Nine Things the Users Should Know
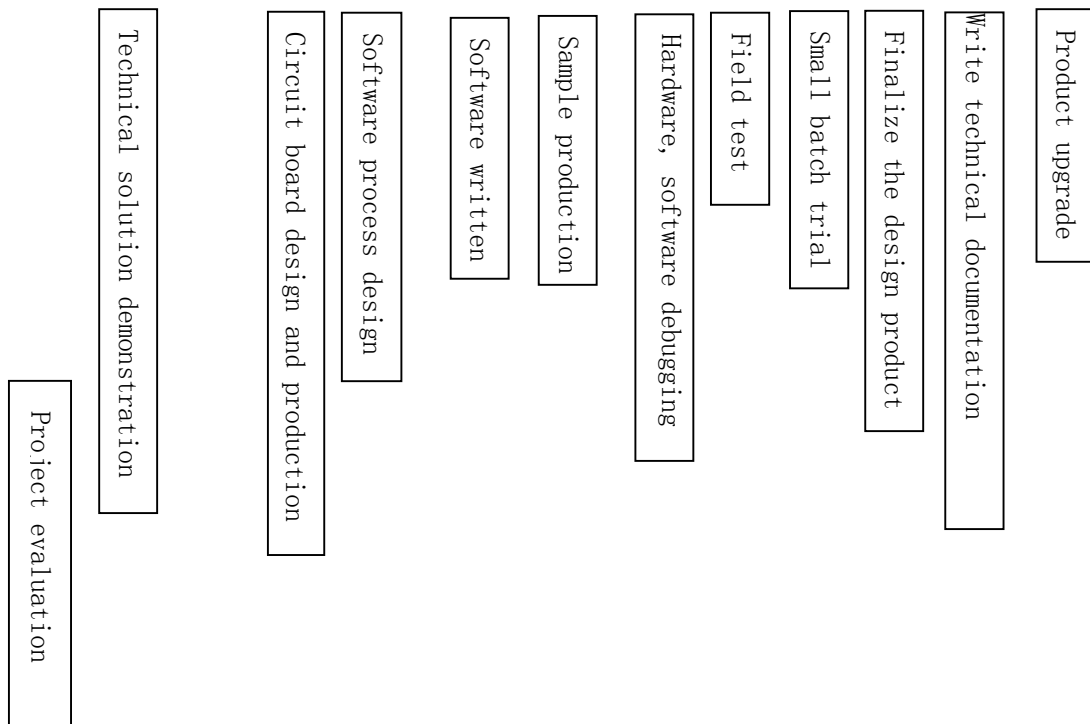
Before you consult, read the following text carefully and you will find it helpful for your decision making.
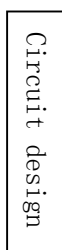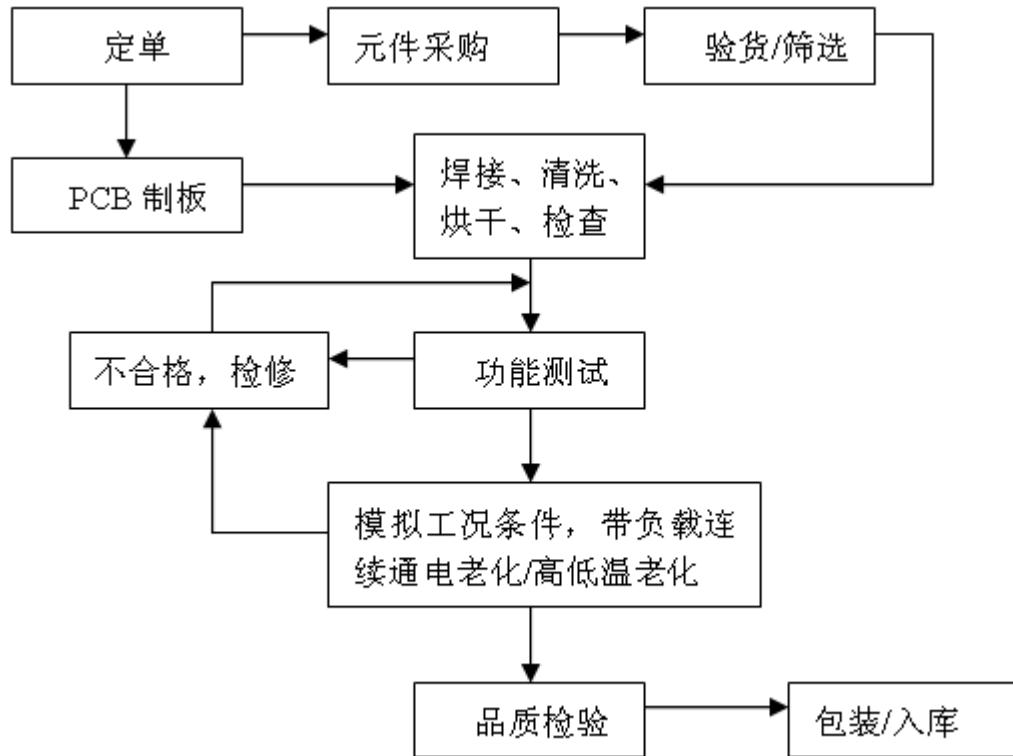
Ⅰ There is no small matter

