

IR720 Series Industrial Grade Multi-Service 3G Router

Multi-Service 3G Router Integrated Managed Switch



Metal Shell



Plastic Isolation Shell



IP65 Protective Shell

Product Description

IR 720 series router adopt strict industrial-grade design standards, which are able to work reliably in extreme industrial environments. Integrating 8-port Fast Ethernet managed switch function, can be divided into different VLANs so that orderly and effectively manage data. Moreover, IR 720 have high security and the advantage of ease of deployment and remote management, so provide superior device networking solutions for industrial users. IR 720 series provide secure virtual private network connection so that ensure the security of data transmission between the SCADA center and remote field device. This series also offers dynamical routing protocol such as RIP or OSPF and batch configuration function, so as to accelerate the speed of the large-scale construction of the industrial network. AAA authentication for large-scale network device management provides powerful security, traffic management to ensure the important data forward preferentially.

IR 720 series support dual SIM cards to backup each other and VRRP link backup function to ensure reliable network connection, they excellent EMC characteristics, wide temperature design and different material of the shell, to ensure safe and reliable operation under harsh environment, according to the number of port, IR 720 router can be divided into 4-port, 6-port and 8-port models so as to provide more options.

Product Features

■ Industrial Design

- Process chip, communication module and electronic components adopt industrial grade design, reaching the target of industrial grade in the level of EMC, protection, anti-static, anti-surge and wide temperature design for the harsh industrial scene.
- Super protection level: metal shell IP40, plastic isolation shell IP40, protective shell IP65.
- Ethernet port support 1.5KV isolation protection.
- Wide temperature range: -25℃~70℃。
- Wide voltage range: DC9-48V。

■ Integrate Fast Ethernet Managed Switch Function

- Support VLAN (VLAN-BASED、PORT-VLAN) 、 802.1Q、 802.1x、
- Support standard RSTP(802.1w)。
- Support port security, port isolation, broadcast storm limiting, can effectively prevent malicious attacks from external sources.
- Support port mirroring , real-time monitoring and analyzing data streams so as to find the faults of network.
- Up to 8 LAN ports to connect multiple devices

■ Large-Scale Deployment

- Provide a variety of configure mode such as WEB and CLI, they are convenient for network administrators to quickly configure the thousands of routers.
- Remote centralized network management: IR 720 series router support remote centralized network management, can bath configure and upgrade the routers remotely. IR 720 support standard SNMP protocol, so as to the enterprise deployments third party SNMP network management platform.
- In addition to the traditional network equipment debugging tools , also include 3G/4GModem status, IMEI, IMSI and wireless network registration status and other important information to help network engineers to quickly locate problems in a complex network conditions.
- Support RIP, OSPF dynamical routing protocol, automatically learn network routing, and synchronize routing information to improve the efficiency of large-scale deployment.。

- Support DMVPN function to simplify the configuration and management and build a large-scale security network.

■ Security Features

● Secure Virtual Private Network Connection

Support IPSec VPN, DMVPN, L2TP, SSL VPN, CA and ensure data transmit safely.

● Network Security

Support SPI,ACL access-control-list, anti-DoS attacks, Secure Shell (SSH) , Intrusion protection (ban Ping), attack defense, IP-MAC binding so as to protect the network from external attacks .

● Device Management Security

Support AAA (tacacs+, radius, local authentication) and multi-level user manage authority and realize devices are centralized authentication and authorization.

■ Redundancy Design

- Dual link backup: support VRRP, provide link protection.
- Dual SIM cards: Support dual SIM cards and backup between different mobile operators, support link self-recovery.

■ The excellent INOS2.0 frame operating system

- Openness, keeping compatibility with other Internet devices.
- Scalability, frame architecture to support new features, new features, new technology at any time implant platform to meet the development needs of the market.
- High stability, any function module fails, does not affect the normal use of other functional modules, and can constantly monitor the status of each functional module, and restart the fault function module to return to normal.
- Ease of use, the perfect way of operation, flexible and easy to understand, easy to manage network devices.
- Consistency, the InHand network devices use a unified INOS2.0 framework platform, easy to use.

