

## CM820P/ CM820P-W 3G WiFi Router Datasheet



### >>| Product Introduction

The Comset CM820P-W Router is a new generation 3G HSPA+ WiFi Modem Router with download speeds of up to 21 Mbps. The CM820P-W is designed to suit Australian conditions. It performs fast and reliable data communication for a wide range of Machine-to-Machine (M2M) applications.

The CM820P-W 3G HSPA+ WiFi Router enables users to quickly create a secure wireless network. It provides access to the Internet over the 3G cellular network.

The durable and rugged design makes the CM820P-W the router of choice for remote harsh environments. The compact design, easy integration and rich built-in features make the Comset CM820P-W suitable for a wide range of industrial M2M applications, including industrial automation, building automation, smart metering, security, surveillance, health, mining and environmental monitoring.

### >>| Hot Spot

- Built-in 3G HSPA+ industrial cellular module and SIM card slot
- Auto-dial feature, keep alive link
- Built-in watch dog
- 1 x WAN RJ45 port + 4 x LAN RJ45 ports

- 3G failover for fixed line broadband connections
- Two CM820 can backup each other if one unit fails
- Rapid service deployment applications
- VPN (PPTP,L2TP, IPSec, GRE, Tunnel), SNMP
- WiFi 802.11b/g/n 150Mbps (CM820P-W model)
- WiFi can be used as WiFi client
- GPS (optional CM820P-G model)
- I/O port \* 2 (optional)
- SMS call to control router to be online, offline, reboot, status info, alarm

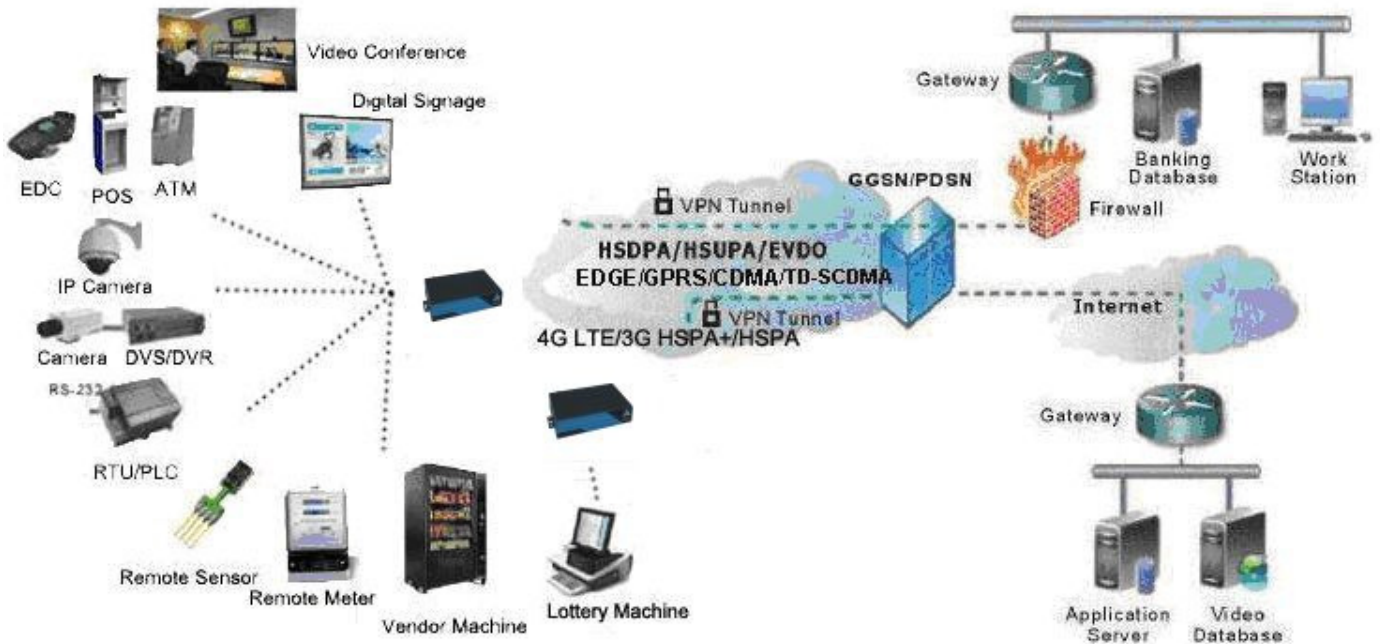
## >>| **Brief**

### **Broadband M2M Communications**

The product line provides a cost-effective broadband Machine-to-Machine (M2M) solution and supports the following radio access technologies: 3G HSDPA, HSUPA HSPA+ UMTS, EDGE, GPRS GSM.