Smaller products also need to work through the following process or one of the most: project evaluation, technical scheme comparison, device selection,

Project evaluation

Technical solution demonstration

Circuit board design and production

Software process design

Software written

Sample production

Hardware, software debugging

Field test

Small batch trial

Finalize the design product

Write technical documentation

Product upgrade

circuit design, PCB design and the system board, the process design of the software, software writing, sample production, hardware test, software testing, joint test, field experiment, or make use test, improvement of technical documents, sorting, written instructions, small batch production trial, product type, upgrade, and so on.

The production process of the product includes:PCB board,component purchase,component screening, welding, cleaning appearance inspection, electric inspection, function test, high temperature and low temperature aging, Quality inspection, warehousing, etc.As follow:

Circuit design

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┌──────────┐      ┌──────────┐      ┌──────────┐
│   定单   │ ───→ │ 元件采购 │ ───→ │ 验货/筛选 │
└──────────┘      └──────────┘      └──────────┘
      │                                    │
      ↓                                    ↓
┌──────────┐      ┌──────────────┐
│ PCB 制板 │ ───→ │  焊接、清洗、 │ ←────────┘
└──────────┘      │  烘干、检查   │
                  └──────────────┘
                          │
      ┌──────────────┐    ↓
      │  不合格，检修 │ ← ┌──────────┐
      └──────────────┘   │ 功能测试 │
              ↑          └──────────┘
              │                 │
      ┌─────────────────────────┐
      │ 模拟工况条件，带负载连    │
      │ 续通电老化/高低温老化     │
      └─────────────────────────┘
                          │
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                  ┌──────────┐      ┌──────────┐
                  │ 品质检验 │ ───→ │ 包装/入库 │
                  └──────────┘      └──────────┘
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Ⅱ、The functional requirements of electronic products account for only about 25% of the total project workload

A lot of users often say, I this product function is very simple, you can handle in a few days. Indeed, it is relatively easy to implement the functions required by the user in the lab, which is what we call "lab products.". The site is often unusable, or broken. But it is precisely those "invisible" reliability design design, high cost performance, limit processing, testing, documentation, such as work takes up a large amount of workload, the so-called time said at all. That is the reason .

Take a simple example: "install a sensor on the railroad to see if the train passes." Functionally it's the simplest application, putting an optical switch, when the train get through a high level produced , the microcomputer will detect the change of the level. But anyone with a little common sense knows that this is a crucial task of a man's life. The system requires that the reliability of this test must be nearly 100%! To ensure that this test is foolproof, you have to consider the impact of various factors, Such as false signals out, how many hours can work normally, whether work normally under all kinds of weather, eliminate the effect of train vibration, whether work normally after the blackout requirements, when break down report to the police, etc. These reliability requirements have multiplied the development workload.

