

SUNIX

DevicePort

VOL.5

The game changer for
Commercial Business



www.sunix.com

ABOUT SUNIX

Global I/O Pioneer since 1986

In 1995, SUNIX announced the first single-chip PCI serial card in the world and obtained patents from more than 50 nations. For 30 years, the company has advanced in the technology innovation and development and has become a global leader in I/O commercial communication field.

Commercial Communication

The commercial communication became over the years an essential part of our life. You will find now days products related to the commercial communication everywhere in your daily life. Whether you go to your preferred bank to withdrew money from an ATM machine or just pay for your shopping at a POS station at a supermarket, gathering information about a foreign city at a KIOSK system, paying the toll fee at a toll collect station. This is where SUNIX comes in.

SUNIX makes daily life more convenient and safer for everybody, with high quality products reflecting the latest technologies and a future oriented strategy.

IC Design

SUNIX has developed and introduced total of 15 self-brand IC.

The IC design team focuses on UART serial port and IEEE1284 parallel port controller ICs. With in-depth understanding of the core technology, the team can do any type of customization for the particular requirements of customers or applications.

DevicePort

Ethernet-enabled Port Replicator

For RS-232, Printer, DIO, Cash Drawer



Setup Serial Device Communication Systems with the DevicePort's Fast Plug-and-Play Installation

SUNIX's DevicePort can provide wired and wireless connectivity solutions with quick and easy installation, low hardware investment, and little maintenance costs. By streamlining and simplifying old, inefficient setups we're revolutionizing serial device communication. Order the DevicePort today and discover exactly how SUNIX can help transform the way you manage serial devices.

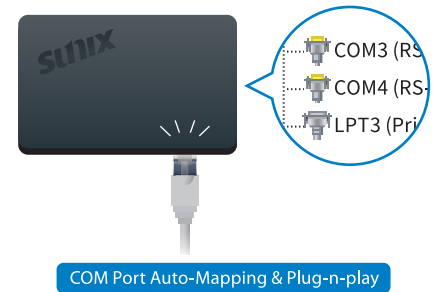
設備連網 ▪ 隨插即用

SUNIX網路界面擴充盒 (DevicePort) 是劃時代的產品，顛覆過往設備連網複雜的安裝與設定程序，實現了設備連網也能隨插即用。DevicePort 同時提供有線及行動的解決方案，安裝簡易、降低整體硬體購買及管理維護的成本，歡迎您立即體驗。

Cost-effective business applications

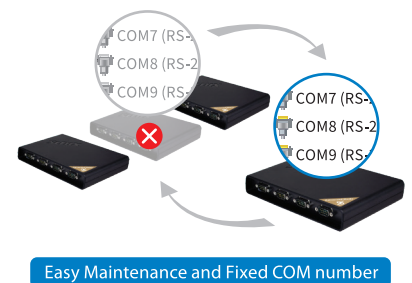
Plug-n-Play

- Real-Time data transmitting (Real COM) without complicated IP setup
- COM Port Auto-Mapping
- Supports Plug-N-Play
- Compatible with existing software
- To make wiring simple, fast, and more space efficient



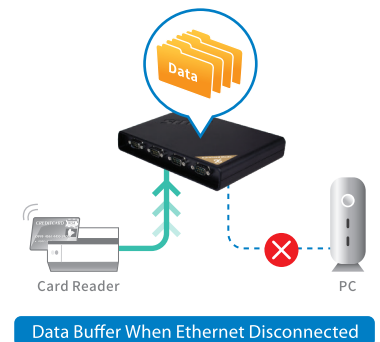
Easy Maintenance

- Greatly reduced downtime during maintenance; swap and replace components in seconds
- With Hot-Swap support there's no need to shut down the host computer during maintenance
- Fixed COM port addresses means you're never adjusting COM port settings
- The Daisy-Chain feature makes expanding or reducing the system fast, easy, and secure



Safety & Stability

- Data encryption technology securely transmits data across networks
- With Offline Mode, any loss of connection between the DevicePort and its computer will not effect on-demand applications
- The built-in data buffer prevents any unforeseen data loss during a connection failure
- Using MAC addresses to bind & link the DevicePort to its host computer, ensuring the highest data security



