

## **Topic:** Printed Circuit Board Becoming A Vital Arena for Bringing Creativity In Audio Devices

### **Summary:**

The audio device industry is set to grow in parallel with the technology triggering across the globe. Also the entertainment and hospitality industry has created an increased demand of audio devices at large. With the enhancement coming up in consumer applications every other day, the recent trend of implementing wireless technology in audio devices has captivated the attention in the market with its growing popularities all over the electronics industry. The recent audio discoveries have marked cosmic developments in the new product launch, business partnership and acquisition globally. With this, the audio device makers are now in race to present a multi featured compact device with giving an appealing dimension experience to the end users in order to survive in the electronic market. The base to audio innovations is the printed circuit board. This article provides interesting updates on the recent innovations in audio devices and the use of printed circuit boards at the very base to new discoveries in audio device market worldwide.

### **Article:**

The present world of electronics has made the humans to use electronic devices right from the carry cot to the tomb. The golden age of audio technology driving innovations in the last few years have made an avalanche of audio tools for the music enthusiasts and audiophiles. The continuing technological transformation has led the analysts to speed up the research to bring out a fine fusion of product, application, technology and geography to meet the on-going audio device requirements of the customers.

With this, the product developments are seen in the speaker system, sound bar, microphones and headset with engineering the wireless technology in every novelty. The current trends in audio device are an overture to the consumer application, automotive, defense, commercial application and security operations. The Bluetooth, airplay, Wifi and many more technologies have made it possible to innovate one stop solution in a single audio instrument with portable, wireless and connected audio devices coming on strong tech adoption.

With increasing research in the audio device market, the researchers have marked the household application of audio gadgets to be positioned at the class level of sophistication. The Bluetooth enabled headphones and the wearable health trackers that helps improve the wellness with entertainment and productivity experience is a fine instance of attaining the sophisticated flavor in the household electronic device. The TV, smartphone, Blu-ray player, laptops, DVD player and other electronic gadgets are enjoying the leadership in growth map of innovation.

Few standout in audio innovations that are under active development, prototype, concepts to be released or expected to ship soon in the market in the near future include laser lights equipped with the headphones that set pulse to the rhythm and your favorite music by giving you feel of the wearable expressive audio tool, the virtual Reality (VR) technology is clubbed with audio devices to give a compelling audio visual experience and many other game changing innovations.

One of the most interesting enhancement is noted in a WiFi guitar cable bringing notion in the wireless audio technology. Also a note of creative music studios with wireless protocols, making it possible to connect the audio instrument, sound cards and devices. The Artiphon Instrument 1 is at the rim of the basket in the world of innovations. This innovation makes it possible to play numerous instruments with different ways on a single device controlling through an IOS device. This will bring a new trend in hybrid instruments. A gestural music system that allows to control music with gloves is pushing the boundaries of audio technology.

The foundation of all these innovations is the proven printed circuit boards. The PCB used in audio gadgets have proven design, flexibility, tech savvy board design and inbuilt technologies of miniaturization and advanced Etching technology with high precision surface mount techniques. The PCB with laser via, multilayer PCB, BVH printed circuit board, high density PCB, FPH printed circuit board and double sided PCB are in trend to suffice the requirements of audio device makers. The above circuit boards provide the optimum solution for the amplifiers, sound to vision, splitters, mixing desk, microphones and recording desk. The enhancement is also seen in the conductive paste with connectivity technology in the inner layer of the board, fine pitch CSP assembly, through hole technique with perpetual hole processing method, via-on-pad configurations and smaller device form factors. These developments in PCB fabrication have made it possible to bring the ideas into reality which can be exemplified by the launch of the bionic hearing module that is majorly used in the medical industry in current times. This super advanced technology is brought into a mini device that is developed by a large margin with flexible printed circuit boards.

The material used in PCB for audio devices must absorb moisture to get better productivity in the gadget. For this, the PCB manufacturers are staying active in the application of the new concepts to give variety with perfect product to the audio device manufacturers. Thus the researchers are focusing towards the creative innovations in PCB manufacturing for analog devices, amplifier PCB board and other PCB for audio devices.

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