

VDI-35 工控机 用户手册/

VDI-35 Industrial PC User

Manual

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V1.03	增加英文版本、产品特性和产品规格/Add the English version, product features, and product specifications	Wendy	2023.6.5

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1 产品简介/ Product profile

VDI-35是一款拥有丰富I/O接口，高度灵活性以及支持mini-PCle拓展的工业电脑。它具有适应宽温、强固机构的特性。一般情况下，工控机已内置安装了Ubuntu系统，RTLS定位程序软件均已配置自启动。

The VDI-35 is a series of industrial microcomputer with rich I / O interfaces, high flexibility, and supporting mini-PCle expansion. It is adapted to the wide temperature and the strong solid mechanism. Generally, the industrial microcomputer has been installed with a built-in Ubuntu system, and the RTLS program software has been configured for self-start.



图1 产品图/ Figure 1 Product picture

2 产品特性/ Features

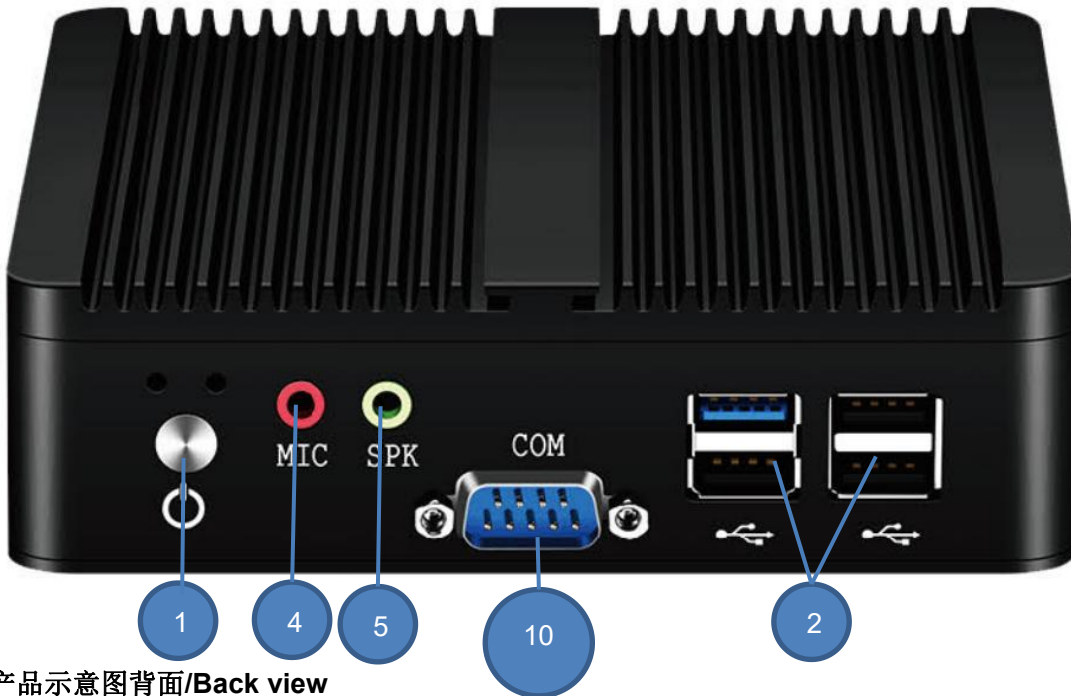
- ◆ RTLS定位引擎预部署，简化定位平台操作配置/ The RTLS positioning engine is pre-deployed, simplify the RTLS platform configuration
- ◆ 接口丰富，方便拓展功能/ Rich IO interfaces, easy to expand external functions
- ◆ 支持键鼠、屏幕，可外接调试
- ◆ 支持1*MINI-PCIE插槽，可扩展WIFI
- ◆ 超紧凑迷你无风扇低功耗设计/ Ultra-compact, mini size, fanless, low power design
- ◆ VGA+HDMI显示，支持同步异步双线显示/ VGA + HDMI display and supports synchronous asynchronous double-line display

