Status and Scope of Microelectronics in India:

Microelectronics has affected almost every walk of life such as healthcare and environment, education, agriculture, communication, robotics, automation, avionics, automobiles, instrumentation, power, military etc. Microelectronics is the key driver for the economic growth in its role as a technology driver, enabler and indicator of technological progress in the whole electronics chain. The phenomenal growth of the microelectronics technology has significantly contributed to the success of information and telecommunication technology in the last few decades.

As per the National Policy on Electronics - 2012, the global Electronics industry was worth USD 1.75 Trillion and is expected to reach USD 2.4 Trillion by 2020. The demand in the Indian market was USD 45 Billion in 2008-09 while in year 2012 it was around USD 69.6 Billion (source www.makeindia.com). This demand is expected to reach USD 400 Billion by 2020. At the current rate of growth, the domestic production can cater to a demand of USD 100 Billion in 2020 as against a demand of USD 400 Billion. Also, the value-addition in the domestically produced electronic product is very low, ranging between 5 to 10 percent in most cases.

Recognizing importance of microelectronics as the major economic contributor in the growth of the country, DeitY initiated the Microelectronics Development Programme in 1980s. The thrust of Microelectronics Development Programme has been to establish microelectronics base in the country through setting up of centres of excellence, technology development & capacity building through sponsored R&D projects in the area of Microelectronics, and MEMS.

The following are the broad thrust area identified under Microelectronics Development programme:

- RF and analog mixed signal technologies
- Embedded systems
- EDA tools and related software
- VLSI, Processors (Micro, RISC, ASP etc.)- Design/ Fabrication, Characterization, Testing and modelling etc.
- Micro sensors, Detectors etc.
- Integrated MEMS and VLSI designs solutions
- Process Technologies including development of related semiconductor materials

Sourced from: http://meity.gov.in/content/microelectronics-development-division