

# Sub-10 nm chips may steer 60% of India's semicon mkt by '32

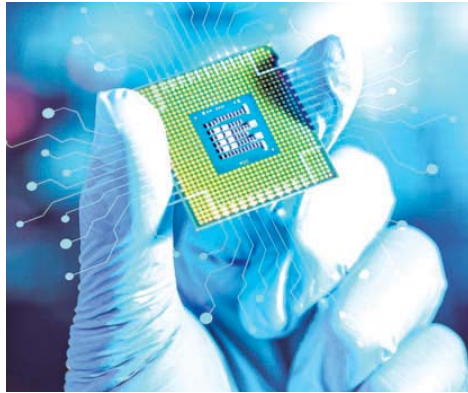
## Conventional chips to drive \$40 billion market for Tata and others: Report

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New Delhi, 1 September

The demand for semiconductor chips in India is set to undergo a dramatic shift, with 60 per cent of it, in value terms, expected to come from chips smaller than 10 nanometre (nm) by 2032. This insight comes from a forthcoming report by the Indian Electronics & Semiconductor Association (IESA), which will be released soon in collaboration with the government.

Currently, 10 nm chips represent only 24-25 per cent of India's \$40 billion semiconductor market. By 2030, the semiconductor chip demand in India is projected to exceed \$100 billion, says the report.

Ashok Chandak, president of IESA, explains the shift to sub-10 nm chips: "We believe that data centres, mobile phones, and computing hardware in India will all



### IESA REPORT ON INDIA'S CHIP FUTURE: A PREVIEW

- Data centres, mobile phones, computing hardware, and memory chips will drive the industry towards high-end sub-10 nm chips
- The majority of 10 nm chip demand will be imported
- Indian fab plants like Tata's

will still have a large market for conventional chips and a sizeable export market

- The electronics industry, which drives chip demand, is expected to grow from \$135 billion currently to \$450-500 billion by 2030

require cutting-edge state-of-the-art, below-10 nm memory chips by 2032. These products will need more memory, which generally falls within the 3-4 nm range." Chandak acknowledges that most of the demand for sub-10 nm chips in India will have to be met through imports.

"Yes, the bulk of sub-10 nm chips will be imported. However, outsourced semiconductor assembly and test (OSAT) players in India, such as Micron, who require less capital expenditure, and other

emerging players, will be able to address part of this demand. Yet, on the fabrication (fab) side, the supply of sub-10 nm chips will be limited," he points out.

Chandak observes that Indian fab plants, including Tata's and others expected to come online in the coming years, will still have a large market for conventional technology chips ranging from 28 nm to 45 nm. This segment is projected to be worth around \$40 billion by 2032 and will be needed across various sectors. There will be a

huge export market for mature, higher-nanometre chips.

"Indian OSAT and fab plants will still find a large export market. Global demand for semiconductor chips is estimated to reach \$1 trillion by 2030-32, with 65 per cent expected to be for sub-10 nm chips. However, there will still be a \$300-350 billion demand for chips above 10 nm that needs to be met," adds Chandak.

IESA's in its report to be made public soon estimates that electronics production, currently at

\$135 billion, will rise to \$450-500 billion (including exports) by 2030, driven largely by mobile devices. This sector has performed better than expected, reflected in the revenues of companies like Apple Inc and Dixon Technologies (India). Accordingly, it is projected that 45-47 per cent of the electronics industry's value in 2030 will come from mobile devices.

A few years ago, the Ministry of Electronics and Information Technology set an ambitious target of \$300 billion in electronics production by 2026, which now seems challenging to achieve. The focus has since shifted to new targets by 2030. IESA has been cautious about allowing joint ventures with Chinese component makers to build the electronics supply chain in India. Chandak says that if permitted, these ventures would primarily assemble products in India, retaining little economic value within the country.

"After all, 40-60 per cent of the profit comes from intellectual property rights, design, and branding, which would remain outside India," Chandak adds.