

Topic: Printed Circuit Board For Industrial Application Drives a wave of Innovation

Summary:

The next generation FUNDAS rest on one and only one motto (i.e.) technology up-gradation. For innovations in any corner of the world, a completely unique electronic solution is derived that accounts for fast trending modernization in the lifestyle of humans. With electronic design or manufacturing solution, the printed circuit boards are the groundwork for every electronic project. As the electronic control system and instruments are now applied in every predominant market across the globe, the use of PCB is predicted to have universal application in the global society. This article details you on the type of PCB's used in the industrial sector, the application of PCB and innovations marked in the industrial sector with current steps taken by PCB manufacturers to provide unique solutions to the industrial sharks.

Article:

The traditional printed circuit board was traced in early 1920's with a frequent use in radio and gramophone instruments. A push towards innovation picked up a pace with the introduction of Plated Through Hole technique implemented in a double sided PCB during the year of 1947. Gradually various customization in the size, shape, material to be used and production techniques were adopted having varied proven PCB design in the circuit board. The PCB market then had a wide scope catering to the defense, military, medical device, automotive, consumer electronics, transportation, aerospace, Telecommunication, renewable energy and industrial sector. The PCB manufacturer's are now strongly conscious in their manufacturing capability, certification and training programs. With the growing trend of miniaturization and Eco-friendly gadgets and electrical control system, the use of PCB in the industrial sector is increasing every other day.

The realm of industrial application of PCB in current times demands for a complete pack of the quality with high durability and tough designs being manufactured implementing upgraded technology and production techniques that can result into cost effective electronic design and manufacturing solution. The recent innovation in the industrial sector has a high use of time critical printed circuit board to bring out a perfect electronic solution. The industrial PCB has its application in controls, mobile devices, indicators, lighting sector and testing system. Among all the major demand portion is focused on the rigid/flex PCB and flexible PCB that can well suit the new discoveries. Be it a manufacturing of welding machines, portable printers, security and safety devices, mining instruments, power supply unit, power conversion application, solar panels, robotics, electronic switch gears, seismic monitoring device, machineries in oil & gas industry, utility metering and many other electronic equipment, the industrial PCB board with tech savvy PCB design marks a ray of innovation for the next generation.

The majority of the electronic solution that needs high performance printed circuit board includes ultrasonic technology, water treatment system, process thickness measurement control and piezoelectric transducers having flexible circuits. Furthermore, the PCB application in Industrial automation is seen in Ventilation and air conditioning system, analog to digital convertor, audible devices, amplifier, battery charger, computer, digital meter, fiber optics, electromechanical controls, gauges, HVAC controls and many more.

The modifications in hybrid printed circuit board with tough outlay are rich in features with retention of precision density and reliability in the circuit boards that can give high performance electronic PCB solution. Furthermore, Cable Harness PCB Assembly, Wire Harness PCB Assembly and Box Build Assembly having complex design have high industrial application worldwide. The digital/analog PCB assembly with selective soldering and Surface Mount Technology (SMT) also has high application in industrial electronic projects. Be it a thermal product with copper bonding, multi layered PCB consists of blind and buried via connections and heavy duty copper PCB or controlled impedance are concepts highly meeting the current industrial PCB needs.

These varied types of PCB assembly has recently put forward innovations in Laser and sonic anemometer, LED system, tachometer, timing device, transformers, velocity controllers and weather detection instruments.

With development becoming a prime time driver to flourish the industrial sector, new concepts have been introduced in the global market that can prove beneficial for human life. The recycling, E-waste and Eco-friendly solution are some of the vital hypothesis that have brought great transformation in the industrial sector. With this, a new trend is set for the demand for high mix low volume PCB manufacturing that has a perfect combination of the fiber interconnect, mixed technology for PCB assembly, copper interconnect and testing operations which can well suit the above vital hypothesis.

In this present world of competition, the PCB manufacturers are constantly striving to offer a unique solution to providing an added value in their services. This has also increased the modification in providing a personalized approach to every project that includes developments in engineering support, strong vendor management, just in time inventory, rigorous inspection/testing of batch of production as well as the raw materials sourced from the certified vendors. Thus, the race in providing power pack package of quality, inspection, tech support, engineering and customization in providing PCB solutions is still not over that counts for many more innovations yet to come on the market.

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