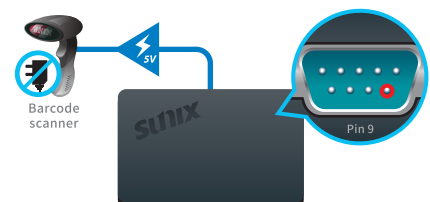
Remote Management

- Support remote control for mobile device applications



SUNIX Patented Powered COM Design

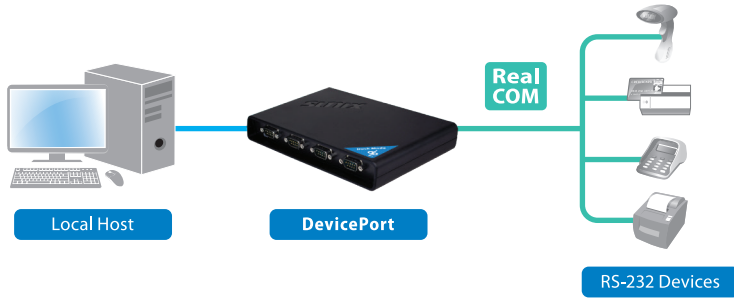
- Provides power via Serial ports with SUNIX's Powered COM (bypassing the need for external power adapters)



Applications

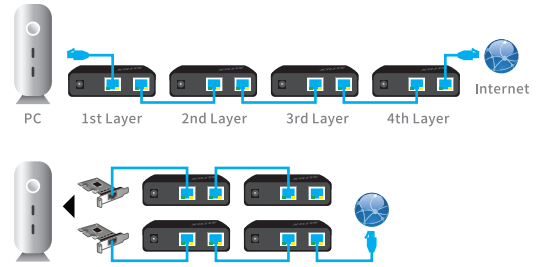
DevicePort Dock Mode

Legacy Expansion



Daisy Chain Topology

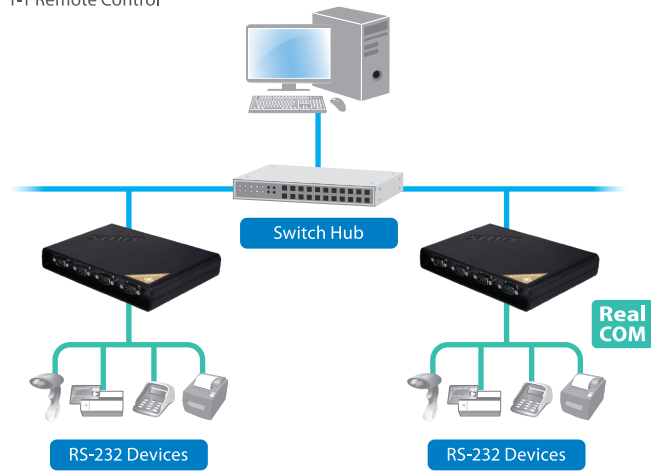
Maximum 12 COM / 3 Printer ports expansion



DevicePort Advance Mode

Remote Control

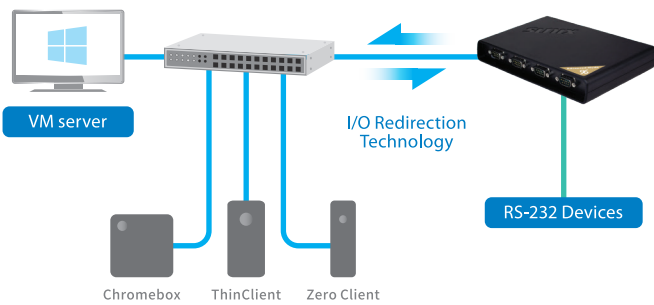
1-1 Remote Control



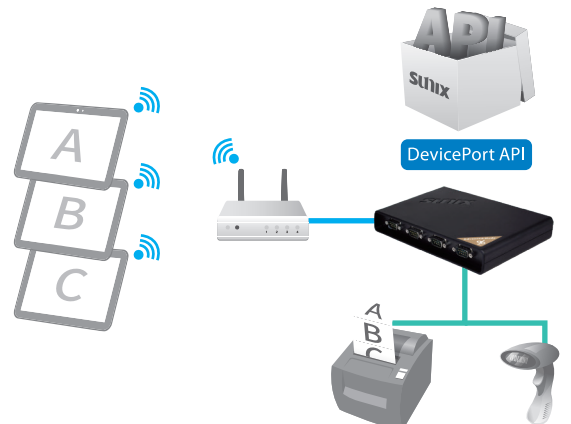
1-2 Mobile Device applications



1-3 Virtual Machine Framework



1-4 Device-sharing & control





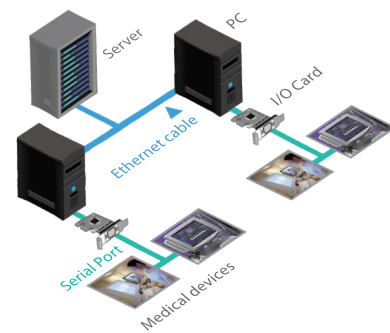
SUNIX DevicePort Simplifies Medical Applications

