

# H720 Series Cellular Router Datasheet



## >>| Product Introduction

The H720 series Cellular Router is designed for establish a 2G/3G/4G cellular wireless network and share a cellular broadband internet connection. The H720 series Cellular Router enables users to quickly create a secure Wi-Fi (802.11 b/g/n) network and provide access to the internet using a cellular network. By connect to cellular broadband network; an internet connection can be accessed and shared virtually anywhere within a wireless broadband network.

E-Lins' mobile data products are widely used in more than twenty industrial fields, such as power control, water schedule, traffic, oil field, weather forecast, environmental protection, street lamp control, post, bank and many other areas.

## >>| Hot Spot for Dual SIM

H720 series is with two module two sim cards (two sim working online): two sim work together to backup (hot standby for failure backup, switch to backup line immediately if main line is failed);

Two sims can be any type from 2G/3G/4G at GPRS/EDGE/HSDPA/HSUPA/HSPA/HSPA+/DC-HSPA+/LTE/CDMA1x/CDMA2000 EVDO. **(Please confirm the type before order)**

### **Main:**

Built-in two 2G/3G/4G industrial cellular modules (two modules to get different network supported), insert SIM/UIM card to work directly;

Built-in two sim card slot;

RJ45 LAN \*4;

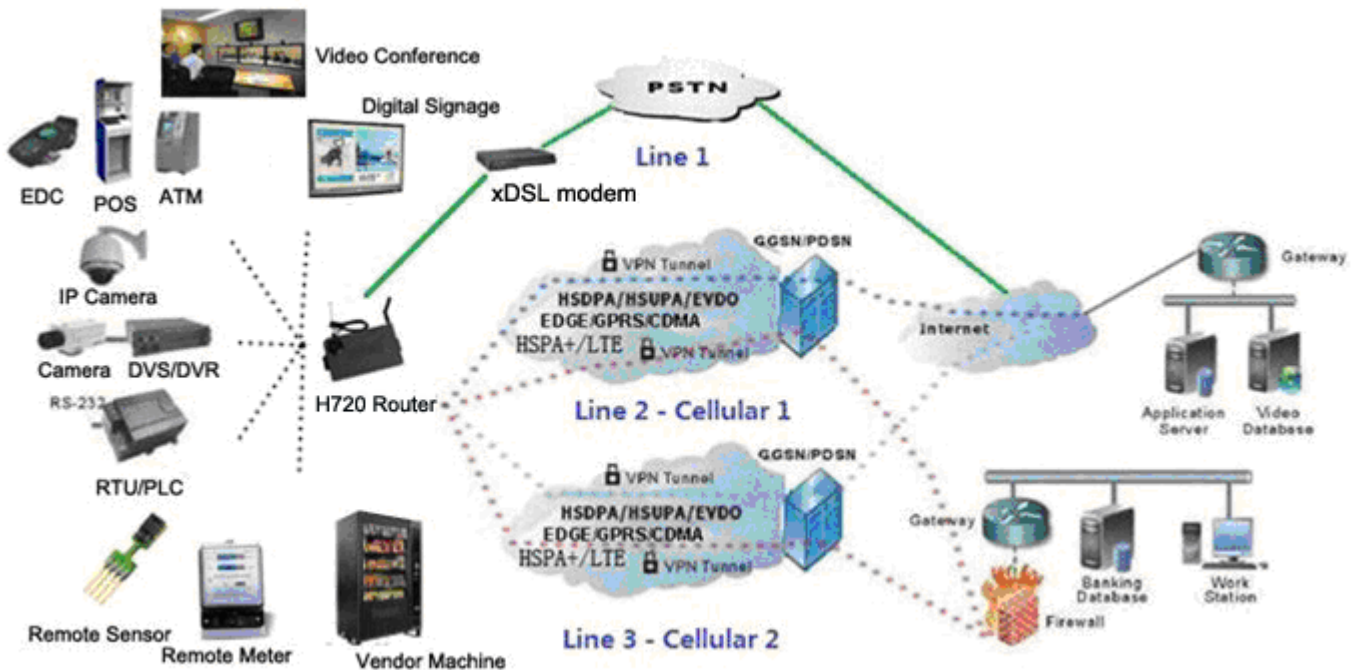
RJ45 WAN \*1;

