

H685m Series Cellular Router Datasheet



>>| Product Introduction

The H685m series Cellular Router is newly published 2G/3G/4G router with mini smart size 87mm*50mm*23mm, specially designed for industrial application. Durable, flexible, and user-friendly feature is widely used for different kinds of high data transmission applications. With such size, customers can put it inside their machines easily.

Designed for establish a cellular broad band Internet connection. The H685m series Cellular Router enables users to quickly create a secure wireless network and provide access to the Internet using a cellular network. By connect to cellular 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.

>>| Hot Spot

Main:

Built-in 2G/3G/4G industrial cellular module, insert SIM/UIM card to work directly;

Built-in one sim card slot;

RJ45 LAN *1;

Option feature:

Serial to cellular gateway (RS232 or RS485 port);

MIMO Cellular diversity receiving (with this feature, router can get better signal and speed);

Broadband M2M communications

SIM failover/standby APN

2G/3G/4G failover for fixed line broadband connections

Rapid service deployment applications

DB9 port for RS232/RS485/TTL to Cellular Gateway

USB port for usb modem use

External antenna SMA socket

VPN (PPTP, IPSec supported)

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Support At command
 Support multi-LAN IP address (VLAN feature)
 Always be online. Dynamic fresh network link to protect “fake link”.
 Auto-dial feature, keep alive link
 Built-in watch dog

>>| Brief

Broadband M2M Communications

The product line provides a cost-effective broadband Machine-to-Machine (M2M) solution and supports the following radio access technologies: HSDPA, HSUPA UMTS, EDGE, GPRS, GSM, HSPA, HSPA+, 4G LTE, CDMA2000 EVDO, TD-SCDMA networks

The compact and rugged structure makes it a suitable product for deployments in M2M applications such as CCTV, ATM, telemetry, SCADA, retail (POS), digital signage, and intelligent traffic systems.

>>| 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)

>>| Basic Features

- Supports multi-band GSM, GPRS, EDGE, HSDPA, HSUPA, HSPA, HSPA+, 4G LTE network, and CDMA1x, CDMA2000 EVDO networks, and TD-SCDMA networks
- SMA Standard antenna
- Optimized EMC design
- Always on line: On-line detection and automatic redial and keep-alive while the line dropped
- Wide range power input
- Smart power management
- Reliable, flexible, easy to use and management
- RS-232/485/TTL interface transparent communication (DTU modem function) optional
- 1 LAN RJ45 ports for Ethernet interface
- WiFi 802.11b/g/n optional

>>| Enhanced Features

- Real-time clock
- VPN (PPTP, IPSec) optional – Please confirm what VPN you require before order.
- Built-in DHCP server
- Supports NAT and DMZ host
- Supports DNS proxy and Dynamic DNS (DDNS)
- Supports Static routing table
- Supports packet filter
- Built-in multi-routing backup (Ethernet and dialup network)
- System and network monitoring

- WAN interface traffic statistics
- Support multiple protocol conversion
- Transparent data transmission (DTU feature) optional
- WEB/Telnet/console management interface
- Support radio network data envelope counting
- Self-diagnostic and alarm output
- Local/remote profiles backup and retrieve
- Local/remote firmware upgrade via web
- Remote web management
- Urgent event alarm via SMS optional
- Firewall, packet filtering
- Support data center communication
- Support NTP
- Support LED status indication
- Support VLAN
- Support LCP, ICMP check

>>| Enhanced Features

- Multi-level link detection and redial, keep the traffic channel alive
 1. PPP detection
 2. Local and remote ICMP detection
 3. Heart-beat detection
 4. WAN interface traffic detection
- On/off line control
 1. Auto or manual dial
 2. Timing on/off line control
- Flexible data communication
 1. Supports layer 2 and 3 data communication
 2. Supports RS-232/485/TTL transparent communication optional
UDP/IP or TCP/IP Client/Server
 3. Supports both RS-232 and Ethernet communication
- Configuration and remote management
 1. Multi-language web based configuration interface (local or remote)
 2. Supports Telnet local or remote operation
 3. CLI operation
- Virtual online technology (VKL, only CDMA)
 1. Release wireless network channel while there is no user's data traffic
 2. Keep the router online logically when the wireless channel released
 3. The router will immediately restore to the connected status without any redial or authentication if there is any data transmitted

