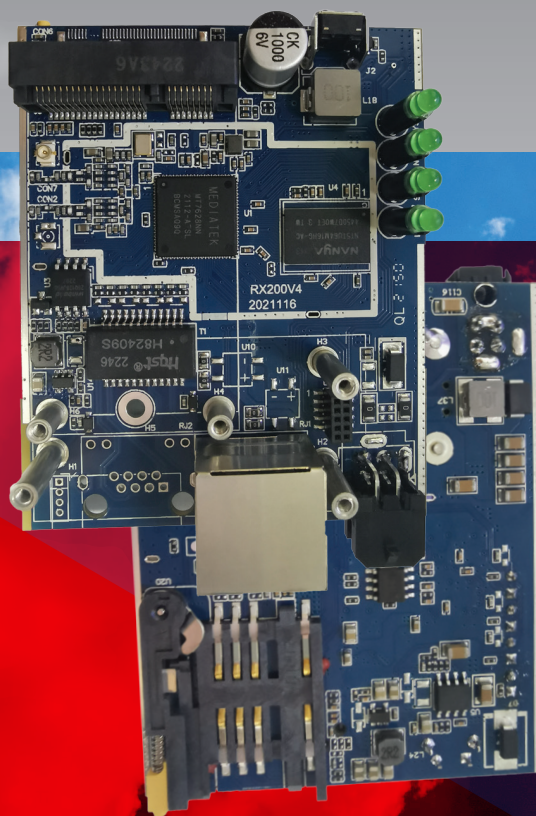




*EV Charger Edition*



**Ricon Mobile**

**P9922MC**

**EV Charger Release**

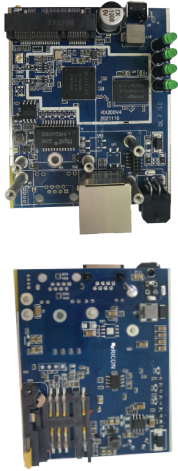
**4.5G/5G Industrial PCBA**

**Integrated Router Datasheet**

Efficiency Through Innovative Technology



# P9922MC Industrial Integrated PCBA Router

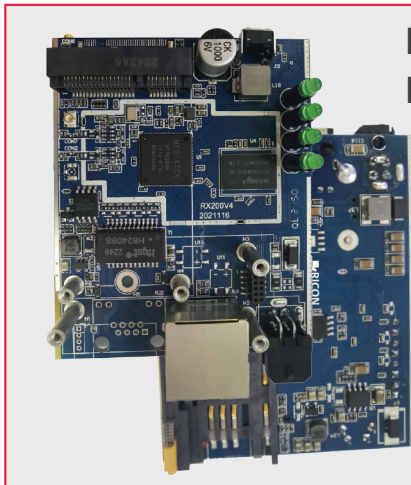


**RICON P9922MC PCBA Integrated Router**, by Ricon Mobile Inc. industrial grade quality, designed and manufactured in accordance with 3G/LTE cellular network technology to be integrated inside any electronic hardware needs cellular connectivity. With the embedded cellular module, it is widely used in many cases such as ATM connection, remote office security connection, data collection etc.

Ricon Mobile P9922MC router provides maximum service to customers while Zero Touch-SMS installation minimizes the need for field service with easy and automatic product installation service. P9922MC Router, Single Module Single SIM hardware type. The best throughput value of the P9922MC Router is 200 Mbps. The unique feature of the P9922MC Router is that it is online and redundant over the network between WAN, WLAN, 3G/LTE network. This feature allows the P9922MC to provide maximum network availability and reduce the likelihood of network failure to prevent losses due to network failures.

Mobile P9922MC routers are web-based and easily routed through CLI. In addition, the Ricon Management System Controller (RMSC) successfully accomplishes the goal of reducing the maintenance costs with the ability to access all the Ricon products in the network and to access instant and statistical data on the web environment and manage them 100%.

## P9922MC PCBA Model & Specification



P9922MC Integrated PCBA Router for EV Chargers



- 5G/LTE/3.5G support, 2.5G/3G compatibility
- 1 x 10/100Base Ethernet LAN interface
- 1 x 10/100Base Ethernet LAN/WAN interface
- 1 x RS232/RS485 interface (optional)
- 1 x SIM slot
- Single GSM module
- VLAN support (LINK TAG/UNTAG)
- LTE+/LTE/DC-HSPA/HSDPA+/HSDPA/WCDMA/2G
- WEB user interface UI/CLI/SNMP/Telnet/SSH
- RMSC
- Component-level industrial design
- 2x2 LTE MIMO SMA antenna
- 2 x 802.11b/g/n Wi-Fi antenna
- 802.11b/g/n Wi-Fi
- MODBUS-TCP protocol support (Optional)

## P9922MC PCBA Integrated Router Specification

### Interface



- » LAN : 1 x 10/100BaseT(MDI-X)
- » RS232 / RS485 : 1 x 5 pin terminal socket
- » SMA-K (LTE MIMO) : 2 x LTE/3G/2G
- » SIM / R-UIM : 1 x USIM slot
- » Reset Switch : 1
- » DC Power Socket : 1 x 3 pin minifit/microfit socket
- » Digital I/O : 2 x 1 pin terminal socket

### Indicator



- » LTE : RF indicator
- » POWER : Power status
- » WLAN : Wireless LAN connection
- » WAN : WAN cable connection status

### Power Specification



- » On Idle : 80mA + 12VDC
- » Single Module Power Consumption : <5W
- » Power Feed : 5 - 35VDC

### Mechanics



- » Dimension : 75mm x 60mm x 28mm (Small Form-Factor)
- » Weight : 80 gr.
- » Industrial aluminum alloy metal housing (Optional)
- » IP54 or IP67 enclosure (Optional)



