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Inventeur(s):
LI XiaoLan – 610000 Chengdu City, Sichuan
Province (Chine)

43

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Mandataire(s):
DENNEMEYER & ASSOCIATES S.A. PATENT
DEPARTMENT – 1015 LUXEMBOURG (Luxembourg)

47

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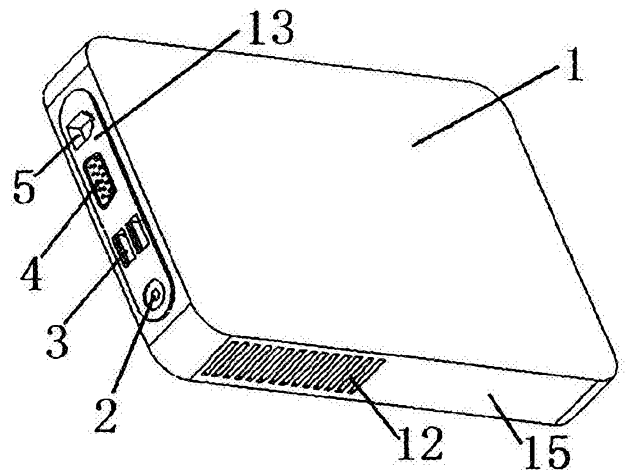
Titulaire(s):
Chengdu Yuyue Technology Limited Liability Company
– 610000 Chengdu City , Sichuan Province (Chine)

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A computer cloud terminal device.

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Abstract: The invention provides a computer cloud terminal device and belongs to the technical field of communication. The computer cloud terminal device comprises a case (1), a power interface (2), a left USB interface (3), a VGA interface (4), an LAN interface (5), a microphone jack (6), a headset jack (7), a right USB interface (8), an LAN indicator lamp (9), a power indicator lamp (10), a power source button (11), a fan, a heat-dissipating opening (12) and a standby battery. The computer cloud terminal device can be connected with a server to replace a computer host so that the function of the host can be achieved; the device is provided with the power indicator lamp, the LAN indicator lamp, the fan and a heat-dissipating hole, and the rotating speed of the fan can be automatically adjusted according to changes of internal temperatures and intelligently dissipate heat and cool a circuit mainboard so as to meet the requirement for continuous work in hot summer; in addition, the requirement of users can be met under the circumstance without power or the circumstance of powering off.
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a computer cloud terminal device

Technology field

The invention relates to a computer connecting device, specifically to a computer cloud terminal device.

Background technology

Computer cloud device is the equipment linking the LAN, WAN on the internet. The present computer cloud device, such as router, has been widely used in all walks of life. Products of different grades have become the main force of backbone internal connection, backbone inter-connection and internet-backbone connectivity. With the emergence and development of lithium-ion batteries, portable laptop is received and used by more and more people, but its connection to the LAN and WAN also need auxiliary connection of computer cloud equipment, thus new requirements on the performance and functionality of the computer cloud equipment has been proposed. How to make the computer cloud equipment keep in power when external power supply is down, and guarantee the whole network system able to network establishing and visit in the event of a power outage, is the main technical problems urgent to solve. In addition, how to improve the performance of the computer cloud equipment to ensure its lasting running in the hot summer is concerned by people.

What's more, at present, the areas such as computer classroom, digital library, electronic reading-room, training institutions mainly use the computer host to visit Internet, build document etc. Because the computer host is large in energy consumption and slow in boot speed, for schools those need more equipment, it causes high cost, and anti-environment.

Therefore, the development of a computer cloud equipment with multiple functions, which can connect to the server to replace a computer host and can improve frequency of daily maintenance to maintain only the sever and save time for system maintenance crews is a technical problems to solve.

Contents of invention

Aiming at the above problems, the present invention provides a computer cloud terminal device with simple reasonable structure and convenient operation. The computer cloud terminal device can link to the server to replace a PC host and realize functions of the host. The operation system and application environment of this device are solidified in the sensor and modification by students is unpermitted, so that the cloud terminal daily maintenance is close to zero namely to maintain only the serve and save time for system maintenance crews. The terminal equipment can be widely used in areas such as computer classroom, digital library, electronic reading-room, training institutions and so on. The computer cloud terminal device can be directly connected to the server once starting

up, using the software resources on the server, including daily class documentation, browsing, etc. The device can be used when external power supply is down or without external power supply and has a fan whose rotation speed can automatically adjust according to the main board temperature to keep stable lasting work in the hot summer. In addition, the invention of the computer cloud device has reasonable interface layout, beautiful appearance and multiple functions. It is can be connected to the display, set with a headset and microphone to realize integrated application.