>>| Specification

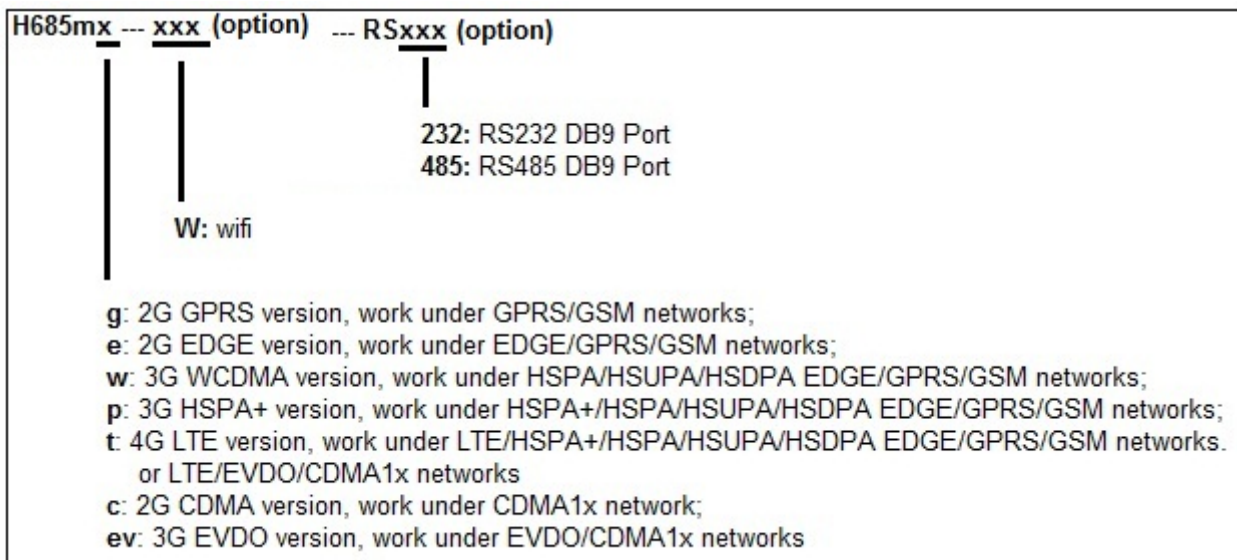
Wireless	
Compatible Mobile Networks	<ul style="list-style-type: none"> • UMTS WCDMA (HSDPA/HSUPA/HSPA/HSPA+) • GSM EDGE • GSM GPRS • CDMA1x • CDMA EVDO Rev 0 and Rev A • 4G LTE
Cellular Frequency	<ul style="list-style-type: none"> • UMTS/HSPA/HSUPA/HSPA/HSPA+ (WCDMA/FDD) 850/1900/2100 MHz or 850/900/1900/2100Mhz optional • Quad-band EGSM 850/900/1800/1900 • CDMA1x/EVDO: 800/1900Mhz or 450Mhz optional • 4G LTE 700(B17)/AWS or 700(B13)MHz or 800/900/1800/2100/2600MHz
Bandwidth	<ul style="list-style-type: none"> • HSUPA/HSPA/HSPA+ Downlink 7.2Mbps or 14.4 Mbps or 21Mbps/42Mbps optional Uplink 5.7Mbps • HSDPA Downlink 7.2 Mbps Uplink 384k bps • WCDMA/UMTS Downlink/Uplink 384 kbps • EDGE Downlink 236,8 kbps Uplink 118 kbps • GPRS Downlink 85.6 kbps Uplink 42.8 kbps • CDMA1x Downlink/Uplink 153.6kbps • CDMA EVDO Rev A: 3.1Mbps downlink, 2.4Mbps uplink Rev O: 2.4Mbps downlink, 153.6kbps uplink • 4G LTE Downlink: 100Mbps, Uplink:50Mbps
DTU (Optional)	With DTU feature (Serial to cellular gateway feature), RS232 or RS485 for option

