as assumptions.

A broad analog portfolio, built around manufacturing control

TI designs and manufactures analog and embedded-processing semiconductors used in industrial, automotive, communications, personal-electronics and other applications. Its products range from components with long product lives and modest unit prices to parts used in newer, faster-growing applications. In 2025, TI estimated that industrial and automotive each represented 33% of revenue and data center 9%; the company's market categories had been realigned, so comparisons across years require care. Analog products made up about 85% of 2025 revenue, with embedded processing around 15%. [S1]

The manufacturing chain has several stages. Front-end fabrication forms circuits on silicon wafers. Finished wafers then move through assembly and test, where chips are packaged and verified. Product-specific processes, qualification and tool availability can limit how quickly

output shifts among sites or suppliers. A wafer-start figure alone would not show whether the right products could reach customers on time.

TI has emphasized internal manufacturing. Its 2025 annual report said the company sourced a majority of wafer fabrication and A&T internally in 2025 and expected internal manufacturing to cover most production needs. Management also reported that an unpackaged chip made on a 300mm wafer costs “about 40% less” than an unpackaged chip made on a 200mm wafer. This comparison is specific to unpackaged-chip cost; it does not state total product cost, fab return, yield-adjusted economics, or cost at a particular utilization level. [S1]

The strategy offers control over supply and product availability, and could provide cost advantages at scale. It also leaves TI with large, specialized assets and the fixed costs that accompany them. If demand falls short, depreciation and facility costs do not disappear with orders. TI identified cyclical demand and high fixed costs among its business risks. [S1]

From construction to equipment

TI described its manufacturing expansion in three broad phases: prepare sites and infrastructure, qualify or transfer production, and install equipment and ramp output in response to demand. Its 2026 capital-management presentation showed activity at Richardson, Texas; Lehi, Utah; and Sherman, Texas. The facilities were at different stages; the diagram was a roadmap, not a disclosure of site-level capacity, utilization or output. [S2]

At the February 2026 capital-management event, management presented a long-term framework aimed at growth in free cash flow per share. The presentation discussed elevated investment during the buildout and a later period in which capital intensity would moderate. It was a management framework, not a filed budget or an independently validated forecast. [S2]

By the July second-quarter call, TI reaffirmed gross 2026 capital expenditure guidance of \$2 billion to \$3 billion. The CFO said spending could land above the midpoint to support demand in subsequent years. Management expected a disproportionate share of that spend to go to A&T, much of which is outside the United States and not eligible for the same U.S. investment tax credit. The CEO said existing front-end cleanrooms and shells left the company in a good position for roughly the next three years, while equipment would be installed as demand developed. [S3]

Those statements left important questions open. TI did not disclose utilization by fab or A&T site, production capacity by product family, the capex split by stage, tool lead times, or the amount of customer demand that could not be served. Existing shells may preserve the option to add tools later, but some equipment and qualification decisions still take time. Deferral can reduce the risk of idle assets; it can also leave capacity unavailable when customers need it.

A strong quarter-and uncertain signal

TI reported second-quarter 2026 revenue of \$5.463 billion, compared with \$4.448 billion a year earlier, a 22.8% increase (rounded to 23%). Operating profit was \$2.310 billion, net income \$1.980 billion, and diluted EPS \$2.14. The company said EPS included a five-cent discrete tax benefit. [S4]

Management attributed the quarter’s growth to a broad recovery: it described industrial revenue as up about 30% year over year, automotive in the mid-teens, and data-center revenue as having doubled. These were rounded management explanations, not independently reported market measurements. Revenue growth could indicate durable demand, a cyclical rebound after customer inventory depletion, restocking, market-share gains, or some combination. [S3,

S4]

On the call, management said customer lead times remained under 13 weeks but had lengthened by perhaps a couple of weeks, and that backlog had grown both near term and farther out. The company also described customer line-down situations and said customers were early in recovery and not yet rebuilding inventory. No backlog amount, cancellation rate, customer forecast, or quantified lost-sales figure was disclosed. Inventory at quarter end was \$4.6 billion, down \$90 million sequentially, or 196 days, down 13 days. [S3]

These observations point in more than one direction. Longer lead times and line-down cases could signal capacity constraints that put customer programs at risk. Yet the recovery followed a downturn in which customers had depleted excess inventory. A few urgent requests may not represent long-lived aggregate demand. Students must decide which signals should carry weight and which additional data should be required before releasing capital.

The cash available for the choice

TI's cash generation improved as capital spending moderated and revenue recovered. For the twelve months ended June 30, 2026, the company reported GAAP operating cash flow (CFO) of \$8.667 billion, capital expenditure of \$3.312 billion, and \$1.179 billion of CHIPS-program proceeds. Under TI's non-GAAP definition, free cash flow (FCF) was \$6.534 billion. [S5]

The cash-flow definition matters. The filing states that CFO already included \$433 million of investment tax credit (ITC) benefits used to reduce taxes payable. Management described total trailing-twelve-month CHIPS benefits of approximately \$1.6 billion: the \$433 million tax benefit already reflected in CFO plus the separate \$1.179 billion proceeds added in TI's FCF reconciliation, or \$1.612 billion before rounding. Adding the full \$1.612 billion again to CFO would count the tax benefit twice. The timing of these incentives is also uneven; they should not be treated as a recurring annual cash source. [S5]