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 DC-HSPA+, HSPA+, HSPA, UMTS, GSM, GPRS, EDGE
- SMA Standard antenna
- Optimized EMC design
- Always on line: On-line detection, automatic redial and keep-alive
- Wide range power input
- Smart power management
- Reliable, flexible, easy to use and management
- RS-232 interface transparent communication (DTU modem function)
- 4 LAN RJ45 ports for Ethernet interface & 1 WAN RJ45 port
- WiFi 802.11b/g/n (CM820P-W model)

## >>| Enhanced Features

- Real-time clock
- VPN (PPTP, L2TP, IPSec, GRE, Tunnel), and VPN pass-through
- 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)
- 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
- Firewall, packet filtering
- Support data center communication
- Support NTP
- Support LED status indication
- Support VLAN
- Support LCP, ICMP check

## >> | Specification

Wireless	
<b>Compatible Mobile Networks</b>	<ul style="list-style-type: none"> <li>• UMTS WCDMA (HSUPA/HSDPA/HSPA/HSPA+)</li> <li>• GSM EDGE</li> <li>• GSM GPRS</li> </ul>
<b>Cellular Frequency</b>	<ul style="list-style-type: none"> <li>• UMTS/HSPA/HSUPA/HSPA/HSPA+ (WCDMA/FDD) 850/900/1900/2100Mhz</li> <li>• Quad-band EGSM 850/900/1800/1900</li> </ul>
<b>Bandwidth</b>	<ul style="list-style-type: none"> <li>• HSPA+ Downlink 21Mbps Uplink 5.76Mbps</li> <li>• HSPA Downlink 14.4Mbps Uplink 5.76Mbps</li> <li>• HSUPA Downlink 7.2Mbps Uplink 5.76Mbps</li> <li>• HSDPA Downlink 7.2 Mbps Uplink 384k bps</li> <li>• WCDMA/UMTS Downlink/Uplink 384 kbps</li> <li>• EDGE Downlink 236,8 kbps Uplink 118 kbps</li> <li>• GPRS Downlink 85.6 kbps Uplink 42.8 kbps</li> </ul>
<b>Wi-Fi</b>	<ul style="list-style-type: none"> <li>• 802.11b/g/n; 150Mbps (CM820P-W model)</li> </ul>
<b>SMS</b>	SMS call to control router to be online, offline, reboot, status info, alarm

<b>GPS</b>	<ul style="list-style-type: none"> <li>Optional (CM820P-G model)</li> </ul>
<b>VLAN</b>	Supports two LAN IP addresses
<b>Fail Over Redundancy (network Backup feature)</b>	<ul style="list-style-type: none"> <li>Auto-dial feature, keep alive link</li> <li>Built-in watch dog</li> <li>Cellular (2G/3G), RJ45 WAN (xDSL, DHCP, Fixed IP), WiFi client (CM820P-W model)</li> </ul>
<b>DTU</b>	With DTU feature, serial RS232 to Cellular Gateway
<b>VPN</b>	VPN, IPSec, L2TP, PPTP, GRE (IPSec can be server and client, PPTP L2TP, GRE can be client)
<b>Firmware upgrade</b>	Supported locally and remotely
<b>Protocol</b>	
<b>Protocol support</b>	TCP, UDP, SMTP, POP, ICMP, FTP, PPP, PPPoE, DHCP, DDNS, DNS, SNMP, WPS, DMZ, Syslog (local and remote), NAT, xDSL, NTP, QoS, SNMP, RIP, support firmware update locally or remotely
<b>Security</b>	
<b>Security</b>	<ul style="list-style-type: none"> <li>Supports 64/128 bits WEP, 802.1x, WPA, and WPA2</li> <li>Supports WDS</li> <li>Supports WPA1/2 – PSK</li> <li>TKIP, AES encryption</li> <li>Supports WPA1/2 – 802.1x</li> <li>Supports EAP – TLS, TTLS, LEAP, PEAP</li> <li>Supports access with user name &amp; password.</li> <li>Supports access control base WAN/LAN interface</li> <li>Supports access control base source IP address</li> <li>Defense DOS attack, supports SYN flooding, IP surfing, ping of Death, fragile, teardrop, land etc.</li> <li>Supports PAP &amp; CHAP</li> <li>Supports IP filtering</li> </ul>
<b>Advanced Firewall Features</b>	<ul style="list-style-type: none"> <li>Network Address Translation (NAT)</li> <li>Stateful Packet Inspection (SPI)</li> <li>VPN Pass-through</li> </ul>
<b>Media Access Control</b>	CSMA/CA with ACK
<b>Certifications</b>	REDIUS Client