3 接口简介/ Interfaces instruction

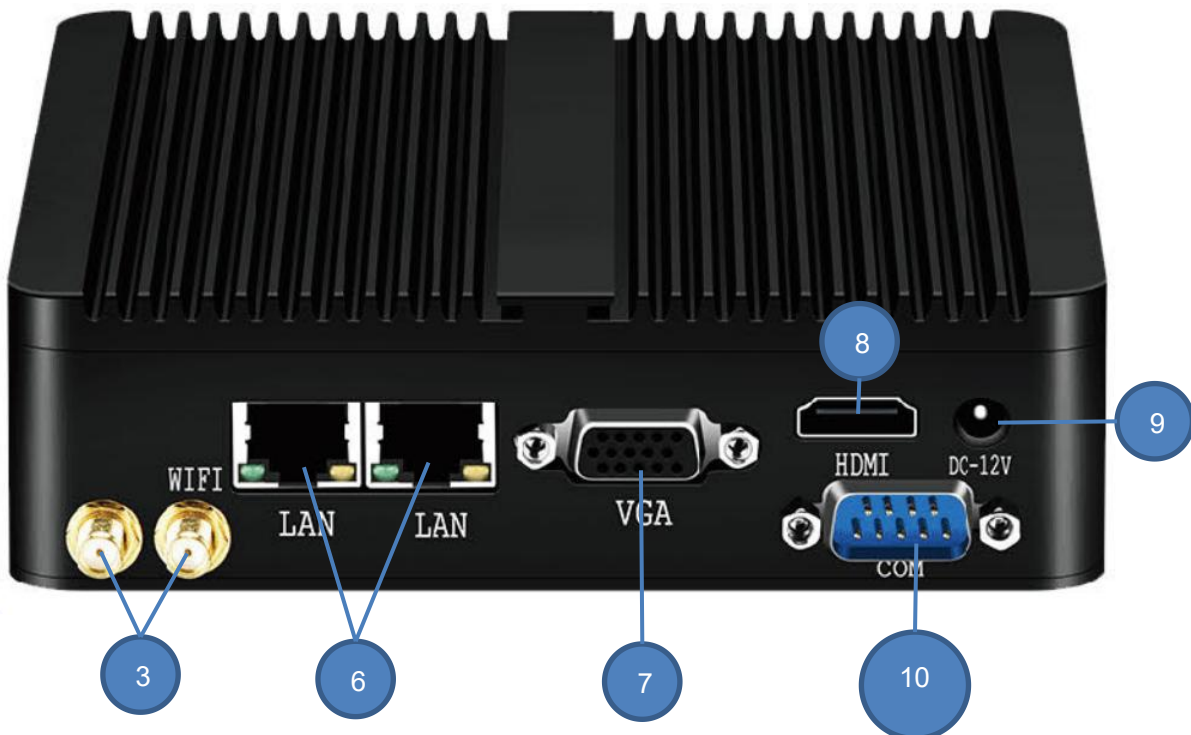
注：以下介绍为公司系列产品型号，具体型号以包装实物为准。

Note: The following introduction is the model of the company's series products, the specific model is subject to the packaging

产品示意图正面/Front view



产品示意图背面/Back view



序号	名称/ Name	说明/ Explain
1	开关按钮/Switch button	启动或者关闭电脑按钮/ A button to start or shut down your computer
2	USB接口/USB interface	连接USB设备，例如U盘，USB键鼠等。/ Connect USB devices, such as USB flash drives and USB mouse or keyboard.
3	WiFi天线/WiFi antenna	用于WiFi信号传输（部分型号不支持） /Used to receive signals（may not supported by some model）
4	耳机接口/headset interface	连接3.5MM耳机/Connect to the 3.5MM headset
5	麦克风接口/Microphone interface	连接3.5MM麦克风/Connect to a 3.5MM microphone
6	RJ-45接口/ The RJ-45 interface	将计算机通过网线连接至以太网网络。/ Connect the computer to the Ethernet network over the network cable.
7	VGA接口/ VGA interface	连接显示器/ Connect the display
8	HDMI接口/ HDMI interface	连接显示器/ Connect the display
9	电源接口/ Power interface	连接电源适配器/Connect the power supply adapter
10	RS232串口 /RS232 UART port	用来连接外部RS232设备 /Used for external RS232 interfaces