Product Specification

Items		Description
Network Connection	Network Access	Support APN、VPDN、
	Authentication	Support CHAP/PAP/MS-CHAP/MS-CHAPV2
	Network Standard	Support WCDMA、GPRS、GSM
	LAN Protocol	Support ARP、Ethernet、VLAN (VLAN-BASED PORT VLAN、802.1Q, 802.1x 、STP(802.1D) 、RSTP(802.1w)
Network Protocol	IP service	TCP、UDP、loopback
	IP Application	Support Ping、Trace、DHCP Server 、DHCP Relay、DHCP Client、DHCP Snooping 、DNS relay、DDNS 、Telnet
	IP routing	Support static routing、RIP、OSPF
Network Security	Port Security	Support PPPoE Client、802.1x
	AAA	Support Local authentication、Radius、Tacacs
	Firewall	Support SPI, anti-DOS attack
		Filter multicast /Ping packets、access control list (ACL)
		Support NAT、PAT、DMZ、Port Map、Virtual Service
	Data Security	Support IPSec VPN、CA、SSL VPN、L2TP、PPTP、GRE、DMVPN
	CA certificate	Support PEM、PKCS12
Reliability	Backup Function	Support dual SIM card backup
		Support VRRP
	Multi-layer detection	Send heartbeat and ICMP packets to detect link
	Built-in watchdog	Built-in hardware watchdog, self-recovery
QOS	Traffic Management	Layer 3 traffic control
	Flow Management	Support layer 2 QOS
Network Management	Configuration	Support serial port、telnet、web、ssh
	Upgrade	Support serial port, telnet, web, TFTP, FTP, SFTP-server
	Log	Support local, remote and serial port log output
		Log can be saved when power off
	SMS	Support SMS activation, GET, SET alarm

Items		Description
	Dail-up on demand	Dail-up on demand, SMS activation, data activation, timing offline
	Network management	Support snmp v1,2 & 3, Private MIBs
	AAA	Support Local/Radius/TACACS+
	Multi-level debug	Support hierarchical user management
	Data analysis	Supports packet capture tool

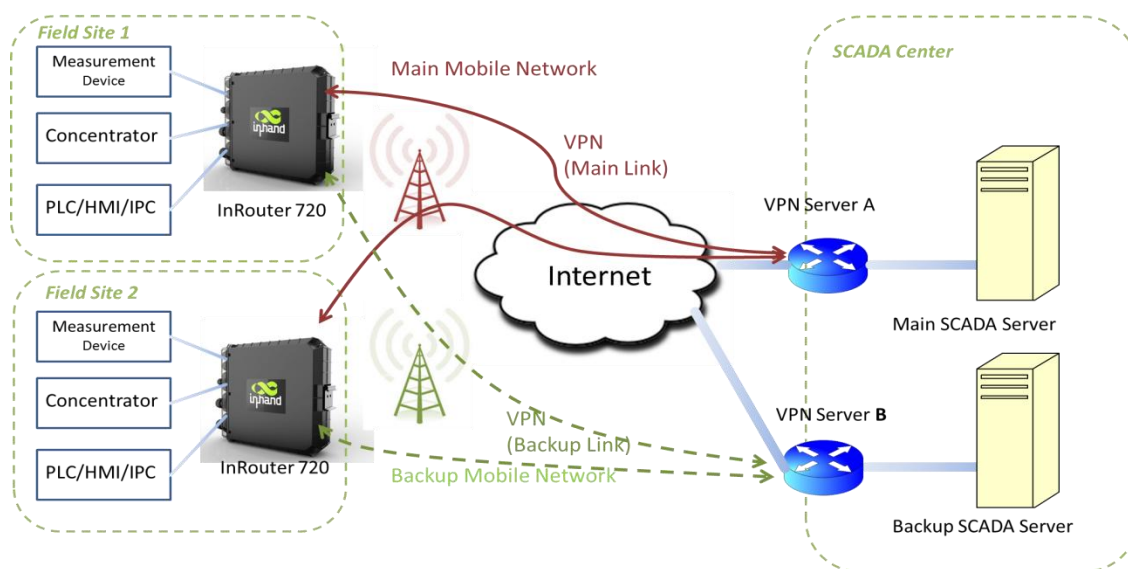
IR720 Hardware Specification

Items		IR724	IR726	IR728
Interface	Fixed Ethernet Port	4*10/100Mbps Ports	6*10/100Mbps Ports	8*10/100Mbps Ports
	Power Supply	Terminal type12-48V DC		
	Serial Port(DEBUG)	RJ45 type		
	SIM Slot	2		
	Reset Button	1 reset button		
	SMA connector	SMA * 1		
Mechanical properties	Dimension (mm)	Metal Shell: 60 x 215 x 170 Protection Shell: 70 x 240 x 240 Plastic Shell: 70 x 230 x 200		
	Installation	DIN-rail or wall mounting		
	Shell	Metal Shell, Plastic isolation Shell, Protective Shell IP65		
	Protection Level	Metal Shell IP40/ Plastic isolation Shell IP40/ Protective Shell IP65		
	Heat dissipation	Fanless cooling		
Power Consumption	Standby Power	1.45~4.944W@12V		
	Operation Power	4.212~5.30W@12V		
	Max Power	5.30W@12V		
Environment	Humidity	5 ~ 90%		
	Storage temperature	-40 ~ 85℃		
	Operating temperature	-25 ~ 70℃		
LED Indicator		POWER power indicator ERROR error indicator STATUS status indicator Modem modem indicator WARN warn indicator VPN vpn indicator		

