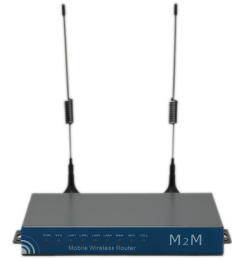


H860 OpenWRT Cellular Router Datasheet



>>| Product Introduction

The H860 series Cellular Router is an OpenWRT version router, which is designed for establish a 2G/3G/4G cellular and Wi-Fi wireless network and share a cellular broad band Internet connection. The H860 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 mobile 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 50 countries and regions, and 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.

>>| Key Point

1. Support OpenWRT
2. Built-in 2G/3G/4G industrial cellular module and sim card slot, insert SIM/UIM card to work directly.
3. Auto-dial feature, keep alive link
4. Built-in watch dog
5. 1 WAN RJ45 port + 4 LAN RJ45 port
6. VPN (PPTP, L2TP, IPSec, OpenVPN)
7. standard SMA antenna can be replaced with high gain type
8. 1 DB9 port for DTU feature (Serial to Cellular Gateway feature,RS232)
9. WiFi (optional), can choose 54Mbps/150Mbps/300Mbps/450Mhz, can choose 2.4Ghz or 5.8Ghz or 2.4+5.8Ghz
10. Always online, Reboot if the connection is failed.
11. I/O port *3 (optional)

>>| 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	
Compatible Mobile Networks	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)
Cellular Frequency	UMTS/HSPA/HSUPA/HSPA/HSPA+/DC-HSPA+ (WCDMA/FDD): 850/1900/2100MHz, or 850/900/1900/2100Mhz; Option band: 850Mhz (B6), 850Mhz (B19), 1700Mhz/AWS (B4) 3G TD-SCDMA: 2010~2025MHz/1880~1920MHz Quad-band EGSM 850/900/1800/1900Mhz; 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 Band 21 Band 25 –1900Mhz G Block Band 31– 450Mhz Other FDD band... 4G TDD LTE (TD-LTE): Band 41 – 2500/2600Mhz

	<p>Band 40 -- 2300Mhz Band 39 -- 1900Mhz Band 38 -- 2600Mhz Other TDD band...</p> <p>Notes: 4G LTE is new. There are many different band and frequency. Please confirm the detailed band and frequency with your carriers before order.</p>
Bandwidth	<p>4G LTE FDD LTE: 100Mbps downlink, 50Mbps uplink; 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 network support.</p>
USB Host	No
DTU	No
VPN	IPSec, OpenVPN
OpenWRT	Yes
Static Route	Yes
Wi-Fi (Optional)	802.11b/g, 802.11n, 802.11ac; Can choose 54Mbps/150Mbps/300Mbps/450Mhz.

	Frequency 2.4Ghz or 5.8Ghz or 2.4Ghz+5.8Ghz. Support Access Points, Routers and Gateway Server Applications, wireless up to 254 PC users
Log	System log, Kernel log
NTP	Yes
Scheduled Tasks	Yes
LED configuration	Yes
Backup/Restore	Yes
Firmware	Support flash new firmware image
Wake on LAN	Yes
Protocol	
Protocol support	TCP, UDP, SMTP, POP, ICMP, FTP, PPP, PPPoE, DHCP, DDNS, DNS, WPS, DMZ, NAT, xDSL, NTP, QoS, SNMP, RIP
Security	
Security	<p>support 64/128 bits WEP, 802.1x, WPA, and WPA2</p> <p>support WDS</p> <p>support WPA1/2 – PSK</p> <p>support WPA1/2 – 802.1x</p> <p>support EAP – TLS, TTLS, LEAP, PEAP</p> <p>TKIP, AES encryption</p> <p>support access with user name & password.</p> <p>support access control base WAN/LAN interface</p> <p>support access control base source IP address</p> <p>defense DOS attack, support SYN flooding, IP surfing, ping of Death, fragile, teardrop, land etc.</p> <p>support PAP & CHAP</p> <p>support IP filtering</p>
Advanced Firewall Features	<p>Network Address Translation (NAT)</p> <p>Stateful Packet Inspection (SPI)</p> <p>VPN Pass-through</p>
Media Access Control	CSMA/CA with ACK

Certifications	REDIUS Client
Interface	
LAN	4X 10/100M LAN port (RJ45 interface) 1X 10/100M WAN port (RJ45 interface)
Antenna	1 or 2 antenna for Wi-Fi (detachable, SMA interface); 1 or 2 antenna for Cellular (detachable, SMA interface); 1 antenna for GPS (detachable, SMA interface)
Led	PWR*1 SYS*1 Cell*1 WAN*1 LAN (10/100M) 1, 2, 3, 4 WiFi*1
Button	Reset
Console	1 console port, DB9
Serial port	No
I/O terminal	No
Configuration Interface	Web/Telnet/CLI/SSH, support remote management
At command	Supported
UIM/SIM Card Slot	Support 1.8V/3V UIM/SIM cards, one sim card slot
DC Jack	2.1mm DC jack * 1
Power	
Power supply	DC5V-50V , typical DC 9V1A or 12V1A, 12v CAR USE; DC5V~40V is the default, DC5V~50V is the option
Power consumption	Idle: about 120mA@12VDC Communication: about 270mA@12VDC
Software	
Device Management	WEB interface (Internet Explorer v6 or Later; Mozilla Firefox v1.5 or Later, or other Java-enabled Browsers,Chome,Opera,Safari)

Minimum System Requirements	Computer with: Windows/Mac/IOS/Android/Linux/Unix, etc. Web browser tool Network Interface Card
Physical	
Operating Temperature	Storage Temperature: -40 ~ 85°C Working Temperature: -30 ~ 75°C Humidity: 95% (non-condensing)
Humidity	95% Maximum (Non-condensing)
Dimensions	PCBA: 156mm x 104mm x 20mm With case: 168mm x 104mm x 25mm
Weight	455g (not including the antenna) 550g (including the antenna) 850g (including all accessories, without package)
Color	Metal Gray-Black, OEM is available
Others	
Warranty	1 Year default, can extend to 5 years
Package Contents	H860 Series wireless Router Ethernet Cable Power Adapter Antenna Others depends on option features

>>| Model and Version

H860 x - - - XXX (option)

W: WiFi WLAN

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

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

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) option feature can be select one or all

2) for LTE version, please confirm your LTE band and Network Carrier with order to avoid wrong selection

>>| Package & Accessories

- The H860 Series wireless Router
- Ethernet Cable
- Power Adapter
- Antenna
- Others depends on 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

UK Power Supplier

EU, US, AU, UK for choice



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.