Technology is advancing with each passing day, All-In-One (AIO) / thin-client / tablet computers are being used in the healthcare market for various applications. New medical equipment, and devices continue being developed to meet different client requirements. In order to face with the vast device communication in healthcare market, SUNIX is proud to introduce the new DevicePort to help resolve all these complicated systems setup issues.

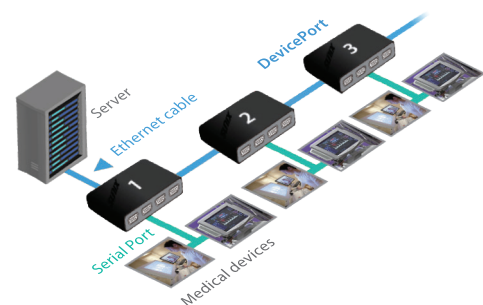
Our DevicePort Solution

In healthcare system, regardless of large hospital or small clinic; our SUNIX DevicePort can satisfy all their needs. DevicePort solution not only can lower the total equipment cost; but also simplifies the system structure design with long term cost saving. SUNIX always trying to diversify our product and solution development to bring us the better life experience.

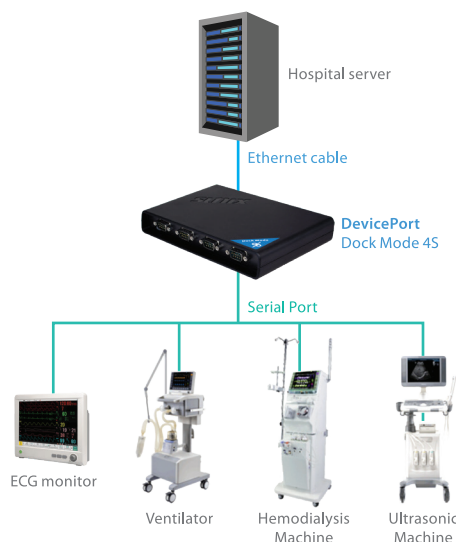
SUNIX DevicePort works well with PC for healthcare systems implementation. It supports I/O redirection technology, and with true real-time data communication. DevicePort uses MAC address to track devices, without any complicated setting or IP conflict issues. Moreover, DevicePort can auto-mapping serial port and extend via Ethernet connection. It can perfectly connect to medical equipment; such as ECG monitor, sphygmomanometer, and many more; also, it provides users with "real-time" parameters. DevicePort will enable data being shown on central management systems, and greatly assisting all medical personnel prompt for best and professional decision on each patient.



Traditional Structure



SUNIX DevicePort Solution



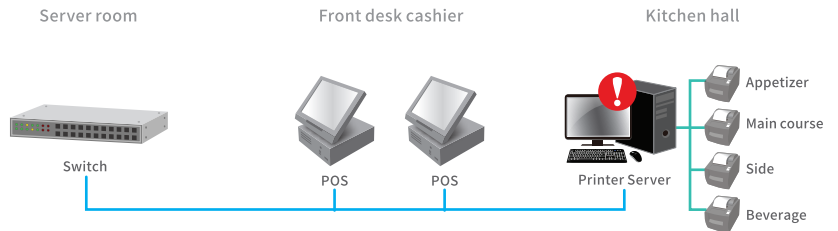
DevicePort supports hot-swap; the deployment, installation, and maintenance are much easier than older traditional solution. Hospital needs to keep all systems live for non-stop operation every day; so, all systems must be running 24/7. Therefore, servicing and maintaining systems without shutting down is extremely helpful.