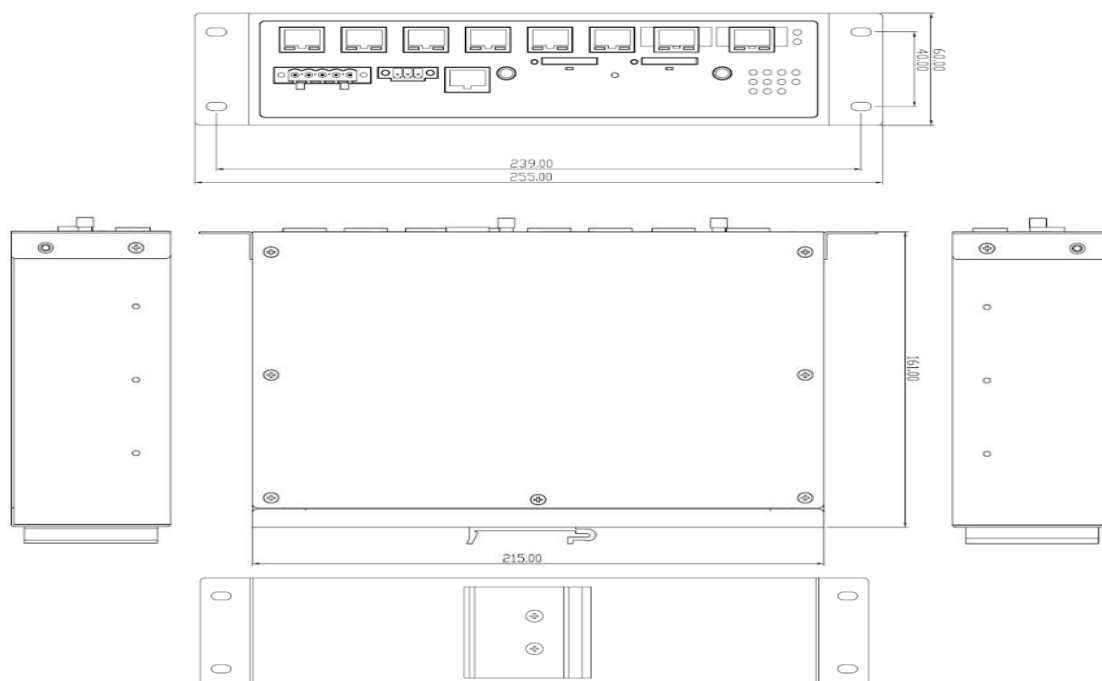
EMC	ESD:EN 61 000-4-2 level 4 HF-radiation: EN 61 000-4-3 level 3 Burst: EN 61 000-4-4 level 4 Surge: EN 61 000-4-5 level 4 Magnetic Field: EN 61 000-4-8 Level 5 Damped Oscillatory Magnetic Field Immunity: EN 61 000-4-10 Level 5 Oscillatory Waves Immunity :EN 61 000-4-12 level 3 Harmonics: EN 61 000-4-13 level 3 Voltage dips, short interruptions and voltage variations immunity: EN 61 000-4-11 level 3 Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6
Certification	CE, EMC & Safety & High-low temperature

Application

InRouter 720 dial up to 3G network, connect to SCADA center through high security VPN tunnel. InRouter 720 can connect up to 8 Ethernet devices and divided into different VLAN for each device . When the 3G network of one mobile operator fails, automatically switch to another mobile operator, avoid the loss of data.



Dimension (mm)



IR720 Plane Graph

Ordering Information

Product Model	IR72x
Number	IR72<X>-<PS>-<P>-<S>-<E>
Code definition	code
X (the number of port)	4: 4 ports 6: 6 ports 8: 8 ports
PS (power supply)	D: 12-48V DC A: 220V AC
P (the information of port)	4FE: 4-RJ45 Ethernet Ports 6FE: 6-RJ45 Ethernet Ports 8FE: 8-RJ45 Ethernet Ports 6FE-2FX: 6个 RJ45 Ports+2 optical port
S (the number of SIM slot)	SS: Single SIM slot DS: Dual SIM slot
E (shell)	P: plastic shell STD: metal shell IP: IP65 protection shell
Example	IR728-D-8FE-DS-P: DC12-48V, 8-RJ45 Ethernet ports, Dual SIM cards

Beijing InHand Networks Technology Co., Ltd.

Beijing InHand Networks Technology Co., Ltd focuses its energy upon development of equipment network (M2M) technology and products, for the purpose of providing safe, reliable, intelligent and advanced equipment network solutions for customers in the fields of electric power, industrial control, finance, medical and other industries. Industrial-class products and equipment monitoring software platforms developed by InHand have been used by a number of well-known big customers, and have stood the test of large-scale field applications for a long time.

InHand hopes to contribute her efforts to the transition process of Chinese manufacturing industry to high value-added products through constant innovation of equipment network solutions.

Many well-known commercial organizations at home and abroad have confirmed development and achievement of InHand. InHand has been awarded the honor of Top-50 High-tech Development Enterprise consecutively by Deloitte (China) since 2007 and was awarded Top-200 Innovative Enterprise in Asia and Top-100 Innovative Enterprise in Asia in 2007 and 2008 respectively by the famous business media “Red Herring” of USA.



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