The above is achieved by the technology solution as following:

A computer cloud terminal device is characterized by comprising of a case, a circuit board ,a power interface, a left USB interface, a VGA interface, an LAN interface, a microphone jack, a headset jack, a right USB interface, an LAN indicator lamp, a power indicator lamp, a power source button, a fan, a heat-dissipating opening and a standby battery; wherein, the power interface, the left USB interface, the VGA interface and the LAN interface are assembled on the left surface of the case; the microphone jack, the headset jack, the right USB interface, the LAN indicator lamp, the power indicator lamp and the power source button are assembled on the right surface of the case; the fan and the heat-dissipating opening are assembled on the main surface of the case; the circuit board includes MCU control chip, power management device, temperature detecting device, Ethernet network detecting device and Ethernet connection device, wherein, the power management device is made up of an external power supply, a standby battery and power detection switching modules.

In order to achieve automatic switching between the standby battery and the external power supply, when the external power supply interface without power input and the power button is closed, the power detection switching modules will automatically switch to standby battery, to provide power supply; in order to feedback conveniently the battery information to the user: the power indicator lamp turns green when using external power supply; the power indicator light turns red when using standby battery.

Meanwhile, in order to feedback network connection status to the user, and remind the user of network signal strength, after the Ethernet network detection device detects the success of the LAN Ethernet interface connection, the LAN indicator (9) will flash, and the stronger the signal, the greater the flashing brightness.

In order to reduce the energy consumption of the fan to allocate the resources reasonably, the fan can automatically adjust its rotation speed according to the motherboard temperature detected by the temperature detection device, thereby save the fan power consumption and optimize the energy distribution and running performance of the equipment.

140mmx100mmx45mm。

In order to be portable and beautiful, as preferred, the computer cloud device is set to 140mm length x 100mm width x 45mm height.

To reduce the cost, as preferred, the standby battery is a rechargeable lithium battery.

Compared to existing computer cloud equipment, the present invention provides a computer cloud terminal device with simple structure, convenient operation and multiple functions. Cloud terminal has harmonious HMI, simple operation. Students do not need to have professional knowledge of computers, only to operate the mouse and keyboard, after system successfully configured, students in class can use it as long as open the host power supply. With fast starting and shutting down speed, students can switch on and off freely as if using electric products, without fear of damage to the computer. With the permission set on the server, students have no right to change any computer settings, and computer system security is guaranteed. The external factors result in the failure of the machine, power failure, etc., which does not affect the current operation, and can continue to work or learn after starting up.

Drawings description

Figure 1 shows the structure diagram from the left point of view of the invention.

Figure 2 shows the structure diagram from the right point of view of the invention.

As shown:

1. a case, 2. a power interface, 3. a left USB interface, 4. a VGA interface, 5. an LAN interface, 6. a microphone jack, 7. a headset jack, 8. a right USB interface, 9. an LAN indicator lamp, 10. a power indicator lamp, 11. a power button, 12. a heat-dissipating opening, 13. the left surface, 14. the right surface, 15. the main surface

Detailed embodiment

In order to better understand the purpose, technical means, and advantages of the invention, the invention is further described in detail with the following embodiment and drawings. The described specific embodiment is only an explanation but not a limitation to the invention.

The invention is further described in detail with the following drawings.

Referring to figure 1 and figure 2, a computer cloud terminal device comprising of a case 1, a circuit board, a power interface 2, a left USB interface 3, a VGA interface 4, an LAN interface 5, a microphone jack 6, a headset jack 7, a right USB interface 8, an LAN indicator lamp 9, a power indicator lamp 10, a power source button 11, a fan, a heat-dissipating opening 12 and a standby battery; wherein the power interface 2, the left USB interface 3, the VGA interface 4 and the LAN interface 5 is assembled on the left surface 13 of the case 1; the microphone jack 6, the headset jack 7, the right USB interface 8, the LAN indicator lamp 9, the power indicator lamp 10 and the power

source button 11 are assembled on the right surface 14 of the case1; the fan and the heat-dissipating opening 12 are assembled on the main surface 15 of the case1. The layout is not only beautiful, but also reasonable, in line with the operation and usage of the equipment.