At command	supported
VPN	Support IPsec, PPTP Firewall Throughput Speed: 100Mbps VPN encryption speed: 5M~200M bps VPN channel: 100~5000 key switch arithmetic: diffie—hellman HASH arithmetic: SHA-1 MD5 Authentication mode: Preshare key VPN network type: support network-to-network Intranet VPN machine access: Remote Access VPN
VLAN	Support multi-LAN IP address, support more than two IP address
Protocol	
Protocol support	TCP, UDP, SMTP, POP, ICMP, FTP, PPP, DHCP, DDNS, DNS,, NAT, DMZ, Qos, ALG,VLAN
Security	
Security	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
Advanced Firewall Features	Network Address Translation (NAT) Stateful Packet Inspection (SPI) VPN Pass-through
Media Access Control	CSMA/CA with ACK
Certifications	REDIUS Client
Interface	
LAN	1X 10/100M LAN port (RJ45 interface)
Antenna	1X antenna for Wi-Fi (detachable, SMA interface) for WiFi version 1X antenna for cellular (detachable, 50Ω SMA female interface)
USB	1X USB 2.0 Host for modem use

Led	<ul style="list-style-type: none"> • SYS • Cell • Link • LAN • VPN • WiFi
Serial port / DB9 (optional)	rate: 300~115200bps
Configuration interface	Web/Telnet
UIM/SIM Card Slot	Support 1.8V/3V UIM/SIM cards, one sim card slot
Power	
Power supply	DC7V-27V , typical DC9V1A
Power consumption	Idle: 48mA@9VDC Average: 300mA@9VDC Max:400mA@9VDC
Software	
Device Management	<ul style="list-style-type: none"> • WEB interface (Internet Explorer v6 or Later; Mozilla Firefox v1.5 or Later, Chrome,Opera,Safari or other Java-enabled Browsers) • SYSLOG
Minimum System Requirements	Mobile Internet Access Subscription and Internet PC Adapter Computer with: <ul style="list-style-type: none"> • Windows 7, Vista , Windows XP SP2, Windows 2000 SP4, or Mac OS® X (v10.4/v10.3), Linux • Internet Explorer 6 or Mozilla Firefox • CD-ROM Drive • Network Interface Card
Physical	
Operating Temperature	<ul style="list-style-type: none"> • Storage: 72°F to 153°F (-40°C to 90°C) • Working: 36°F to 126°F (-30°C to 80°C)
Humidity	95% Maximum (Non-condensing)
Dimensions	Item not including installation hole (L x B x H): 87mm*50mm*23mm Item including installation hole (L x B x H): 102m*70mm*23mm PCBA size: 84mm*48mm*20mm

Weight	Item: 160g
Others	
Warranty	1 Years
Package Contents	<ul style="list-style-type: none"> • The H685m Series wireless Router • CAT5 Ethernet Cable • Power Adapter • Antenna • CD-ROM with Product Documentation • Others depends on the option features

>>| Model version and types



Notes:

1. We name H685d HSDPA version and H685u HSUPA version both as H685w version.
2. Please inform us the option feature while you order.

>>| Accessories

- The H685m Series wireless Router
- CAT5 Ethernet Cable
- Power Adapter
- Antenna
- CD-ROM with Product Documentation
- 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 Mangetic-Mount W/ Cable



Rubber antenna



Rubber Mangetic-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.