&1、What kind of operating system is TreeOS?

The real time operating system for the TreeOS1.0 is a set of "single-chip standardized systems" called MCUSDS.It is a real time operating system for 51 MCU.It do not has core and it contains a large number of driver libraries which can help you to complete the real-time operating system of 60% ~ 90% of software development tasks;A microcomputer operating system suitable for beginners to learn and use.TreeOS1.0 has filled up the major problems of the current low - level micro controller in the world.

&2、What are the advantages of TreeOS and other embedded real-time operating systems?

1. The TreeOS system occupies a small amount of resources and can be applied to low-end single-chip microphones;

2. TreeOS contains a large number of driving libraries which can save development time.

3. The TreeOS adopts non-nuclear design, and the debugging is concise and clear;

4. The TreeOS adopts the component design which can be cut out in a flexible and efficient way.

5. The operation RAM needed by TreeOS is smaller, and the requirements for MCU are low relatively.

&3、Is there any difference between TreeOS and other operating systems?

Single chip memory capacity, program space and other resources are very limited, and the core of operating system needs to occupy a considerable amount of memory and program space, which restricts the performance of the system;Running the kernel program takes up processor time, so it reduces the system's real time ability and the power consumption.The operating system kernel program is very complicated and it is difficult to learn.The traditional kernel of these microcomputer operating systems requires a large number of design drivers and common library, etc.

The TreeOS1.0 operating system takes up system resources for its "non-nuclear" design thoughts(memory, program space, MCU running time), so that MCS51 single-chip microcomputer can also be used to operate the system. TreeOS1.0 biggest advantage is to provide a reusable software architecture and reusable software component library, which simplify the software development process and shorten the development cycle.

&4、What are the reliability and stability of the TreeOS system?

The system written by experts has been patented and applied to a large number of projects.There is no doubt about sex and stability.

&5、Is TreeOS difficult to use?

TreeOS has experience in standardized software, standardized circuit and reliability design. Some standard drivers and common libraries can be used directly to reduce the workload.

Documentation is available when used, helping engineers to use quickly and develop their own projects.

&6、What is the basic requirement for TreeOS for beginners?

With a simple C language foundation, simple single chip microcomputer base and electronic technology base can use our TreeOS operating system basically .

&7、What role does the TreeOS operating system have?

(1) The TreeOS operating system provides some standard drivers and common library, which can be used directly to reduce the workload.

(2) The operating system provides perfect programming ideas, so that a large number of tasks can be worked together in an orderly manner, reducing the possibility of errors;

(3) For beginners, it can shorten the accumulation process greatly and help them to grow rapidly.

&8、Which industries the TreeOS operating system applies to?

Iot, industrial 4.0, artificial intelligence, aviation, military electronics, industrial control equipment, intelligent instrument, robot, car electronics, intelligent household, information home appliances, office automation equipment, communications equipment and other industries.

&9、What is the effect of using the TreeOS system development project?

Developers need to do a lot of repetitive work from the bottom up.Use TreeOS, then only need to write the user program,and many existing programs can be used to use, also do not have to keep all tasks running situations of the heart,which simplifies the development process and reduce the workload. 60-90% software development tasks can be completed.

&10、What type of singlechip is the TreeOS for?

Low-standard micro controller, MCU resources such as memory capacity, program space is very limited, and the operating system kernel need to take up a fair amount of memory and the program space, which restrict the performance of the system.However, the TreeOS operating system does not have a kernel and does not take up memory.We support STC51, MSP430, AVR, STM32, these mainstream MCU currently , we will add more MCU support in the future.

&11、Are TreeOS drivers easy to migrate?

All drivers will not have complicated statements,which are simple and easy to use.The SPI interface and IIC interface are all simulated and easy to migrate to other singlechip.

&12、Key technologies for TreeOS？

(1) Adopt the software component technology that has arisen in recent years;

(2) Adopt a non-nuclear design to solve the problem of operating system crowding out system resources;

(3) The industry initiated the "scene oriented" programming, which organized the scene into the tree structure and provided a solution involving the application layer;

(4)The software structure is clear and clear because of task grid;

&13、What should we learn about the TreeOS operating system?

