



Vidya Vikas Education Trust's

# Universal College of Engineering

Approved by AICTE, DTE, Maharashtra State Government and Affiliated to Mumbai University

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## ELECTROBUZZ

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### *Department Vision:*

To be recognized for practicing the best teaching-learning methods to create highly competent, resourceful and self-motivated young electronics engineers for benefit of society.

### *Department Mission:*

- To nurture engineers who can serve needs of society using new and innovative techniques in electronics.
- To improve and apply knowledge of electronics subjects through participation in different technical events.
- To enhance carrier opportunities of electronic students through industry interactions and in plant training.
- To install the passion and spirit among students to pursue higher education in electronics and entrepreneurship.

# *India could emerge as alternative for investment in electronics in near to medium term: Report*

India might emerge as an alternative destination for new planned investments in the electronics sector in the near to medium term. The proactive decision taken by the state governments to reform the labour laws, low wage skilled workers and India's strong position in software development can help India to become a hub for electronic components, mobile manufacturing and Internet of Things (IoT) development, says a latest report by Dun & Bradstreet. The report said countries such as China, Malaysia, Vietnam and Indonesia are low cost manufacturing destinations and manufacturers in these regions have an edge over Indian companies.

“For domestic players to dominate the market, there is a need to create a strong electronics component hub. The government has taken cognizance of the opportunity that can be leveraged and has initiated a series of policy initiatives to strengthen the supply chain and the entire eco-system of the sector,” said the report. Dun & Bradstreet said a wide gap exists between the current domestic production capability and the expected growth in demand in the electronics segment in India. “This offers immense opportunities for foreign players. For domestic players, this is an opportunity as well as a challenge,” it said.

However, the report noted that India's electronic exports are likely to take a hit as several sectors including airline, hospitality and banking markets in the US and Europe have been severely hit by the COVID-19 pandemic. Quoting the Electronics and Computer Software Export Promotion Council estimates, the report said India might miss the electronics and software exports forecast of \$155 billion for 2020-21.

The three largest export markets of India for computers and hardware are the US (31%), Singapore (12%) and UAE (7%), while France, Germany and Netherland constitute another 9% of export demand.

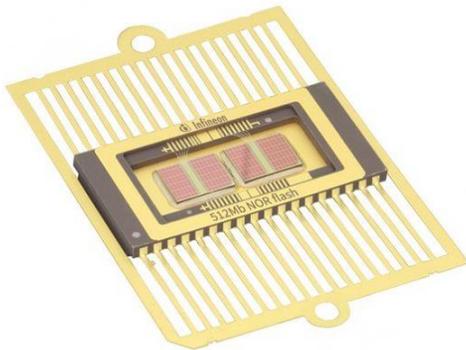
The report says India's electronics production has increased from Rs 1,903 billion in FY15 to an estimated Rs 5,465 billion during FY20, at a compound annual growth rate of about 23%. It grew by around 20% in FY20. As per Government estimates, demand for electronics hardware is expected to increase to \$ 400 billion by 2025, whereas in FY20 production stood at \$ 77 billion. Currently, the domestic production meets close to 60% of the domestic consumption demand.

China meets 37% of India's import demand for electronics components, 40% of telecom instruments, 46% of computer hardware, peripherals and 29% of electronics instruments. The sector was initially impacted from the shutdown of factories in China during February to March 2020 and had to bear the brunt of domestic lockdown and subdued demand. The COVID-19 outbreak in China considerably impacted the mobile phone industry.

Dun & Bradstreet says new avenues of revenue have emerged for the electronics sector which includes connectivity products for telecoms and IoT, online platforms for entertainments, home-office electronics for remote work, e-education, [telemedicine](#), tele-healthcare services and shift towards digital modes of conducting business by the players in almost all the sectors.

## *Infineon Launches Industry's First Radiation-Tolerant, QML-V Qualified NOR Flash Memory for Space-Grade FPGAs*

Space-grade field-programmable gate arrays (FPGAs) require reliable, high-density non-volatile memories that contain their boot configurations. To address the growing need for high-reliability memories, Infineon Technologies LLC, an Infineon Technologies AG company, today announced the industry's first high-density radiation-tolerant (RadTol) NOR Flash memory products qualified to MIL-PRF-38535's QML-V flow (QML-V Equivalent). The QML-V flow is the highest quality and reliability standard certification for aerospace-grade ICs.



Infineon's 256 Mb and 512 Mb RadTol NOR Flash non-volatile memories deliver superior, low-pin count, single-chip solution for applications such as FPGA configuration, image storage, microcontroller data and boot code storage. When used at higher clock rates, the data transfer supported by the devices match or exceed traditional parallel asynchronous NOR Flash memories while dramatically reducing pin count. The devices are radiation-tolerant up to 30 krad (Si) biased and 125 krad (Si) unbiased. At

125°C, the devices support 1,000 Program/Erase cycles and 30 years of data retention and at 85°C 10k Program/Erase cycles with 250 years of data retention.

