

# InRouter700 Series Industrial Cellular Router

## Serial/Ethernet to Cellular Intelligent Gateway

### IR 7x1 (One Port Mode)



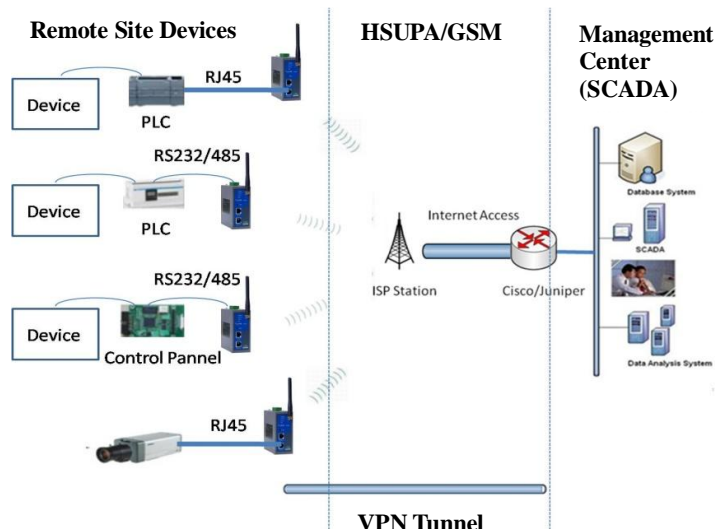
### Features

- ✧ DIN mount
- ✧ 12-48V DC Power Supply
- ✧ RS232/485 or Ethernet access
- ✧ Temperature: -25-70 °C
- ✧ LED display panel
- ✧ WOL support; SMS control;
- ✧ VPN Supported (IPSec./OpenVPN/PPTP, etc)

### Approval

- **CE:**  
EN61000-4-3 (RF Electromagnetic Field Immunity) Level 3  
EN61000-4-4 (Electric Fast Transient / Burst) Level 4  
EN61000-4-5 (Surge) Level 3  
EN61000-4-6 (RF conducted interference) Level 3  
EN61000-4-8 (Power-frequency electromagnetic fields Immunity) Level 3  
EN61000-4-12 (Damped oscillation Immunity) Level 3
- **FCC** (for IR7x1WH01 only), Certificate No.: ZAZ7X1WH  
Part 15 Subpart B; Part 2; Part 22 Subpart H; Part 24 Subpart E

## HSUPA/GSM Access to Internet



### Proven in Applications

Schneider Electric, Siemens, GE Healthcare, SKF, China State Grid

### Support Industrial Interfaces

Support RS232/485 or Ethernet device; support MODBUS, Virtual COM, etc.

### Typical Applications



Electric Automation



Wind/Solar Plants



Transportation



Environment Projects



Large Machine Monitor



Financial Segment  
ATM/POS

## Overview

IR7x1 Series are **Industrial-Grade** products designed to simplify and optimize M2M networks. It provides secure, efficient, reliable link based on HSUPA/GPRS network. No matter where it is, your service can easily access to Internet through the HSUPA/GPRS network that is available across the globe. Meanwhile it brings you a practical management approach to your devices while reducing maintenance costs.

## Industrial Shell Design

- Industrial Power Terminal  
Wide Power Supply: 12-48V DC with industrial terminal  
RS232/485 interfaces support bus protocols: MODBUS etc.
- DIN mount for cabinet installation
- Wide Operating Temperature: -25-70 °C
- Industrial on-shell ground terminal
- Flip SIM card Slot, protect SIM card during oscillations and vibrations
- LED display panel
- Quad-band HSUPA/GPRS: 850/900/1800/1900-MHz



## IR 7x4 (Four Ports Mode)



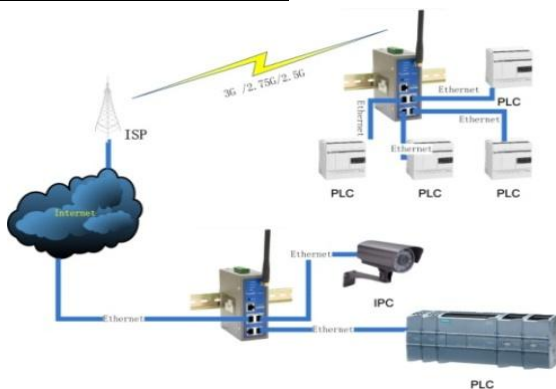
### Improvement over IR7x1

- ✧ Fast access to cellular or cable networks (ADSL/Static/DHCP)
- ✧ 4-port switch, DMZ, VRRP
- ✧ Redundancy Link Backup between cellular and cable networks