4 产品规格/ Specifications

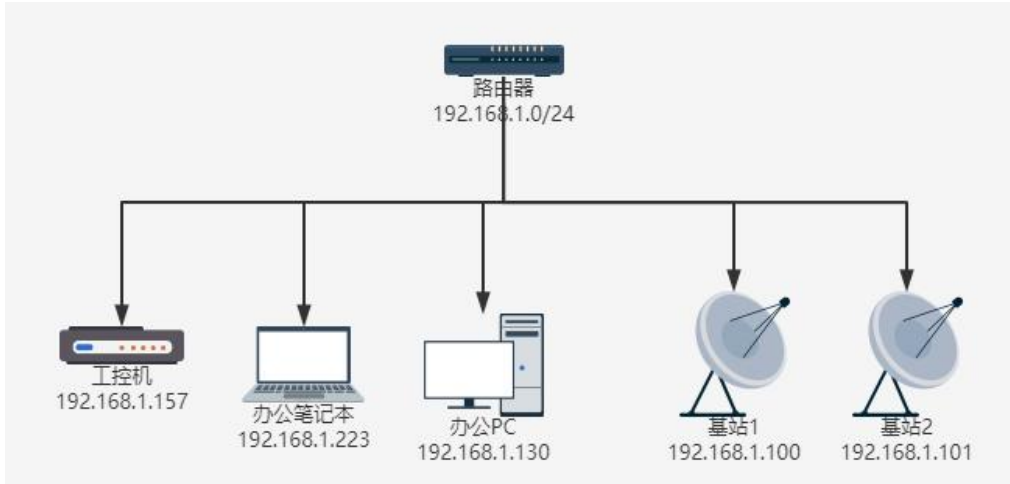
项目/Item	特性/Character	描述/Description
处理器 /Processor	CPU	Intel Celeron Processor J1900(2.0GHz)
	核心/线程数	四核四线程/ Four-core and four-thread
内存/Memory	技术架构	单通道 SODIMM 插槽，支持 DDR3L1066/1333/1600MHz
	最大容量	8GB
	插槽	SODIMM
显示 /Display	VGA	最大支持分辨率 2650*1600@60Hz
	HDMI	最大支持分辨率 1920x1200@60Hz
	双显	VGA+HDM 支持同步异步显示 / Supports synchronous and asynchronous display
以太网 /Ethernet	LAN1	10/100/1000/ Mbps Realtek 8111F 支持网络唤醒/ Wake On Lan
	LAN2	10/100/1000/ Mbps Realtek 8111F 支持网络唤醒/ Wake On Lan

音频/ Audio frequency	主系统/ Controlling system	采用 Realtek ALC662 音频控制芯片，支持双声道，立体声， Line out/ Using the Realtek ALC662 audio control chip, support for dual-channel, stereo, Line out
I/O接口	USB	1*USB3.0 3xUSB2.0
	串口/UART	2xRS232
拓展/Expand	Mini-PCIE	1x半高尺寸 Mini PCIE
缓存	HDD	支持 SATA 2.5"HDD (最高数据转换速率SATA 2.0)
	SSD	1x全高尺寸 mSATA socket
软件/Software	OS	Windows7/ Windows8 / Windows10
	Linux	Ubuntu/ LINUX/ CENTOS
电源/Power	电源类型 /Power type	DC-IN 5.5*2.5
	输入电压 / Input voltage	12V
	最小电源输入 /Minimum power input	3A
	电源适配器 /Power adapter	DC12V3A/36W(ACTODC100-240V)
功耗 /Consumption	CPU	10W
物理特性/ Physical characteristics	结构/Structure	铝制外壳/Aluminum Enclosure
	安装方式/Install	VESA/壁挂式/桌面式
	尺寸/Size	136*128*39mm
	重量/Weight	1KG
	颜色/Colour	黑色/ Black
环境 /Environment	工作温度/Operating temperature	-20℃~+65℃
	储存温度/Storage temperature	-20℃~+75℃
	工作湿度 /Operating humidity	5%-95%相对湿度，无凝结

5 系统操作说明/ System operation instructions

以如下网络拓扑结构为参考，基站、工控机、客户端PC需要在同一局域网内。

With the following network topology structure as a reference, the base station, the IPC and the client PC need to be in the same LAN.