SUNIX DevicePort Making Restaurant Logistics Simple and Easy

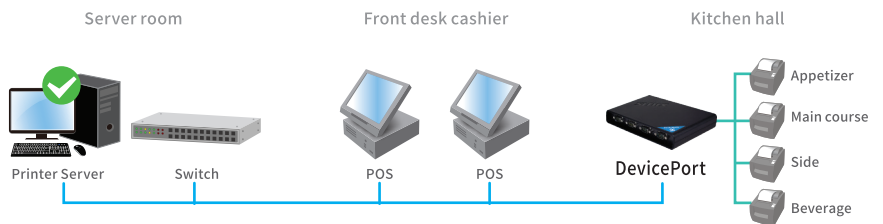
This client runs a well-known garden-themed restaurant with beautiful scenery and lots of land. It's a very popular holiday destination. Because the restaurant is so large and spread out they've created a ticket system that sends orders to chefs via printers located at workstations within the kitchen. The current setup requires a network server within the kitchen that receives and sends these messages to printers.

Poorly wired with a confusing setup?!



- ❌ Current ordering system is poorly wired with a confusing and unreliable setup.
- ❌ Smoke and steam interferes with communication systems between servers and printers.
- ❌ Whenever the system shuts down or needs maintenance the entire kitchen comes to a halt.

Our DevicePort Solution



- ✓ The DevicePort's makes wiring simple, easy, and more space efficient.
- ✓ Avoiding kitchen smoke or steam by moving the server into a dedicated server room.
- ✓ Should the system require maintenance workers can simply swap one DevicePort out with another and continue serving guests.

By transitioning to the SUNIX DevicePort system the restaurant was able to move the printer server into a dedicated server room. This more efficient setup freed up space and reduced clutter within the kitchen while creating a more stable system without interference from smoke, steam, or water damage.

Ensure Clients Never Lose Orders with SUNIX DevicePort

This client runs a popular chain of Japanese restaurants. Their success has allowed them to expand into neighboring markets on a global scale. To ensure guests are always served quickly and efficiently the restaurant uses wireless touchscreen devices to relay food orders back to the kitchen. This increases quality of services and doubles as a great marketing device.

Unexplainable Missing Orders?

At peak dining hours waiters can become overworked or overwhelmed. The wireless ordering system helps to alleviate this issue. When customers have special or customized orders waiters can relay the order correctly using the smart Tablet. Unfortunately, orders are often lost during this wireless transaction. The meal data transmission through USB/LAN port causes data lost.