### Approval

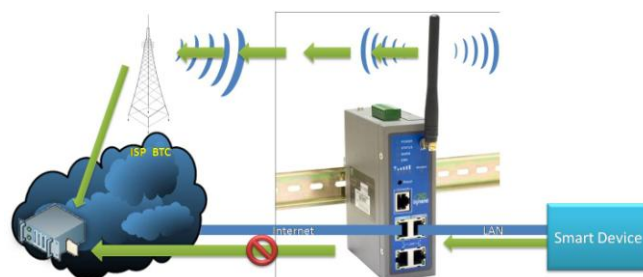
- CE:
  - EN61000-4-3 (RF Electromagnetic Field Immunity) Level 3
  - EN61000-4-4 (Electric Fast Transient / Burst) Level 4
  - EN61000-4-5 (Surge) Level 3
  - EN61000-4-6 (RF conducted interference) Level 3
  - EN61000-4-8 (Power-frequency electromagnetic fields Immunity) Level 3
  - EN61000-4-12 (Damped oscillation Immunity) Level 3

## 4 Ports Ethernet Switch



InRouter7x4 supports four port for industrial switch, which provides more interfaces for remote devices. Meanwhile, it support special interfaces including WAN/DMZ, realizing flexible connectivity for remote devices while cutting the costs and well preparing for networks upgrade in future.

## Hot Link Backup between Cable & Cellular



InRouter7x4 is the leader to realize link backup between wired networks and cellular networks by single router, and to promote efficiency while reducing costs.

## Overview

IR7x4 series inherit all advantages of IR7x1, while combining with more functions, including 4 Ethernet port switch, DMZ port, cable Link (Static Router/DHCP/ADSL/PPPoE), VRRP, and Hot Link Backup between cable link and cellular. It significantly promote networking efficiency while cutting costs. With IR704, you can link more devices together to your data center, and you can also using the VRRP or Link Backup to prevent the loss while cable fails.

## Industrial Shell Design

- Industrial Power Terminal  
Wide Power Supply: 9-48V DC with industrial terminal; RS232/485 interfaces support bus protocols: MODBUS etc.
- DIN mount for cabinet installation;
- Industrial on-shell ground terminal :
- Flip SIM card Slot, protect SIM card during oscillations and vibrations;
- LED display panel:
- Universal Quad-band:  
HSUPA/GPRS 850/900/1800/1900-MHz