Ⅲ、Reliability engineering of electronic products

Including reasonable design and excellent production process, it is to improve product quality and reliability, and reduce the failure rate of hardware

production and market inefficiency. The quality of the product is related to many factors. In addition to the quality of the factory, a good quality product whose long-term performance stability and reliability are also ver yimportant. According to the analysis of the industry, more than 60% of the production failures of the normal working products are caused by the failure of the device, and more than 70% of the rework of the market is due to the failure of the device. So it is very important to implement effective and practical methods to improve product quality reliability.

The reliability of the product is the key issue that the manufacturer must make full consideration when designing the whole product. Otherwise, the product will be left with a fatal disaster, even users lose confidence in the product, and shame the enterprise brand.

Ⅳ、The cost of electronic products

This is also an important issue in the design of electronic products and also an important issue in the design of electronic products. It is good to use high quality components, But for mass-produced products, even 10 yuan per product can be a considerable "net profit". Therefore, it is the best thing to do, that is, to improve the performance of the product as much as possible.

Therefore, when we develop products, we ask users to provide the environment and the key degree of the tasks as much as possible, in order to determine the most suitable circuit and components, which make the product can meet the application requirements and the maximum cost saving.

In addition, experienced engineers will try to use software instead of hardware to realize functions to save cost. When choosing the device, adopt the device that the manufacturer mass-produced, not only can reduce the price but also the quality is good, and the goods source has safeguard.

Ⅴ、Advantages of development and production outsourcing

At present, it is difficult to find suitable technical developers for monthly salary of 10,000 yuan. Good and experienced engineers are scarce, and non-professional companies are hard to attract them.

Even if the product developped by the unit of engineers , after the completion of a development task, the engineer may choose to leave because of task unsaturated, which will make the enterprise into embarrassment that nobody to provide follow-up service.

The production of electronic products is not simply a process of welding and assembling. It requires both professional testing and equipment testing and testing. It is difficult for ordinary enterprises to have normal production conditions.

Therefore, the development and production outsourcing is the trend, and its advantages are obvious. It can not only save people's salaries, reduce equipment investment, but also avoid a series of problems caused by management, so that users can concentrate on doing things well.

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Ⅵ、Improve the importance of the electronic part

The cost of the electronic part is generally small in the whole user product project.So many users don't pay much attention to it.The reason mainly is because users are not familiar with the characteristics of electronic products.

The importance of the electronic parts that provide monitoring and control functions is the brain of the whole user product.Also, the electronic part is not as strong as the mechanical part, so it can be said that the whole product is more prone to failure.

Therefore, users should improve the importance of the electronic part.Otherwise, once the electronic part is not designed or the quality is not too hard,which will delay the whole product launch cycle, even cause significant loss!

Ⅶ、The total cost of electronic products

Users are more concerned with the cost of development and the hardware cost of the follow-on products, and seldom consider the total cost of the product.A product's total cost of ownership is refers to the product of everything that has happened during the whole life costs, including the hardware cost, software cost and spare parts, maintenance cost and maintenance cost, upgrade cost, travel management fees, etc.For example, a module can cost only a few hundred yuan, while a trip can cost thousands of yuan!

Therefore, users should think long term in the project, and make a comprehensive consideration of the possible cost.

Ⅷ、Guarantee of subsequent services

Electronic products need to be improved ,upgraded and maintained constantly, and long-term and stable technical services are required.Since its inception, the Guanglun has established a good relationship with its customers.They have any technical problems, they can find us at any time. All the technical materials of the users we have should made the proper preservation, which can be found at any time.We are not a one-shot deal, which is very different from some part-time engineers, teachers or students.Many enterprises tend to consider price only when they outsource their projects, but ignore the follow-up service. Once the problem arises, the enterprise falls into a passive situation.