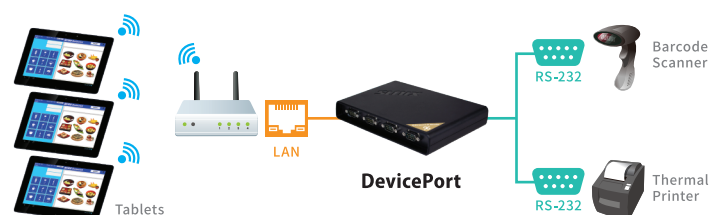
Our DevicePort Solution

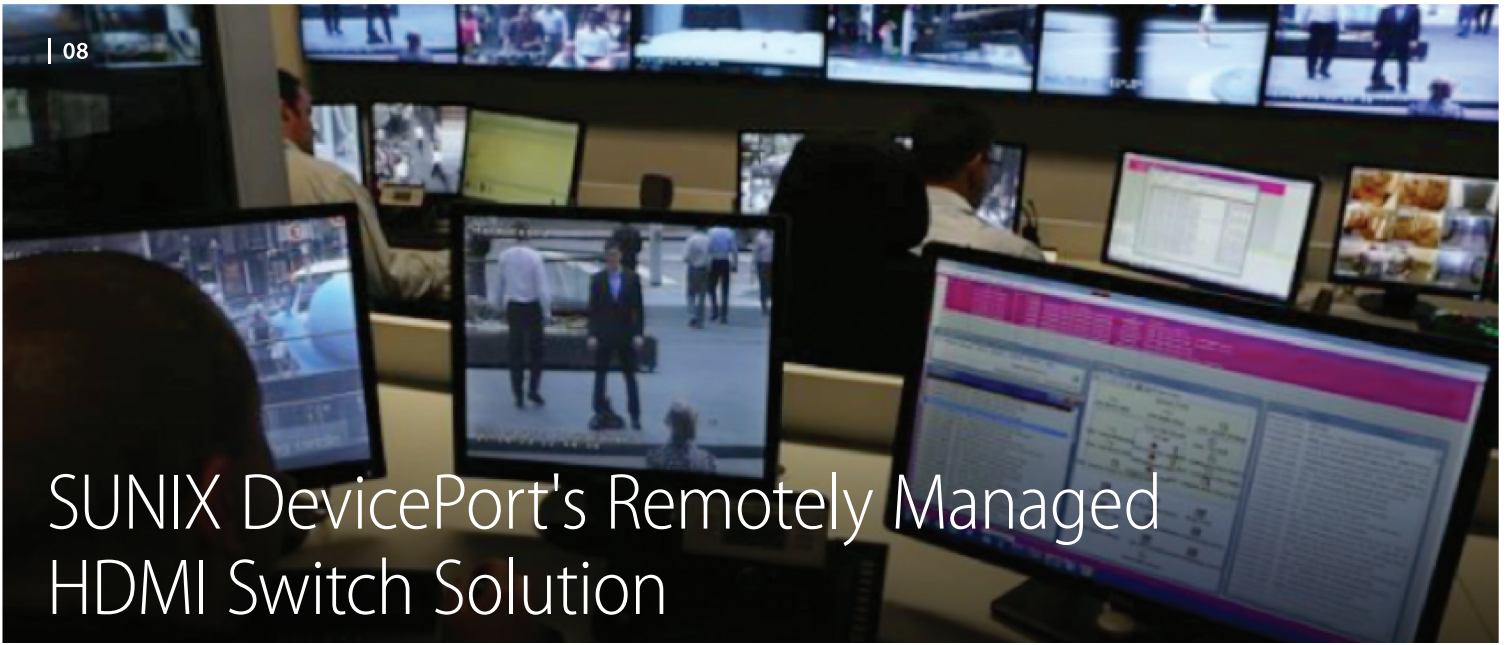
Our unique DevicePort Advanced Mode is a wireless solution that solves the missing order dilemma. It allows users to expand RS-232 ports over Ethernet connections. Our wireless ordering system can replace a USB/IP Printer to a more reliable RS-232 printer, solving the issue of occasionally missing orders. After the SUNIX DevicePort is installed the restaurant's service is better than ever.



TDMA concept – Multiple to One Saves More

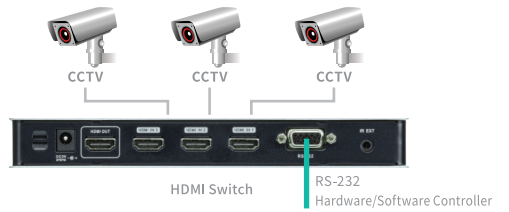
DevicePort supports TDMA (Time Division Multiple Access) I/O technology. Multiple smart devices can transmit meal order data to one or multiple RS-232 devices such as printers, scanners, LED Displays, etc. Meanwhile, Device Port uses on/off-line smart COM deployment, auto connection, and mapping functions. When the smart Tablet is off-line, Device Port will share the RS-232 device with other smart devices. With this functionality, multiple smart tablets can share a single thermal printer. This multiple to one feature significantly reduces the client's costs.



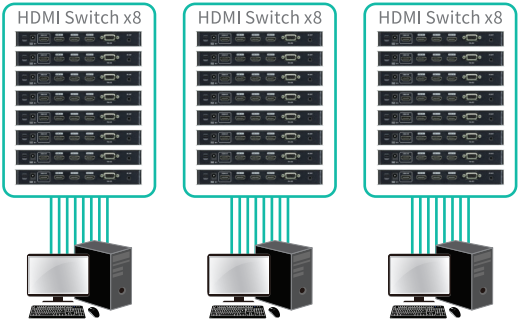


SUNIX DevicePort's Remotely Managed HDMI Switch Solution

This customer needs to manage 32 HDMI switches from a central station. They plan to implement remote management methods for this initial setup so they might later improve the efficiency of the central control and management system. This should allow them to save on overhead costs.



A Complicated and Inefficient Setup



► This setup requires multiple PCs & an extremely complicated wiring setup

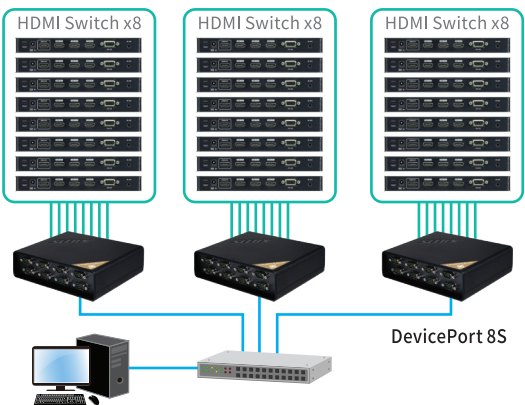
High Cost

Most computers have limited COM port capabilities which means, in order to remotely manage 32 HDMI switches, this customer will need to invest significant amounts of capital into the numerous computers required for such a setup. In addition, because RS-232 serial interface cables are short, this whole system of computers will need to be housed in close proximity to the 32 HDMI switches—this makes for a very costly and complicated cable setup.