As a leader in space-grade memory products, Infineon leveraged the 65 nm floating gate Flash process technology to develop the RadTol 256 Mb quad-SPI (QSPI) and 512 Mb dual quad-SPI NOR Flash. Both are featuring 133 MHz SDR interface speed. The 512 Mb device comprises two independent 256 Mb die that fit side by side in a single package solution. This provides flexibility for designers to operate the device in dual QSPI or single QSPI mode on either die independently,

offering an option to use the second die as a backup solution. Infineon is collaborating closely with leading FPGA ecosystem companies such as Xilinx on space-grade applications.

“Our radiation-tolerant dual QSPI non-volatile memories are fully supported by the latest space grade FPGAs. They enable a superior, low pin count, single-chip select solution to configure processors and FPGAs,” said Helmut Puchner, VP Fellow of Aerospace and Defense at Infineon Technologies LLC. “The entire image for the Xilinx Kintex UltraScale XQRKU060, for example, can be loaded in about 0.2 seconds in dual-quad mode.”

The NOR Flash devices can be programmed in-system through the FPGA or through a standalone programmer, offered in the same 36-lead ceramic flat package. Infineon’s development kit and software further enable easy design implementation.

Source:<https://www.eletimes.com/infineon-launches-industrys-first-radiation-tolerant-qml-v-qualified-nor-flash-memory-for-space-grade-fpgas>

## *How Artificial Intelligence (AI) is Being Used in Design*

. Artificial Intelligence, or AI, is easily one of the biggest technology developments in the past few decades. Both exciting and limitless in its possibilities, it is opening the doors to all kinds of creative applications. What started out as a high-tech and seemingly unapproachable technology has now become mainstream, with people using it in one way or another often without even realizing it.



One area that AI has managed to have a real impact on is design. In fact, design has been completely shaken up thanks to this technology and the doors it has opened. But how exactly is AI being used in the design? Let’s peel back the layers and look a little closer.

### ***Use AI for the Monotonous Jobs***

There are plenty of jobs that designers have to do that feel monotonous, time-consuming, and frankly not all that creative. This is where AI could really step in and fill a void, freeing up the designers’ time and energy so they can direct it elsewhere.

Some examples of these types of tasks include color correction on various photos, cropping photos, and even resizing images. A fair amount of time can be spent on these types of simple tasks, and AI has the ability to learn what to do and do it for designers.

### ***It Allows for Custom Designs***

Then there is the fact that AI can aid in custom designs. So many businesses, clients, and individuals prefer that custom touch to their particular design, as it helps to add a unique feature and makes the finished design more functional.

A really intriguing example is custom stage design, meant for professional stage productions like concerts, plays, and so forth. Because these shows have such specific needs, a custom design from companies like Staging Concepts makes sense, and AI along with other technology makes the design concept that much easier to put together and showcase to the client.

### ***The Opportunity to Co-Create Designs***

Here's a really innovative concept but imagine being able to co-create with AI and/or robot technology? That is quickly becoming the reality, as AI isn't intended to take the place of a designer in a company rather it is meant to help them.

It can spark creativity, help make the job go smoother and faster, and offer solutions that the designer may not have thought of. Again, the AI is meant to enhance the process not take it over.

### ***Use Voice Commands for Your Designs***

Now imagine being able to put together designs via voice commands. It sounds incredibly high-tech, but again it is the reality of where things are today. If you can use voice commands to create designs, then you can expect a much faster design process overall. Think of it AI as your **digital** assistant.

**Source:** <https://www.eletimes.com/how-artificial-intelligence-ai-is-being-used-in-design>

## ***Entertainment Robots Market Share to Reflect a Holistic Expansion by 2023***

Entertainment Robots are specially designed for amusement for people in distinctive ways in different places so that people can have happy times. The main purpose of these robots is to entertain people from any age group. Robots are designed in such a way that microphones are available to listen and interact with people and cameras to adapt the people's actions and habits carried out in the day to day life.

The Entertainment Robots technology has great scope ahead, and the industry is upgrading itself with the change of time. They make use of artificial intelligence (AI) advance's techniques and methods.

The 21st century will witness how Entertainment Robots are becoming of an integral part of human life. The days are gone when robots were just concepts or imaginations. Today's there is an android, automated know by many names. The Entertainment Robots technology is trending and innovative that has made some phenomenal development business sectors now the humans.

The changing lifestyle and working culture around people be a major concern in recent times. The human-looking out for more entertainment and fun in their life. The Entertainment Robots Market plays a major role here they are a new source of relaxation or stress-free time for people. The new partner for a human.

The discovery of these robots is not only provided relaxation to humans but also a medium of entertainment. Robot toys can imitate depression, laughter, and other emotional simulations. These robots can be found in any amusement park and crowd location nowadays they are also found in the healthcare industry. Humanoid Robotics are toys that are usually made of two legs, robotic dog toys that contain robot toys create a large part of all entertainment robots.