### **Option feature:**

1. WiFi
2. GPS
3. Serial to cellular gateway (RS232 or RS485 port)
4. Internal battery

Redundancy backup: cellular1+ cellular 2+ WAN RJ45

## >>| Typical Topology



## >>| Industrial Application

- Remote Data Monitor and Control
- CCTV, security surveillance
- Water, gas and oil flow metering and schedule
- AMR (automatic meter reading)
- Power station monitoring and control
- Remote POS (point of sale) terminals, ATM
- Traffic signals monitor and control, Traffic info guidance
- Oil field, weather forecast, environmental protection, street lamp monitoring and control
- Early Warning of Mountain Torrent
- Fleet management
- Power distribution network supervision
- Central heating system supervision
- Weather station data transmission
- Hydrologic data acquisition

- Vending machine
- Telemetry, SCADA
- Vehicle logistics and diagnostics controlling
- Parking meter and Taxi Monitor
- Telecom equipment supervision (Mobile base station, microwave or optical relay station)

## >>| Specification

Wireless	
<b>Compatible Mobile Networks</b>	UMTS WCDMA (HSUPA/HSDPA/HSPA/HSPA+/DC-HSPA+) GSM EDGE/GPRS CDMA1x CDMA2000 EVDO Rev 0, Rev A, Rev B TD-SCDMA/TD-LTE 4G LTE (FDD/TDD)
<b>Cellular Frequency</b>	UMTS/HSPA/HSUPA/HSPA/HSPA+/DC-HSPA+ (WCDMA/FDD): 850/1900/2100 MHz, option for 850/900/1900/2100Mhz/1700Mhz/AWS;  3G TD-SCDMA: 2010~2025MHz/1880~1920MHz  Quad-band EGSM 850/900/1800/1900;  CDMA1x/EVDO: 800/1900Mhz, option for 450Mhz;  4G FDD LTE: Band 1--2100Mhz Band 2--1900Mhz Band 3--1800Mhz Band 4—AWS(1700/2100Mhz) Band 5--850Mhz Band 7--2600MHz Band 8--900Mhz Band 12--700Mhz Band 13--700(B13)Mhz Band 17--700(B17)/AWS Band 19—800Mhz Band 20--DD800Mhz

	<p>Band 21 Band 25 –1900Mhz G Block Band 28 – 700Mhz Band 31– 450Mhz Other FDD band...</p> <p>4G TDD LTE (TD-LTE): Band 43 –3600-3800Mhz Band 42 –3400- 3600Mhz Band 41 – 2500/2600Mhz Band 40 -- 2300Mhz Band 39 – 1900Mhz Band 38 -- 2600Mhz Other TDD band...</p> <p>Notes: There are many different band and frequencies for 4G LTE. Some frequencies are note listed. Please confirm the detailed band and frequency with your carriers before order.</p>
<p><b>Bandwidth</b></p>	<p>4G LTE FDD LTE: downlink 100Mbps / 150Mbps / 300Mbps / 600Mbps / 1200Mbps; uplink 50Mbps / 150Mbps / 300Mbps / 600Mbps; TDD LTE: 150Mbps downlink, 50Mbps uplink;</p> <p>DC-HSPA+: Downlink 42Mbps, Uplink 5.76Mbps; HSPA+(H): Downlink 21Mbps, Uplink 5.76Mbps; HSPA+(L): Downlink 14.4Mbps, Uplink 5.76Mbps; HSUPA: Downlink 7.2Mbps, Uplink 5.76Mbps; HSDPA: Downlink 7.2 Mbps, Uplink 384k bps; WCDMA/UMTS: Downlink/Uplink 384 kbps;</p> <p>EDGE: Downlink 384 kbps, Uplink 118 kbps; GPRS: Downlink 108 kbps, Uplink 42.8 kbps;</p> <p>CDMA1x: Downlink/Uplink 153.6kbps; CDMA EVDO: Rev B: 14.7Mbps downlink, 5.4Mbps uplink Rev A: 3.1Mbps downlink, 2.4Mbps uplink Rev O: 2.4Mbps downlink, 153.6kbps uplink</p> <p>3G TD-SCDMA: 2.8Mbps</p> <p>Notes: the bandwidth is peak value. Real value depends on carrier</p>