The circuit board includes MCU control chip, power management device, temperature detecting device, Ethernet network detecting device and Ethernet connection device, wherein, the power management device is made up of an external power supply, a standby battery and power detection switching modules. In order to achieve automatic switching between the standby battery and the external power supply, when the external power supply interface without power input and the power button is closed, the power detection switching modules will automatically switch to standby battery, to provide power supply; in order to feedback conveniently the battery information to the user: the power indicator lamp turns green when using external power supply; the power indicator light turns red when using standby battery. The design quickly and intuitively feeds back the operation status of the device to the user, so that the user can master the operation of the computer cloud device at any time.

In order to facilitate users to understand and grasp of network state information, to feedback network connect status to the user at any time, and remind the user of network signal strength, after the Ethernet network detection device detects the success of the LAN Ethernet interface connection, the LAN indicator (9) will flash, and the stronger the signal, the greater the flashing brightness.

In order to reduce the energy consumption of the fan to allocate the resources reasonably, the fan can automatically adjust its rotation speed according to the motherboard temperature detected by the temperature detection device, thereby save the fan power consumption and optimize the energy distribution and running performance of the equipment.

In order to be portable and beautiful, as preferred, the computer cloud device is set to 140mm length x 100mm width x 45mm height.

The invention discloses a computer cloud terminal device, whose system is configured as: processor of CortexA91Ghz, operating system of Linux, Storage memory of DDR3512M and flash of NandFlash2G. Its operating system and application environment is curing in the chip, not allowing students to make any changes, so the daily maintenance of cloud terminal real close to "zero" maintenance, only need to do the server maintenance, saving a lot of time system maintenance personnel. The equipment can be widely used in areas such as computer classroom, digital library, electronic reading-room, training institutions and so on. The computer cloud terminal device can be directly connected to the server once starting up, using the software resources on the server, including daily class documentation, browsing, etc. And the multimedia classroom can fully satisfy the teacher's daily classroom teaching, including OFFICE, FLASH, PHOTOSHOP, Acdsee

and other common software.

The computer cloud terminal device disclosed in the invention has low power consumption. It is equipped with the most advanced memory chips technology to solve problems of big noise of traditional hard disk and heat dissipation. The host is designed with ultra-thin chassis and quiet operation, small in occupying. It is greatly suitable for class calculated as 50 devices, 12 lessons, 35 weeks per year: $12 \times 2/3 \times 35 = 280$ (hours) (calculated as 40 minutes a lesson), and power consumption: cloud terminal: 0.005 kw PC: 0.25 kw,; electricity costs: cloud terminal: $50 \times 280 \times 0.005 = 70$ kw/h. Therefore, the computer cloud terminal device disclosed in the invention can greatly reduce the power consumption and save resources.

1. Computer-Cloud-Endgerät, dadurch gekennzeichnet, dass es Folgendes umfasst: ein Gehäuse (1), eine Leiterplatte, eine Energieversorgungsschnittstelle (2), eine linke USB-Schnittstelle (3), eine VGA-Schnittstelle (4), eine LAN-Schnittstelle (5), eine Mikrofonbuchse (6), eine Headset-Buchse (7), eine rechte USB-Schnittstelle (8), eine LAN-Anzeigeleuchte (9), eine Energieversorgungsanzeigeleuchte (10), einen Energiequellen-Schaltknopf (11), einen Lüfter, eine Wärmeableitungsöffnung (12) und eine Reservebatterie, wobei:
die Energieversorgungsschnittstelle (2), die linke USB-Schnittstelle (3), die VGA-Schnittstelle (4) und die LAN-Schnittstelle (5) an die linke Fläche (13) des Gehäuses (1) montiert sind,
die Mikrofonbuchse (6), die Headset-Buchse (7), die rechte USB-Schnittstelle (8), die LAN-Anzeigeleuchte (9), die Energieversorgungsanzeigeleuchte (10) und der Energiequellen-Schaltknopf (11) an die rechte Fläche (13) des Gehäuses (1) montiert sind,
der Lüfter und die Wärmeableitungsöffnung (12) an die Hauptfläche (15) des Gehäuses (1) montiert sind.