Low Effectiveness

If this customer did invest in a computer-based management system using 32 COM ports they would inevitably encounter crippling CPU performance issues essentially rendering their costly remote management system unreliable at best. Not to mention that, after each system failure, troubleshooting and repairs would not only be very costly but extremely time consuming.

Cost-effective DevicePort Solution



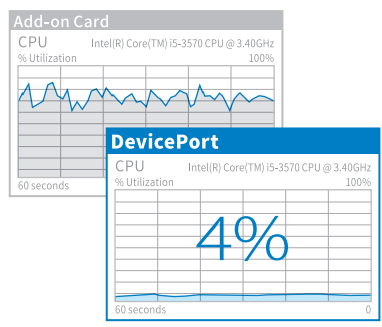
- Requires just one host computer to control the entire remote management system
- Low CPU Usage gives the system stable & utmost efficiency

Greatly Reduce Hardware, Deployment, and Management Costs

The SUNIX DevicePort can remotely extend COM ports without requiring any additional processing power or card installation. That means any computer (All-in-One PCs, Laptop Computers, etc.) with a RJ-45 connector, paired with the DevicePort software, can expand COM ports with ease.

Improved Management Efficiency

The DevicePort is extremely easy to install and uses very little system resources. It also supports Plug-N-Play and Hot-Swap features which make troubleshooting and repair fast, easy, and inexpensive.



SUNIX DevicePort Supports Virtual Desktop Infrastructure Application

As the banking industry needs better service quality and enhances client's experience, there are more and more banks are exploring the future IT structure to speed up some complicated steps. For the multiple devices connection in every counter and VDI (Virtual desktop infrastructure) application, DevicePort supports serial port auto mapping and VM to satisfy current project needs.

All serial peripherals did not work with PC, Thin Client, terminal under VM?!

In current banking environment, every counter needs many devices, such as card reader and PIN pad. Moreover, the banking system strongly emphasizes Finance Security, and government has many policies to protect transaction security. Thus, banks usually get irregularly scheduled requirement for device extension. Usually, the maintenance contract has 4 hours completed troubleshooting requirement and completed online service. Thus, IT members or vendors need a lot of resource or cost to deal with it. They also need to implement VDI solution to keep data security.

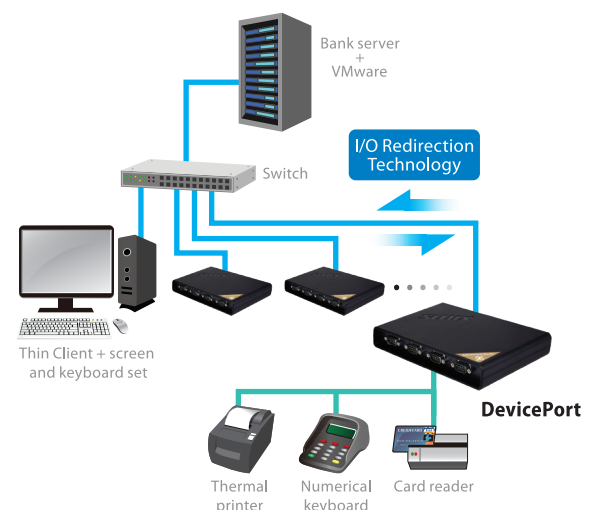
But if VM system was used, no matter it was PC, Thin Client or Fat Client as terminal, all serial and parallel peripherals for I/O ports connected to the terminal did not work at all.

SUNIX DevicePort VM Solution

SUNIX DevicePort Advanced mode supports VM application, it based on Thin client to serve virtual desktop. This way means it doesn't need to be limited by hardware specification and driver. It not only saves the PC cost, but also enhances the counter performance and service quality. As soon as banks implement Thin client structure, it is not only easy to manage, but also lower the risk system crash issues. Thus, DevicePort goes with Thin Client is perfect solution for that kind of business needs. Besides, DevicePort's hot swapping and auto mapping function make the system more flexible.