	network support.
<b>Bandwidth (bandwidth binding mode)</b>	Twice bandwidth (depends on network quality)
<b>Main Features and Performance</b>	
<b>USB Host</b>	No, can ODM
<b>SMS and SMS/Voice Control and Alarm (Option)</b>	Receive and Send the SMS; SMS/Voice Control and Alarm. SMS or Call to control router to be online, offline, reboot, signal and status monitor; SMS is default feature, Voice is option; SMS text sending and receiving;
<b>GPS (Option)</b>	GPS feature
<b>DTU</b>	With DTU feature (Serial to Cellular Gateway feature, RS232 or RS485 port option). Details: Serial Baudrate: 300bps, 600bps, 1200bps, 2400bps, 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps; Serial Parity: none, even, odd; Serial Databits: 7, 8; Serial stopbits: 1, 2; Serial flow control: none, hardware, software; Mode: Server (up to 4 server centre, can OEM to be more), Client; Protocol: TCP, UDP ; Heart Beat : Yes;
<b>VPN</b>	PPTP, L2TP, IPSec, GRE, Tunnel (PPTP server, PPTP client, L2TP client, IPSec client, IPsec server)
<b>OpenWRT (Option)</b>	Optional
<b>VRRP (Option)</b>	Optional
<b>Route</b>	Static Route; Optional for Dynamic Route (BGP, BGPD, OSPF, Zebra, Rip);
<b>SNMP</b>	Support V1, V2. V3
<b>VLAN</b>	Support multi-LAN IP address, support two IP address
<b>Wi-Fi</b>	Optional, 802.11b/g/n; 300Mbps. Can be used as AP and client; Frequency from 2.4GHz to 2.483GHz, Access Points, Routers and

	Gateway Server Applications, wireless up to 254 PC users
<b>Fail Over Redundancy (network Backup feature)</b>	<p>Auto-dial feature, keep alive link;          LCP, ICMP check;          Built-in watch dog;          Dual cellular (2G/3G/4G), RJ45 WAN (xDSL, DHCP, Fixed IP), WiFi client four line redundancy;</p> <p>Cold Backup (WAN RJ45, Dual WAN Cellular, WiFi Client) is default, Hot Backup (Two Cellular) is default, Hot Backup (WAN RJ45 and WAN Cellular) is option;</p> <p>Cold Backup=Two lines not online at the same time. One line online and the other line standby, switch freely with triggers;          Hot Backup=Two lines are online at the same time. Data goes the main line, and switch to the other line. Hot Backup switch time is shorter than Cold Backup.</p>
<b>POE</b>	POE for LAN/WAN RJ45 (use with POE adapter)
<b>Firmware update</b>	support firmware update locally or remotely (LAN, WiFi and OTA WAN)
<b>Syslog</b>	local and remote
<b>DDNS</b>	Yes
<b>DHCP Server</b>	Yes
<b>Internal Battery</b>	Optional (8000mAH, 4000mAH *2)
<b>Others</b>	<p>DNS proxy;          Optimized EMC design;          Real-time clock (NTP, support update with defined hours);          WAN/LAN/Memory statistics;          Local/remote profiles backup and retrieve;</p>
<b>Remote Management System</b>	Option
<b>Protocol</b>	
<b>Protocol support</b>	TCP, UDP, SMTP, POP, ICMP, FTP, PPP, PPPoE, DHCP, DDNS, DNS, WPS, DMZ, NAT, xDSL, NTP, QoS, etc.
<b>Security</b>	

<b>Firewall</b>	support 64/128 bits WEP, 802.1x, WPA, and WPA2 support WDS support WPA1/2 – PSK support WPA1/2 – 802.1x support EAP – TLS, TTLS, LEAP, PEAP TKIP, AES encryption support access with user name & password. support access control base WAN/LAN interface support access control base source IP address defense DOS attack, support SYN flooding, IP surfing, ping of Death, fragile, teardrop, land etc. support PAP & CHAP support IP filtering support content filtering support NAT/NAPT/Port forwarding/DMZ
<b>Advanced Firewall Features</b>	Stateful Packet Inspection (SPI) VPN Pass-through
<b>Media Access Control</b>	CSMA/CA with ACK
<b>Certifications</b>	REDIUS Client
<b>Interface</b>	
<b>LAN/WAN</b>	4X 10/100M LAN port (RJ45 interface) 1X 10/100M WAN port (RJ45 interface) WAN ports support Cell/Static IP/DHCP/PPPoE (on demand, keep alive, schedule, manual)
<b>Antenna</b>	4-8 X antenna (50Ω SMA female interface, detachable): Wi-Fi*2 Cellular*2-4 GPS*1-2 Cellular support MIMO(Diversity Receiving) option; WiFi support MIMO (Diversity Receiving) option;
<b>Led</b>	SYS VPN WiFi Cell1 Cell2 Cell Signal1 Cell Signal2 LAN (10/100M) 1, 2, 3, 4