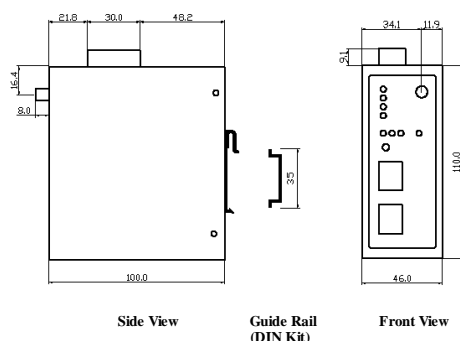


# Specifications

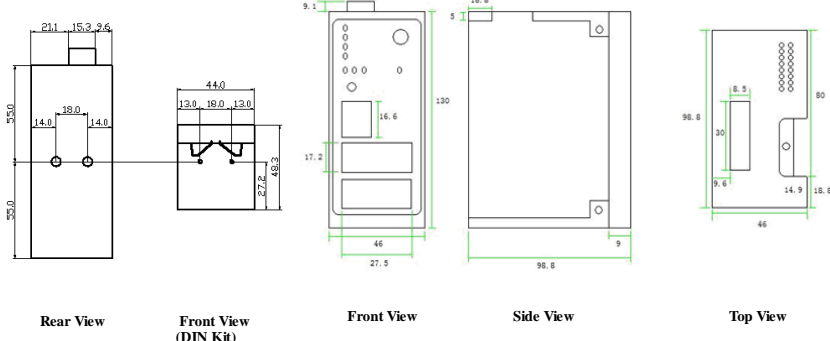
Networks	HSUPA/GPRS	Quad band(Global): 850/900/1800/1900-MHz; Optional dual band (Asia)
	Authentication Protocol	CHAP/PAP/MS-CHAP/MS-CHAPV2/etc.
	Dial On Demand	Activated by Call/SMS/Local data, support WOL(Wakeup On LAN)
	Support APN	Support enterprise private network service provided by mobile operator
	USB Modem (for IR7xxUE only)	Please refer to "3G Modem Support List" to make sure your wireless modem is supported
Platform	CPU	200 MIPS ARM9
	FLASH	8 Mbytes
	SDRAM	16 Mbytes
	O/S	Linux
LAN Interface	Auto-Adaption	10M/100M Ethernet auto-adaptive, MDI/MDI-X auto crossover
	Isolation Protection	1.5KV network isolation transformer protection
Serial Port	Rate	1200bit/s~115200bit/s
	Communication Parameters	Parity: None, Even, Odd, Space, Mark; Data Bits: 5,6,7,8; Stop Bits:1,1.5,2
	Protection	15KV ESD Protection
System Management	Configuration	Serial, Telnet, and Web configuration
	Upgrade	Remote upgrade and web upgrade, utilizing redundant backup mechanism for worry-free upgrade
Network Functions	Routing	Static routing
	Multi-Protocol Support	ICMP, IP, TCP, UDP, DHCP, PPP, ARP, Telnet, DNS, SSH, VRRP, HTTP, HTTPS, etc
	Connection Inspection	Utilizing self-developed connection inspection mechanism, ensuring the device is always on-line
	NAT and PAT, Port Mapping	Network Address Translation (NAT) and Port Address Translation (PAT), Deny illegitimate host access
	MAC Address Bundling	Allow extranet user to access specific intranet port
	DDNS	Support Dynamic DNS (Domain Name System)
Network Security	VPN	Support standard IPSec (both support main mode and aggressive mode) Support PPTP/L2TP/GRE/SSL VPN
	Firewall Strategy	State Packet Inspection(SPI), filtering multicast, filtering PING packet, preventing DoS attack, setting different firewall strategies
Display Panel	LED	3 LEDs Signal strength; 4 Running Status LEDs: POWER, STATUS, WARN, ERROR
Power Supply	Power Input	12~48VDC, anti-RCE, over-current protection; 5mm spacing industrial connector
	Power Consumption	300mA @ 12V(max)
	Burst/Surge Protection	4KV/2KV
Operation Environment	Operation Temperature	Industrial-grade: -25~70 °C Storage: : -40~85 °C
	Humidity	5% - 95%, non-condensing
	Protection Level	IP30
Safety Certification	Anti-shock/ Drop/ Vibration	IEC60068-2-27/ IEC60068-2-23/ IEC60068-2-6
	Electric Strength	DC500V imposed on communication lines to ground and on power lines to ground, resistance >500MΩ

### Dimensions (mm)

**IR7x1:**

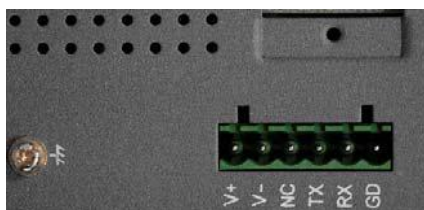


### IR7x4:



## Pin Assignment

5.00mm pluggable terminal block



V+	12-48V, power supply positive polarity
V-	12-48V, power supply negative polarity
NC	None connect
TXD/485-	232, 485-
RXD/485+	232, 485+
GND	Digital ground

## Ordering Information

**IR7x1:**

Network	RS232 interface Without VPN	RS485 interface Without VPN	RS232 interface With VPN (IPSec/L2TP /PPTP/GRE) OpenVPN Certificate Management	RS485 interface With VPN (IPSec/L2TP /PPTP/GRE) OpenVPN CertificateManagement
GPRS (dual band)	IR701GS37	IR701GS37-485	IR791GS37	IR791GS37-485
GPRS (quad band)	IR701GS55	IR701GS55-485	IR791GS55	IR791GS55-485
HSUPA	IR701WH01	IR701WH01-485	IR791WH01	IR791WH01-485
EVDO 450MHz	IR701VC80	IR701VC80-485	IR701VC80	IR701VC80-485
USB 2.0	IR701UE	IR701UE-485	IR791UE	IR791UE-485

**IR7x4:**

Network	RS232 interface Without VPN	RS485 interface Without VPN	RS232 interface With VPN (IPSec/L2TP /PPTP/GRE) OpenVPN Certificate Management	RS485 interface With VPN (IPSec/L2TP /PPTP/GRE) OpenVPN Certificate Management
HSUPA	IR704WH01	IR704WH01-485	IR794WH01	IR794WH01-485
USB Interface 2.0	IR704UE	IR704UE-485	IR794UE	IR794UE-485