1. 将工控机电源线连接好，按下电源按钮，开机时电源指示灯闪烁并有提示音。

1. Connect the power cable of the industrial computer, press the power button, and the power indicator blinks and gives a prompt tone.



2. 若需要人工维护，可以连接视频输出线到显示器,连接键盘鼠标，系统启动成功后可以使用默认的账号密码进行登录，默认账号为 **uwb**，默认密码为**123456**。切记一般不把工控机暴露在不可控的互联网中，除非您有经验维护系统安全问题。

2. If manual maintenance is needed, you can connect the video output line to the monitor and the keyboard and mouse. After the system is successfully started, you can log in with the default account password. The default account is **uwb** and the default password is **123456**. Remember not to expose the industrial controller to the uncontrollable Internet, unless you have experience in maintaining system security issues.


```
Ubuntu 22.04.2 LTS uwb-server tty1
uwb-server login: uwb
Password:
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.15.0-71-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.
Last login: Thu May 18 01:20:52 UTC 2023 on tty1
uwb@uwb-server:~$ ifconfig
enp2s0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
ether 00:e0:1b:7f:b1:80 txqueuelen 1000 (Ethernet)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

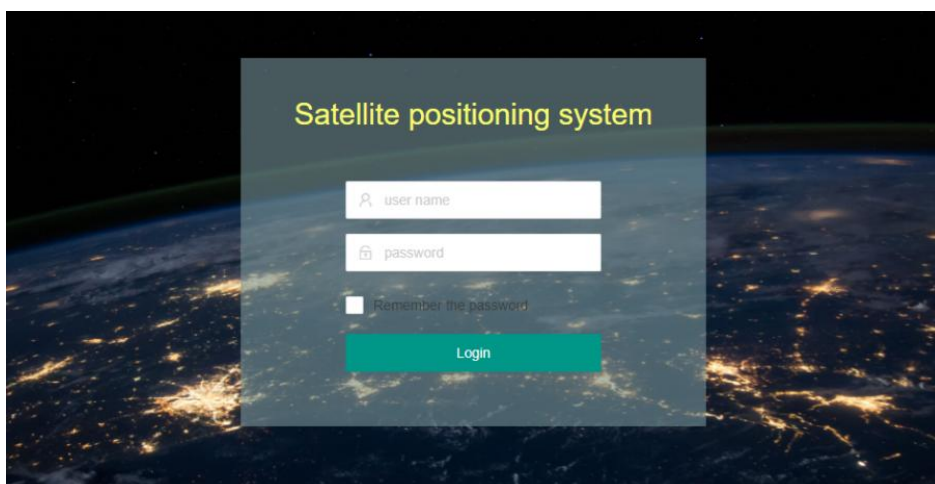
enp4s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 192.168.1.157 netmask 255.255.255.0 broadcast 192.168.1.255
inet6 fe80::2e0:1bff:fe7f:b181 prefixlen 64 scopeid 0x20<link>
ether 00:e0:1b:7f:b1:81 txqueuelen 1000 (Ethernet)
RX packets 19789 bytes 1647509 (1.6 MB)
RX errors 0 dropped 4 overruns 0 frame 0
TX packets 844 bytes 523932 (523.9 KB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 27593 bytes 9768276 (9.7 MB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 27593 bytes 9768276 (9.7 MB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

uwb@uwb-server:~$ _
```