Exhibit 1. Trailing-twelve-month cash-flow bridge to June 30, 2026

USD billions; company-reported and derived figures

Item	Amount	Treatment
GAAP operating cash flow	8.667	Includes \$0.433bn of ITC benefits used to reduce taxes payable
Capital expenditure	(3.312)	Subtracted in TI's FCF definition
CHIPS proceeds	1.179	Added separately in TI's FCF definition
TI-defined non-GAAP FCF	6.534	$8.667 - 3.312 + 1.179$
TTM CHIPS cash benefits, rounded	about 1.6	$\$0.433\text{bn ITC in CFO} + \$1.179\text{bn proceeds} = \$1.612\text{bn}$

Source: Q2 2026 Form 10-Q, p. 24. FCF follows TI's definition; it is not simply CFO less capex. Incentive cash is not necessarily recurring. [S5]

The company had \$7 billion in cash and short-term investments and \$14 billion in debt at June 30, with a 4% weighted-average coupon. TI had also agreed to acquire Silicon Labs for \$231 per share in cash, at an announced enterprise value of about \$7.5 billion. As of the cutoff, the deal remained subject to approvals, with closing expected in the first half of 2027; TI expected to

fund it with cash and debt. Management described strategic and manufacturing fit, but the acquisition and any combination benefits remained prospective. [S5, S6]

Capital expenditure competed with other uses of funds, including the pending acquisition, dividends, repurchases, debt service and liquidity. At its February event, management said the company's priority was long-term FCF-per-share growth and gave a 2026 FCF-per-share expectation above \$8 based on then-current consensus revenue. That was a conditional management expectation, not a result or guarantee. The company also cited remaining repurchase authorization; authorization was not cash earmarked for repurchases. [S2]

Three operating architectures

TI's choice involved more than an all-or-nothing decision about internal manufacturing.

- **Equip internally as demand develops.** Continue staged investment, using existing cleanrooms and shells and releasing tools when demand, utilization and product mix justify them. This retains TI's manufacturing-control thesis and limits some irreversible spending, but could be too slow if tool lead times or customer qualification windows are long.
- **Accelerate selected capacity.** Install front-end equipment, A&T equipment, or both ahead of demonstrated demand in product families where service, availability and customer design wins matter. This could protect growth opportunities and relieve a bottleneck, but increases exposure to fixed costs if demand normalizes. The correct stage and product mix are not publicly quantified.
- **Use more external capacity selectively.** Rely more on foundries or outside A&T suppliers for uncertain peaks while keeping internal capacity for products where control or cost matters most. Analog Devices reported sourcing more than half of its wafer requirements externally in fiscal 2025, showing that a mixed approach exists in the sector. Its portfolio, footprint and economics differ from TI's, and its filing is not evidence that the same products could be moved at comparable cost, yield, quality or lead time. [S7]

None of these architectures eliminates uncertainty. A decision must account for product-specific qualification and transfer limits, the economics of utilization, supplier availability, the cost of waiting and the possibility that a forecast recovery is temporary.

Questions for discussion

1. Which parts of TI's Q2 demand evidence are most decision-relevant? What would distinguish secular growth, cyclical recovery, restocking and share gains?
2. How should TI evaluate the next increment of capacity separately for front-end and A&T? What facts would justify acting before demand is fully visible?
3. What does the \$6.534 billion TTM FCF measure include? Explain the \$1.6 billion rounded incentive figure and identify the double-counting error a decision maker could make.
4. Compare internal capacity with selective external sourcing. What product, service, cost and flexibility evidence is needed before shifting the mix?
5. Recommend a 2027-30 investment rule. State the indicators, thresholds or milestones that would release or pause spending, and explain what would change your recommendation.

Sources

All sources below were available by the information cutoff. Management views, outlook and estimates are identified as such; the case does not include later Q3 results.

- **[S1]** TI, [2025 Form 10-K](#), filed February 6, 2026: Items 1 and 1A, pp. 2-13; MD&A, pp. 18-23; CHIPS disclosure, pp. 38-39.
- **[S2]** TI, [2026 Capital Management presentation and Q&A](#), February 24, 2026: strategy and FCF objective, pp. 2-3; manufacturing roadmap, pp. 5-6; capex and FCF/share, pp. 6-7.
- **[S3]** TI, [Q2 2026 earnings-call transcript](#), July 22, 2026: demand and lead times, pp. 4-6; capex and incentives, p. 9; A&T, modular capacity, inventory and three-year outlook, pp. 10-14.
- **[S4]** TI, [Q2 2026 earnings release](#), July 22, 2026: earnings summary and segment tables.
- **[S5]** TI, [Q2 2026 Form 10-Q](#), filed July 24, 2026: financial statements and segment results, pp. 3-11; capex, liquidity, FCF reconciliation and ITC footnote, pp. 22-24; Silicon Labs subsequent event, p. 26.
- **[S6]** TI, [Silicon Labs acquisition announcement](#), February 4, 2026; see also [Q2 2026 Form 10-Q](#), p. 26, for the latest filed status.
- **[S7]** Analog Devices, [2025 Form 10-K](#), filed November 25, 2025: Item 1, p. 3 and manufacturing risk discussion, pp. 12-15.