India eyes hi-tech manufacturing

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India is now finally poised to realize its dreams of moving beyond software into the very heart of hi-tech manufacturing: the microchips.

SemIndia, a consortium of U.S.-based tech entrepreneurs in technology partnership with AMD Inc. that intends to make India a global hub for semiconductor manufacturing, announced last week that it has chosen a 1200 acres plot in Hyderabad as the location for setting up its Fab City project, an industrial park for hi-technology manufacturing units.

The Fab City which will house the first phase -- a $1 billion chip-assembly and testing facility to be operational in a year -- of SemIndia's $3 billion semiconductor fab plant, the first in the country, while the $ 2 billion actual fabrication plant, or "fab," to produce semiconductor chips will come up in the second phase in two years.

"The real journey for India to realize its dream for becoming a destination of hi-tech manufacturing has begun," said Dayanidhi Maran, India's minister of communications and information technology adding that besides semiconductor manufacturing, he is making efforts to bring in flat screen display and hard disc manufacturing to India as well.

"Even until a few years back, replete with infrastructural deficiencies like inadequate water supply, power and poor roads, Indian could have hardly hoped of becoming a destination for manufacturing something as hi-tech as a microchip anytime before decades," says Vinnie Mehta, executive director of Manufacturing Association of Information Technology (MAIT). "But now as India witnesses an explosive

consumption of electronic goods and equipment, this market has become too big to ignore."

The IT ministry sources add, following Indian's decision of establishing the Fab City, the country has already received "at least seven fab proposals" that according to Maran includes Intel, Texas Instruments, AMD Inc., and a local electronic maker, Indian Equipment Manufacturing Co.

"The investment outlay of these proposals is not known yet, but considering that a fab plant requires a minimum investment of $3 billion, clearly India is already set to attract billions in hi-tech manufacturing," said Mehta of MAIT.

The India story for hi-tech manufacturing is real, says Ajay Marathe, president of AMD India adding that the main driver is its domestic consumption. And indeed a burgeoning domestic market for chips and a chance to compete with heavyweights China and Taiwan to win a slice of the global $220 billion chip pie poses a huge opportunity for hi-tech manufacturing in India.

A study released early February by the Indian semiconductor industry, a premier representative body of the semiconductor industry in India and Frost & Sullivan said that consumption of electronic equipment in the country would rise to $363 billion by 2015 from $28.2 billion in 2005 at a compound annual growth rate of 29.8 percent pushing the total market for semiconductors to $36.3 billion by 2015.

"India is developing as one of the largest markets for electronic equipment fuelling semiconductor demand," the report said, while Rajendra Khare, chairman, ISA added that "at $36.3 billion, India will account for 6.5 percent of global semiconductor revenues, which by no means is a small market."

The report also said that India's rapidly expanding GDP over the next several decades will boost electronics demand in the public and private sectors. "The Indian electronics equipment production grew at a growth rate of 25 percent in 2005 and is expected to reach a growth rate of 50 percent in 2010 and 34 percent in 2015," the report said. "Indian electronics equipment manufacturing is expected to grow at 5.5 times the growth rate of global electronics equipment production during 2010 and 2015."

But it is not demand alone that's driving the interest for hi-tech manufacturing in India.

"India today has also developed a significant ecosystem for hi-tech manufacturing that includes chip design houses, application development companies and other supporting activities like chip design and design automation," says Mehta.

"In my opinion," says Maran, "global tech companies have realized that the environment has changed and India today is fully fitted out." He added, "for instance, chips are increasingly loaded with embedded software, and India has $17 billion software industry to give that activity an edge."

Yet like every good story has a flip side, Partha Iyenger, vice president of Gartner India, says that it may too early to claim that an era of hi-tech manufacturing has begun. "Many things need to happen," he says, "and for one all the announcements by the companies yet, need take off; they just announcements at the moment."

Other says that hi-tech manufacturing will begin at the top end, and in niche areas that require highly skilled labor. Unlike China where manufacturing moved up the value chain, India is expected to begin with high-end manufacturing, and then go downwards.

But it is also true, says Iyenger of Gartner, that global tech companies will increasingly start looking at India for manufacturing for the same reason many are flocking to China for software; "these two nations would soon be the most dominant economic forces in the global arena and all would like a foothold in both," said Iyenger.