Interface	
<b>LAN</b>	4 x 10/100M LAN ports (RJ45 interface) 1 x 10/100M WAN port (RJ45 interface)
<b>Antenna</b>	2 x antennas for Wi-Fi (detachable SMA interface x 1, Internal x 1, CM820P-W model) Or, 3 x antennas for Cellular and GPS (detachable 50 Ω SMA female interface, CM820P-G model), Cellular support diversity receiving (MIMO)
<b>Led</b>	<ul style="list-style-type: none"> <li>• SYS*1</li> <li>• VPN*1</li> <li>• Signal*1</li> <li>• Cell*1</li> <li>• WAN*1</li> <li>• LAN*1</li> <li>• WiFi*1</li> </ul>
<b>Serial port</b>	DB9 for RS232
<b>IO port</b>	2 (optional)
<b>At command</b>	Supported
<b>UIM/SIM Card Slot</b>	Supports 1.8V/3V UIM/SIM cards, one sim card slot
<b>DC Jack</b>	Two types of input jack for DC 2.5mm DC jack*1 Terminal Block*1
Power	
<b>Power supply</b>	DC5V-40V, typical DC9V1A or 12V 1A, 12V car use
<b>Power consumption</b>	<p>Current</p> <ul style="list-style-type: none"> <li>• Idle: 22mA@12VDC</li> <li>• Max: 208mA@12VDC</li> <li>• Average:125mA@12VDC</li> </ul> <p>Power</p> <ul style="list-style-type: none"> <li>• Idle: 1.2w@12VDC</li> <li>• Max: 2.5w@12VDC</li> <li>• Average:2w@12VDC</li> </ul>

<b>Software</b>	
<b>Device Management</b>	<ul style="list-style-type: none"> <li>• WEB interface (Internet Explorer v6 or Later; Mozilla Firefox v1.5 or Later, Chrome, Opera, Safari or other Java-enabled Browsers)</li> </ul>
<b>Minimum System Requirements</b>	<p>Mobile Internet Access Subscription and Internet PC Adapter Computer with:</p> <ul style="list-style-type: none"> <li>• Windows 7, Vista , Windows XP SP2, Windows 2000 SP4, or Mac OS® X (v10.4/v10.3), Linux</li> <li>• Internet Explorer 6 or Mozilla Firefox</li> <li>• CD-ROM Drive</li> <li>• Network Interface Card</li> </ul>
<b>Physical</b>	
<b>Operating Temperature</b>	<ul style="list-style-type: none"> <li>• Storage: -40 °C to 85 °C</li> <li>• Working: -30 °C to 75 °C</li> </ul>
<b>Humidity</b>	95% Maximum (Non-condensing)
<b>Dimensions</b>	<p>PCBA: 156mm x 104mm x 20mm With case: 168mm x 104mm x 25mm</p>
<b>Weight</b>	<p>455g (not including antennas) 550g (including antennas) 850g (including all accessories)</p>
<b>Others</b>	
<b>Warranty</b>	1 Year
<b>Regulatory Compliance</b>	<p>RCM *, FCC, CE, RoHS * Effective 1<sup>st</sup> March 2013, the C-Tick and A-Tick marks are consolidated into a single compliance mark, RCM. For more information, visit the ACMA website.</p>
<b>Package Contents</b>	<ul style="list-style-type: none"> <li>• The CM820 Series Router</li> <li>• CAT5 Ethernet Cable</li> <li>• Power Adapter</li> <li>• Antennas</li> <li>• Other depends on option features</li> </ul>