When learning the TreeOS operating system, you have to have simple single chip microcomputer foundation, C language foundation and electronic technology foundation. Then look at the documentation, and learn to invoke the driver function to implement your project.

&14、What is the TreeOS ComLib software component library？

The TreeOS ComLib software component library is the main component of the TreeOS 1.0 component operating system.

The TreeOS ComLib software component library mainly contains the following four aspects:

1) Initial template of various MCU and interrupt service template;

2) Drivers of various peripheral devices;

3) Common library procedures;

4) Generic scenario library programs or templates.

&15、What are the features of TreeOS ComLib？

1) Conform to the software architecture specification of TreeOS 1.0
2) It can be transplanted to different single chip microcomputer platform easily
3) Writed by expert, after practice test
4) Upgrade and expand continuously

&16、How to use the TreeOS ComLib software component library？

1) Replication: copy the c and.h files into the project folder and transfer c files into the project according to the project requirements.

2) Configuration: general configuration is performed in.h files, including conditional compilation selection, properties, IO port definitions, special statements, etc.Where configuration is required where is the "/ / M/" flag;

3) Cropping: some subroutines are not needed, and must be commented out so as not to take up memory and ROM space.Generally, the "conditional compilation selection" in the h file is cropped.Where it is required to cut where is the "/ / M/" mark;

4) References: including calling subroutines and referencing "special statements".The most common reference to "special statements" is in the T0 interrupt, such as iSACN_KEY_TIME in TreeOS_keyboard;

5) Modify and supplement: some subroutines need to be written according to the actual situation, such as the ReadPress (void) in TreeOS_keyboard.Where modifications and complements are required where is the "/ / M/" mark;

6) Templates: some of the files are just a template that typically provides only the architecture, not the specific content.Sometimes providing routines can be written in accordance with this architecture, with the same "/ / M/" prompt.

&17、What circumstances did I want to make a system like this?

TreeOS iot real-time operating system was born from the project. With many projects done, there are a lot of common place.Can I make a system to store the same functions between projects and shorten the period for future projects, so the birth of TreeOS was born not all of a sudden, but rather a true "from practice to practice" products.Experiencing more than one hundred single chip microcomputer refining and validation of the project, as well as the theory of sublimation, version upgrade continuously, formed TreeOS1.0 dedicated to MCU in 2012 .It really realize the process from quantitative change to qualitative change.Avoid a lot of redundant operation when the development of embedded software , which makes software development more stable, more efficient!

&18、What is the future direction of TreeOS?

The TreeOS will be upgraded continuously , mainly along two lines: one is the continuous expansion of the component and the construction of dedicated component library, which is large;The second is that the management of tasks can be considered with kernel or micro kernel to apply more complex embedded applications.

&19、 What are the advantages of the Internet of things such as Huawei liteos, Tinyos and Contiki?

In contrast, our Treeos has a component library that provides rich drivers for faster development.

&20、Are bugs easy to debug with TreeOS？

Programming architecture like tree are easy to locate and solve problems.

&21、What are the disadvantages of TreeOS?

The execution time of the entire cycle is not a constant, as the number of tasks increases, the time for the task executed increases with it.

&22、Our Treeos system is the main Internet of things, right? So it must also support many iot standards,Which iot standards are now supported?

The standards that are supported include ZigBee, bluetooth, Lora, wifi now , like the newer NB-IOT, and we're doing it.

&23、What is the specific content of the component library that is supported by Treeos, and what size will it be?

It is mainly related to the peripheral circuit of MCU, related driver, like SD card reading and writing, CAN Bus, 485 Bus, RF communication, TCP/IP protocol stack and so on.

&24、Will the program be open source in the future with the number of TreeOS users increasing?

Still open source, it's only in open source that it's possible to drive TreeOS to grow , attracting tens of millions of iot engineers