World First I/O Redirection Technology

SUNIX DevicePort Advance mode, which was the world only I/O redirection technology, enabling VM server to catch all peripherals connected to different expansion I/O interfaces and ports on the terminal DevicePort. This was the world only product supporting I/O redirection technology.



DevicePort Product Summary

Model	Mode	Interface	Port	Connector Type	Speed	ESD	Powered COM
<i>DPA-S04HP0</i>	Advanced Mode	RS-232	4	DB9M	115.2~50Kbps	15KV	5VDC
<i>DPA-S02HP0</i>			2	DB9M	115.2~50Kbps		5VDC
<i>DPA-S08H00</i>			8	DB9M	115.2~50Kbps		-
<i>DPA-S04H00</i>			4	DB9M	115.2~50Kbps		-
<i>DPA-S02H00</i>			2	DB9M	115.2~50Kbps		-
<i>DPA-S01D00</i>			1	DB9M	115.2~50Kbps		-
<i>DPA-S01DZ0</i>			1	DB9M	115.2~50Kbps		-
<i>DPK-X08H00</i>	Dock Mode	RS-232	8	DB9M	921.6~50Kbps	15KV	-
<i>DPK-X04H00</i>			4	DB9M	921.6~50Kbps		-
<i>DPK-X02H00</i>			2	DB9M	921.6~50Kbps		-
<i>DPK-S08H00</i>			8	DB9M	115.2~50Kbps		-
<i>DPK-S04H00</i>			4	DB9M	115.2~50Kbps		-
<i>DPK-S04HP0</i>			4	DB9M	115.2~50Kbps		5VDC
<i>DPK-S02HP0</i>			2	DB9M	115.2~50Kbps		5VDC
<i>DPK-S02H00</i>			2	DB9M	115.2~50Kbps		-
<i>DPK-M21H00</i>		RS-232/Printer	2/1	DB9M/DB25F	115.2~50Kbps		-
<i>DPK-M11H00</i>			1/1	DB9M/DB25F	115.2~50Kbps		-
<i>DPK-P01H00</i>		PRINTER	1	DB25F	-		-

Dock and Advanced Mode Compare Table







Product		
	<i>Dock Mode</i>	<i>Advanced Mode</i>
Design	SUNIX SoC	SUNIX SoC
Response	Real Time	Real Time
Protocol	Ethernet I/O Redirection*	Ethernet I/O Redirection*
Identify	MAC Address	MAC Address
Deployment	Single PC	Single PC
	Local	Local / Remote
Operation Mode	Real COM (Real I/O interface)	Real COM (Real I/O interface)
Management Utility	SUNIX DevicePort Control Center	SUNIX DevicePort Manager
Security	Smart Dock Protection*	Data Encryption
User Experience / Feature	Ethernet Hot-Swapping	DevicePort Authority Management
	Plug-n-play Auto-Detect	Plug-n-play Auto-Detect/Mapping with MAC address bound
	Plug-n-play Auto-Mapping	Smart-COM Deployment Off-Line Mapping
	Daisy Chain	Multiple Access

* Ethernet I/O Redirection technology is SUNIX proprietary protocol for COM & LPT expansion over cat6/5.