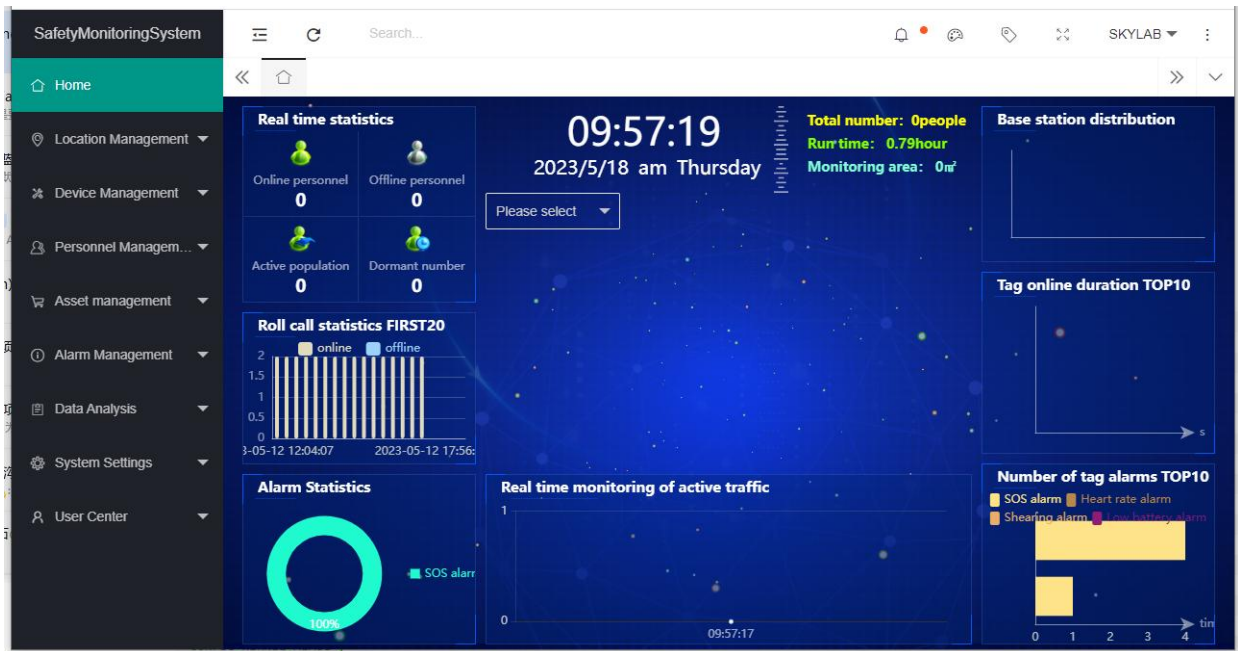
3. 获取工控机的IP地址，这一步一般需要工控机插入网线，uplink 端需具备DHCP功能，工控机可自动获取IP地址。要查看工控机的IP地址，一般有两种方式。第一种是在路由器观察新出现的设备和IP地址，第二种是登录到工控机之后使用 ifconfig 命令查看IP地址。

3. To obtain the IP address of the industrial control machine, this step generally requires the industrial control machine to insert into the network cable, the uplink terminal needs to have the DHCP function, and the industrial control machine can automatically obtain the IP address. To view the IP address of the industrial controller, there are generally two ways. The first is to observe the new device and IP address on the router, and the second is to use the ifconfig command to view the IP address after logging in to the industrial controller.



4. 获取到IP地址后，一般情况下可以直接在浏览器输入工控机 IP 地址，即可访问 UWB 系统。能正常访问 UWB 系统时，可以使用默认账号密码登录系统,默认账号为 admin 默认密码为123456。后续操作可以根据《软件操作手册_UWB人员物品定位平台系统》进行操作。

4. After obtaining the IP address, you can generally directly input the industrial controller IP address in the browser to access the UWB system. When you can access the UWB system normally, you can log in to the system with the default account and password. The default account is admin and the default password is 123456. Subsequent operations can be conducted according to the 《软件操作手册_UWB 人员物品定位平台系统》.



6 简单故障排除/ Simple troubleshooting

序号	故障现象/ Fault performance	排除方法/ The exclusion method
1	不开机/Can not start	1. 请确认交流电源适配器已连接至计算机，且电源线插头已插入 工作正常的电源插座/Ensure that both ends of the AC adapter are in good contact and the input power supply works properly. 2. 确认计算机电源已开启。(可再次按电源键)/Confirm that the computer power supply is turned on.(Can press the power key again) 3. 如果以上问题确认无误，而计算机依然黑屏，则需送去专业维修。 / If the above problems are confirmed and the computer is still black, it needs to be sent for professional repair
2	计算机开机时	如果是外接显示/ If it is an external display:

	屏幕无显示/ When starting the computer The screen is not displayed	<ol style="list-style-type: none"> 1. 请检查HDMI、DP线缆是否正确连接。/ Please check whether the HDMI and DP cables are properly connected. 2. 检查显示器输入模式是否正确。/ Check that the display input mode is correct.
3	计算机正在运行时，突然黑屏/ When the computer is running, the screen is suddenly black	<ol style="list-style-type: none"> 1. 查看电源指示灯状态，确认设备是否进入睡眠模式。（按下电源键是否可唤醒）/ Check whether the device is in sleep mode by viewing the power indicator status. (Press the power button to wake up or not) 2. 检查显示器是否休眠。/ Check whether the monitor is in sleep mode
4	计算机没有响应/ The computer did not respond	<ol style="list-style-type: none"> 1. 如果要关闭计算机，请按住电源按钮4秒钟或更长时间。/ If you want to shut down the computer, please hold down the power button for 4 seconds or longer 2. 如果计算机仍然没有响应，请拔下交流电源适配器。/ If the computer is still not responding, unplug the AC power adapter. 3. 过1分钟后插入适配器重新开机，如果无法开机，请送去维修。/ After 1 minute, plug in the adapter and boot it again. If it cannot be started, please send it to repair.
5	喇叭或耳机无声音/ There is no sound from the speaker or headset	<ol style="list-style-type: none"> 1. 检查静音功能是否关闭。/ Check whether the mute function is turned off. 2. 是否选择了扬声器/耳机作为播放设备。/ Selected the speaker / headset as the playback device.
6	电脑蓝屏/ blue screen of death	<ol style="list-style-type: none"> 1. 拔掉内存，用橡皮轻轻擦拭后，再重新安装进行测试/ Remove the memory, wipe it gently with an eraser, and reinstall it for testing.
7	高清无声音/ High definition without sound	<ol style="list-style-type: none"> 1. 检查显示器是否带有扬声器。/ Check the display for a loudspeaker. 2. 检查设备管理器声音驱动是否正常。/ Check that the Device Manager sound drive is normal.

7 安全警告/Safety warning

为避免火灾、触电、及人员受伤等危险，在使用此计算机时，应遵循基本的安全措施，包括：

To avoid the hazards of fire, electric shock, and personnel injury, basic safety measures should be followed when using this computer, including:

1. 在使用计算机前，仔细阅读指导说明。/ Read the instructions carefully before using the computer.
2. 在设置之前，将计算机放在平稳的台面上。/ Place the computer on the smooth surface before setting up.

3. 使计算机远离高温，潮湿以及灰尘。 / Keep the computer from heat, humidity and dust.
4. 切勿撞击、跌落计算机，避免损坏。 / Do not hit or drop the computer to avoid damage.
5. 切勿将任何液体泼洒到计算机上，避免损坏计算机或引起燃烧。 / Do not spill any liquid on the computer to avoid computer damage or combustion.
6. 切勿将任何物体塞入计算机的通风口或者其他敞开的开槽内。 / Do not plug any object into the computer vent or other open slots.
7. 确保电源线没有放在容易绊倒人或被人踩踏的位置。 / Make sure the power cord is not in a position where it is easy to trip or be trampled.
8. 如果长时闲下来不打算使用计算机，请将插头拔下。 / If you do not planning to use a computer for a long time, unplug the plug.
9. 切勿自行拆卸计算机，为了安全起见，请交给合格的专业人员来服务。 / Do not disassemble the computer by yourself. For safety reasons, please give it to qualified professionals.

8 订购信息/Order information

型号	CPU	内存	存储	显示	USB	COM	LAN	电源
VDI-35-001	Intel Celeron Processor J1800 双核 (2.41GHz)	1*DDR3L1066/ 1333/1600MHz SODIMM MAX 8G	1*2.5DHH 1*mSATA	1*VGA 1*HDMI	4	2	2	DC 12V,3A
VDI-35-002	Intel Celeron Processor J1900 四核 (2.0GHz)				4	2	2	DC 12V,3A
VDI-35-003	Intel Celeron Processor N2815 双核 (1.86GHz)				4	2	2	DC 12V,3A
VDI-35-004	Intel Celeron Processor N2930 四核 (1.83GHz)				4	2	2	DC 12V,3A
VDI-35-005	Intel Celeron Processor J2900 四核 (2.41GHz)				4	2	2	DC 12V,3A

9 联系方式/Contact information

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