# P9922MC PCBA Integrated Industrial Router

## Cellular Network

- » EDGE/GPRS
- » Ethernet Standards: IEEE 802.3, IEEE 802.3U
- » FDD-LTE/TDD-LTE
- » WCDMA/UMTS/HSPA/HSPA+/CDMA2000 EVDO/CDMA

## Wi-Fi

- » Standard: IEEE 802.11b/g/n
- » AP, Client, Station, Bridge mode support
- » WEP, WPA and WPA2 encryption w/AES-TKIP
- » IEEE 802.11ac optional 5Ghz Wi-Fi support
- » SSID isolation support
- » Channel manipulation support
- » 20Mhz/40Mhz beamer support

## Temperature Recognition

- » Operation Temp. : -40 °C ~ +75 °C
- » Shelf Temp. : -45 °C ~ +85 °C
- » Related Humidity : <%95 (non-condensing)

## VPN

- » IPSec
- » PPTP/L2TP client
- » GRE/EoGRE
- » OpenVPN, DMVPN
- » EoIP

## Device Management

- » Local or remote web browser
- » CLI/Telnet command
- » RMSC
- » SSH config
- » Wi-Fi

## Integration Options

- » Ethernet Internal Jumper
- » Via PCIe Bus (Full Integration as Interface)
- » UART/RS232 Controller Integration
- » Terminal Block or Serial Cable

## Firewall & Filtering

- » IP packet/Domain/MAC filter
- » NAT
- » DMZ
- » VPN pass through
- » Stateful firewall

## Hardware Feature

- » CPU : Arm Cortex Dual Core
- » SDRAM : DDR2 256 MB
- » Flash : 64MB

## Certifications

» Health	EN 62311
» Safety	EN 60950 - 1+A11+A1+A12
» EMC	EN 301-489-1/-7/-17/-24
	EN 55022, EN 55024
» Radio	EN 301 511
	EN 301 908-1/-2
	EN 300 328







# P9922MC PCBA Integrated Industrial Router

## Routing Protocols

- » Static route
- » Policy route
- » RIPv2/OSPF dynamic route
- » VRRP
- » BGP

## Maintenance Operation

- » Local/remote firmware and patch upgrade support
- » Backup, import configuration
- » Easy to debug local/remote system log
- » RMSC support

## Secure Data Transmission

- » 1024 bit encryption GRE/L2TP/PPTP/IPSec/OpenVPN/EoGRE
- » GRE over IPSec, IPSec over PPTP/L2TP
- » Supports DHCP Server, DHCP Forwarding/Relay
- » SNMP network management, NTP support
- » QoS (Quality of Service) protocol

## RMSC

- » Excellent monitor feature
- » IPFix support
- » SLA based live alarm control
- » Bulk remote configuration
- » Remote configuration with timer
- » Remote terminal management maintenance
- » Display of GIS device location (optional)
- » Remote debugging
- » Flow static and analysis
- » Automatic installation (RiconApps)

## Industrial Design

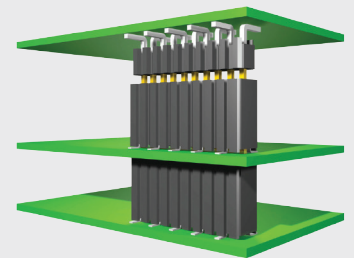
- » Aluminum alloy outer housing, IP54 protection
- » System security isolation, Particularly suitable for the application of industrial control field
- » Wide working power (DC 5-35V)
- » Antenna lightning protection
- » SIM/UIM port: 15KV ESD protection
- » Power port: reverse-voltage and overvoltage protection
- » Ethernet port: 1.5KV magnetic isolation protection

## Supported Network Protocols

- » 4G (TD-LTE/FDD LTE), DS-HSPA +, HSPA +, HSPA, WCDMA, EVDO, TD-SCDM, CDMA1x, EDGE/GPRS
- » EWAN, WLAN, SIM1
- » WLAN AP/station/repeater, 802.11n up to 300Mbps
- » VPDN
- » 802.11b/g/n Wi-Fi
- » Supports DNS proxy and dynamic DNS (DDNS)
- » APN
- » DHCP client

## Optional Interface / Features

- » RS232 Serial Port
- » RS485 Serial Port
- » 2 x Digital I/O
- » Unmodulated UART
- » Board To Board Connection



\*\*\*The above options are available with an extension PCBA

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# P9922MC PCBA Integrated Industrial Router

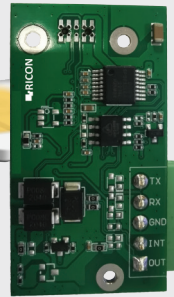
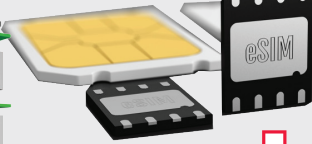
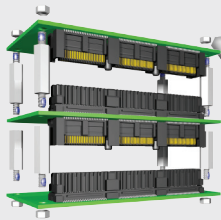
## Integration Options For EV Chargers



4G LTE

5G

Direct Integrated PCBA



Extern Integrated PCBA



4G LTE

5G

- » Board-To-Board (As Daughter Card)
- » Internal Flat Cable
- » External Integration
- » Control over RICON Software/Firmware
- » Ethernet Throughput
- » RMSC Integration
- » Easy maintenance

- » PCIe Bus
- » Direct Integration
- » Full Control with Driver pack
- » Router as an integrated WAN Interface\*\*\*
- » Wirespeed Throughput
- » RMSC Integration
- » Easy maintenance

- » USIM (MicroSIM/NanoSIM)
- » eSIM
- » Industrial Chip SIM

\*\*\*\*Optional Global Roaming Data SIM subscription Services\*\*\*\*