	WAN CHR (Internal battery charging) GPS
<b>Button</b>	Reset
<b>Console</b>	1 console port (also can be used as M2M port)
<b>Serial port</b>	RS232 or RS485 with DB9 and Terminal Block interface
<b>IO Port (option)</b>	2
<b>Management</b>	Easy to use and management; Web/Telnet/SSH/CLI, support remote management SMS; SNMP; RMS (Remote Management System)
<b>At command</b>	Supported
<b>UIM/SIM Card Slot</b>	Support 1.8V/3V UIM/SIM cards, two sim card slot
<b>DC Input</b>	Dual Power Inputs / Power Failover; Two types of input jack for DC 2.5mm DC jack * 1 Terminal Block * 1
<b>Power</b>	
<b>Power supply</b>	DC5V-50V / DC5V-60V, typical DC 12V1A-2A, 12v CAR USE; DC5V~40V is the default, DC5V~50V is the option
<b>Current</b>	Idle: about 170mA@12VDC Communication: about 320mA@12VDC
<b>Software</b>	
<b>Device Management</b>	WEB interface (Internet Explorer v6 or Later; Mozilla Firefox v1.5 or Later, or other Java-enabled Browsers, Chrome, Opera, Safari, etc.)
<b>Minimum System Requirements</b>	Windows, Linux, Mac OS, IOS, Symbian, Android, other OS support web browser; Network Interface Card
<b>Physical</b>	
<b>Operating</b>	Storage Temperature: -40 ~ 85°C



<b>Temperature</b>	Working Temperature: -30 ~ 75°C
<b>Humidity</b>	95% Maximum (Non-condensing)
<b>Dimensions</b>	PCBA: 168mm x 111mm x 16mm With case: 180mm x 114mm x 32mm
<b>Weight</b>	705~725g (not including the antenna)
<b>Color</b>	Metal Gray-Black, OEM is available
<b>Others</b>	
<b>Warranty</b>	1 Year default. Option extends to 5 years maximum.
<b>Package Contents</b>	H720 Series wireless Router Ethernet Cable Power Adapter Antenna Others depends on option features

## >>| H720 model and types

H720 **xx** - - - **XXX** (option)



**W:** WiFi WLAN

**G:** GPS

**RS232/RS485:** DTU feature (cellular to serial), RS232 or RS485 for choice

**50V:** DC input 5~50V support, default is 5~40V

**B:** internal rechargeable battery

**t:** 4G LTE version. Support FDD LTE or TDD LTE or FDD+TDD LTE, back compatible to 3G and 2G

**w:** 3G WCDMA HSPA version, support HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM

**p:** 3G WCDMA HSPA+ version, support HSPA+/HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM

**eva:** 3G CDMA2000 EVDO version, support EVDO RevA/EVDO Rev0/CDMA1x

**evb:** 3G CDMA2000 EVDO version, support EVDO RevB/EVDO RevA/EVDO Rev0/CDMA1x

**td:** 3G TD-SCDMA version, support TD-HSUPA/TD-HSDPA/TD-SCDMA/EDGE/GPRS/GSM

### Notes:

- 1) H720 contains two radio module inside. Users can select the suitable type for each module
- 2) option feature can be select one or all
- 3) for LTE version, please confirm your LTE band and Network Carrier with order to avoid wrong selection

**Notes:**

1. We name HSDPA version and HSUPA version both as WCDMA version.
2. Please confirm the exact model and type before your order.

**>>| Accessories**

- The H720 Series wireless Router
- Ethernet Cable
- Power Adapter
- Antenna
- Others depends on the option features



DB15 to DB9 Cable



DB9 serial cable



RJ45 to DB9 Cable



USB Cable



EU Power Supplier



US Power Supplier



AU Power Supplier



Desktop Power Supplier  
EU, US, AU, UK for choice



UK Power Supplier



Metal Magnetic-Mount W/ Cable



Rubber antenna



Rubber Magnetic-Mount W/ Cable



CD-Rom with Manual/Data

**Notes:**

- 1) We packed the units with free accessories; default packed depends on stock and the device's feature requirement. If you need specify the type, please inform us when you order.
- 2) Different places have different band and frequency. Signal quality affects the data speed. The antenna in the packages is free default. It's a world-wide use type. Our free antenna may not get good signal or good speed in your area. Please get the dedicated antenna for your area yourself to get the best signal and data speed.
- 3) E-Lins has high gain antenna for option.