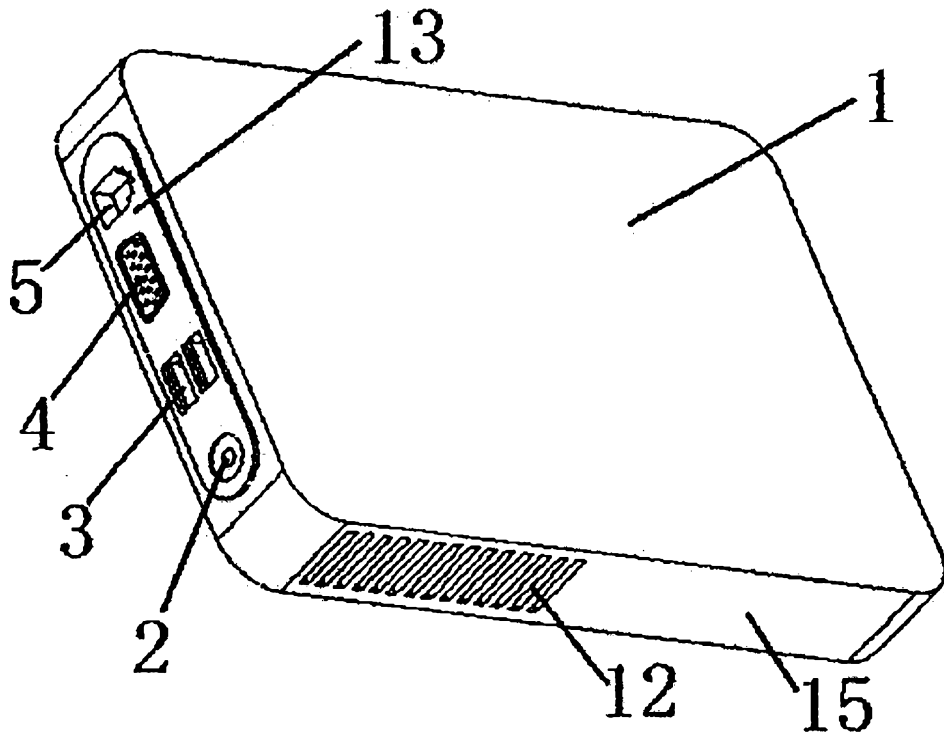


FIGURE 1

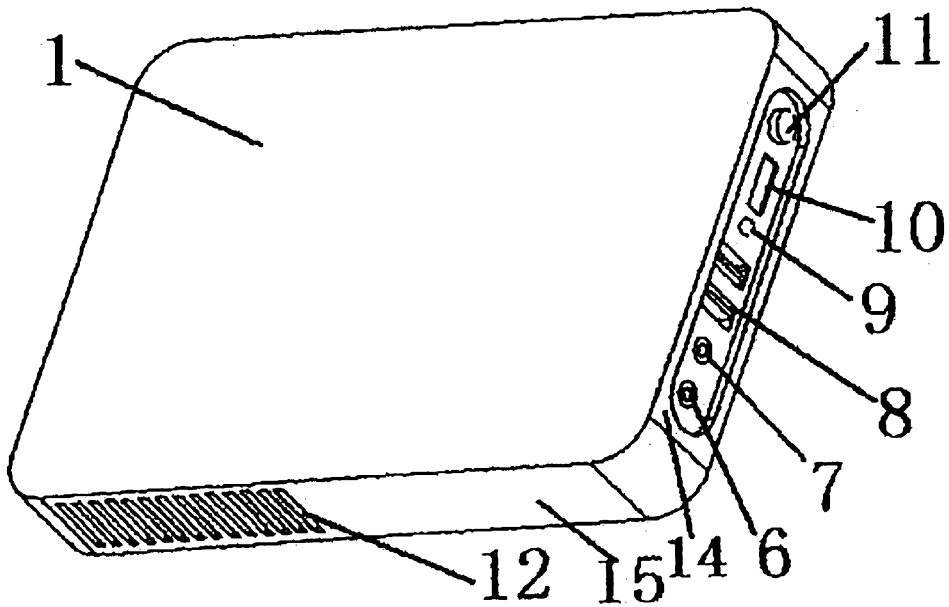


FIGURE 2

The invention provides a computer cloud terminal device and belongs to the technical field of communication. The computer cloud terminal device comprises a case (1), a power interface (2), a left USB interface (3), a VGA interface (4), an LAN interface (5), a microphone jack (6), a headset jack (7), a right USB interface (8), an LAN indicator lamp (9), a power indicator lamp (10), a power source button (11), a fan, a heat-dissipating opening (12) and a standby battery. The computer cloud terminal device can be connected with a server to replace a computer host so that the function of the host can be achieved; the device is provided with the power indicator lamp, the LAN indicator lamp, the fan and a heat-dissipating hole, and the rotating speed of the fan can be automatically adjusted according to changes of internal temperatures and intelligently dissipate heat and cool a circuit mainboard so as to meet the requirement for continuous work in hot summer; in addition, the requirement of users can be met under the circumstance without power or the circumstance of powering off.