* Smart Dock protection feature prevent record working from spy recording device

Product Family

Dock Mode

Model		<i>DPKS02H00</i> <i>DPKX02H00</i>	<i>DPKS04H00</i> <i>DPKX04H00</i>	<i>DPKS08H00</i> <i>DPKX08H00</i>	<i>DPKM11H00</i>	<i>DPKM21H00</i>	<i>DPKP01H00</i>	
Product								
Controller		SUNIX DPL2000Q						
Serial Communication	No. of Port	2-Port	4-Port	8-Port	1-Port	2-Port	—	
	Board Connector	DB9 Male						—
	Interface	RS-232			IEEE1284 / RS-232		—	
	FIFO	1Kbyte Hardware / per port (Hardware)						—
	Signal	TxD,RxD,RTS,CTS,DTR,DSR,DCD,GND, RI						—
	Baud rate	DPKS Series: 50bps ~ 115.2Kbps DPKX Series: 50bps ~ 921.6Kbps						—
	Data bit	5,6,7,8						—
	Stop bit	1,1.5,2						—
	Parity	None, Even,Odd, Space,Mark						—
	Flow Control	RTS/CTS(Hardware) XON/XOFF(Software)						—
	ESD Protection	±15KV ESD IEC6000-4-2 Air Discharge ±8KV ESD IEC61000-4-2 Contact Discharge ±4KV ESD IEC61000-4-2 Level2 Line-to-Line						—
Parallel Communication	No. of Port	—			1-port			
	Board Connector	—			DB25 Female			
	Interface	—			IEEE1284 Printer Support			
	FIFO	—			1Kbyte Hardware / per port			
	Speed	—			Maximum 2.7Mbps			
Ethernet Communication	Number of Ports	2-port, Upstream to Ethernet Switch, Downstream to PC Host						
	Speed	10/100 Mbps, auto MDI/MDIX						
	Connector	RJ45						
	Magnetic Isolation Protection	1.0K Built-in						
Power Requirements	Input Voltage	5 to 12VDC						
	Power Consumption	2.5W @ 5VDC						
	Connector	DC-Jack						
Software Support	Microsoft Windows	DevicePort Control Center: Microsoft Windows XP/Vista/7/8.1/10 (32/64 bit) Microsoft Windows Server 2003 / 2008 / 2012R2 (64-bit)						
Regulatory Approvals	Hardware	• EUR: CE EN55022 Class B, EN55024 • AS/NZS: C-Tick: CISPR22 AS/NZS • US: FCC Part 15 Class B • JAPAN: VCCI" • TAIWAN: BSMI: CNS13438						
	Software	Microsoft WHQL Certification						
Regulatory Approvals	Operating Temperature	0 to 45°C (32 to 113°F)						
	Operating Humidity	5 to 95% RH (non-condensing)						
	Storage Temperature	-20 to 85°C (-4 to 185°F)						
	Housing	ABS, PC, Metal						
	Dimensions	121x81.93x27(mm), 145g	190x120x27(mm), 283g	190x120x46(mm), 365g	121x81.93x27(mm), 145g	190x120x27(mm), 283g	121x81.93x27(mm), 145g	

Product Family

Advanced Mode

Model		<i>DPAS01D00</i>	<i>DPAS01DZ0</i>	<i>DPAS02H00</i>	<i>DPAS04H00</i>	<i>DPAS08H00</i>
Product						
Controller		SUNIX DPL2000Q				
Serial Communication	No. of Port	1-Port	1-Port	2-Port	4-Port	8-Port
	Board Connector	DB9 Male				
	Interface	RS-232				
	FIFO	1Kbyte Hardware / per port (Hardware)				
	Signal	TxD,RxD,RTS,CTS,DTR,DSR,DCD,GND, RI				
	Baud rate	DPAS Series: 50bps ~ 115.2Kbps DPAX Series: 50bps ~ 921.6Kbps				
	Data bit	5,6,7,8				
	Stop bit	1,1.5,2				
	Parity	None, Even,Odd, Space,Mark				
	Flow Control	RTS/CTS(Hardware) XON/XOFF(Software)				
ESD Protection	±15KV ESD IEC6000-4-2 Air Discharge ±8KV ESD IEC61000-4-2 Contact Discharge ±4KV ESD IEC61000-4-2 Level2 Line-to-Line					
Ethernet Communication	Number of Ports	1-port		2-port		
	Speed	10/100 Mbps, auto MDI/MDIX				
	Connector	RJ45				
	Magnetic Isolation Protection	1.0K Built-in				
Power Requirements	Input Voltage	5VDC		5 to 12VDC		
	Power Consumption	2.5W @ 5VDC				
	Connector	DC-Jack				
Software Support	Microsoft Windows	DevicePort Manager Microsoft Windows XP/Vista/7/8.1/10 (32/64 bit) Microsoft Windows Server 2003 / 2008 / 2012R2 (64-bit)				
Regulatory Approvals	Hardware	<ul style="list-style-type: none"> • EUR: CE EN55022 Class B, EN55024 • AS/NZS: C-Tick: CISPR22 AS/NZS • US: FCC Part 15 Class B • JAPAN: VCCI" • TAIWAN: BSMI: CNS13438 				
	Software	Microsoft WHQL Certification				
Regulatory Approvals	Operating Temperature	0 to 45°C (32 to 113°F)				
	Operating Humidity	5 to 95% RH (non-condensing)				
	Storage Temperature	-20 to 85°C (-4 to 185°F)				
	Housing	ABS, PC, Metal				
	Screw	Bolt Type	Nut Type	—		
	Dimensions	480x34x18(mm), 67g	480x34x18(mm), 67g	121x81.93x27(mm), 145g	190x120x27(mm), 283g	190x120x46(mm), 365g

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