The major drivers for the Entertainment Robots market are as follows, the technology is working as a companion for humans which can be in the form of Robot Toys, Educational Robots, and Robotic Companion Pets. The educational sector is taking proper advantage of this technology they use this entertainment robot for education purpose in most of the school and college where children can learn the basic thing in a different format.

Educational robots have pre-programming responses to many questions and commands, but they can also program programs for students doing specific things that they can dance to and can sync music with them in time. The Healthcare industry also utilizing this technique.

The hotels and restaurants where customers waiting in queue for their food, this robot acts as an entertainment factor. The Healthcare industry also utilizing this technique. The hotels and restaurants where customers waiting in queue for their food, this robot acts as an entertainment factor.

### **Entertainment Robots Market Competitive analysis**

The key strategies traced from the analysis of recent developments of the key players include Product Launch, Agreement & Partnership, Acquisition, and expansion. The Entertainment Robots market is generally known because innovative products and solutions are present due to the presence of major players. The players are delivering the updated technology tool and services and solutions, product portfolio and prices to gain a competitive advantage in the Entertainment Robots market.

### **Industry/ Innovation/Related News**

- **1st November (the guardian)**, The Japanese electronics firm, once a pioneer in home robotics, announced that after more than a decade its robot canine pal will return to shelves with artificial intelligence-infused upgrades. Sony is bringing its robotic dog Aibo back from the dead.

- **11 NOVEMBER 2017 (telegraph UK)**, The Video game publisher Electronic Arts is to acquire the Titanfall developer Respawn Entertainment in a deal worth over \$300m. EA announced to take this post on their official site, along with the news that Respawn is working on a third game in the Titanfall universe.

### Entertainment Robots Market – Segments

The Entertainment Robots market can be segmented by product and region dynamics for the convenience of the report and enhanced understanding; Segmentation By Type: Robotics toy, Educational Robots, Robotic Companion Pets Segmentation By Region: Comprises Geographical regions – North America, Europe, APAC and Rest of the World.

### Entertainment Robots Market Regional Analysis

The regional analysis of the entertainment robot market is being studied for regions such as the Asia Pacific, Americas, Europe and the Rest of the World. North America's is dominating the market in this sector reason for this is rise in adoption of robots in school and colleges. The North America region is the leader in the entertainment robots market because of the advancement in technology and the implementation of **artificial intelligence** in developing robots.

*Source:*<https://www.eletimes.com/entertainment-robots-market-share-to-reflect-a-holistic-expansion-by-2023>

## *Windows 11: Everything You Must Know About Microsoft's Latest Software*



Last month, Microsoft unveiled Windows 11, the latest operating system powering personal computers. And the company says it is scheduled to roll out in late 2021 and continue into 2022.

Microsoft's chief product officer for Windows and devices, wrote in a June blog post the changes were inspired by shifts in PC usage among consumers during the COVID-19 pandemic, as remote work surged, This is what inspired us as we were building the next generation of Windows. To build

you a place that feels familiar, where you can create, learn, play and most importantly, connect in all new ways. Got questions about Windows 11? We've got answers. Here's everything you must know about Windows 11: The software will roll out starting in late 2021, according to Microsoft, and will continue throughout 2022. It's free to upgrade.

Microsoft says computers and Surface devices pre-installed with Windows 11 will launch later this year. Most PCs running Windows 10 that are currently available should also support the Windows 11 upgrade so long as they run the appropriate specs.

Microsoft had initially released a PC Health Check app to test whether your device could run Windows 11. However, Microsoft said "confusion" over how the tool was assessing a device's compatibility prompted the company to take it down. So new independent open source tool called WhyNotWin11 is introduced, which could help users to figure out whether Windows 11 will work or not.

Most notable is the interface itself looks sleeker compared to earlier versions of Windows. The software has bolstered its Snap layouts, which allow users to quickly snap an application to their screen, to support multiple configurations depending on what users desire. The operating system also simplifies the docking and redocking process to eliminate the need to reconfigure apps.

Windows 11 will also support Android apps made available through the Amazon app store. Although it lacks the breadth of Google Play, the store still offers big names including TikTok.

Other big features include a revamped Microsoft Store, more detailed Widgets, and different typing options including a one-handed option if you're on a Surface tablet.

Windows 11 is also reportedly ditching the "blue screen of death," a Windows PC owner's nightmare. It will be black instead, according to The Verge.

If you're on Windows 10 and want to go back after you upgrade, Microsoft says users will have a 10-day window "where you can move back to Windows 10 while keeping files and data that you brought along with you." Past that, users have to back up data and perform a "clean install," which means re-installing Windows 10 from scratch.

No rush. **Microsoft** isn't pulling away from Windows 10 anytime soon. If you stick to Windows 10, Microsoft says it will continue supporting it through 2025.

*Source: <https://www.eletimes.com/windows-11-everything-you-must-know-about-microsofts-latest-software>*



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