

InPortal3012 Vehicle Wi-Fi Router



Advantages

■ Wi-Fi to Build a Secure Wireless Network

- Support 802.11a/b/g/n/ac standard communication to meet user needs for WLAN wireless access with MIMO technology and bandwidth of up to 1.6Gbps to easily build a wireless LAN.

■ Powerful Web-Portal

- Portal Function: Passengers use a smart phone or tablet to connect to the InPortal3012 (thereinafter “IP3012”) Wi-Fi hotspot and then are greeted with a splash page showing advertisements, pictures, etc. Passengers can access internet via authentication.

■ Local Storage

- Support mSATA drives allowing for storage of up to 256G

■ Content Update Mechanism

- Remote Sync: local stored contents sync with the cloud management platform to ensure updates
- Local Sync: support local SD, FTP update

■ **Built-in Web Server**

- IP3012 provides reliable WebServer NGINX to build information websites
- Embedded PHP for dynamic WebPages

■ **High-speed 4G Access**

- IP3012 integrates 4G wireless module and provides reliable LTE, HSPA+ access
- LTE downlink speed of 100Mbps and uplink speed of 50Mbps
- HSPA+ downlink 42Mbps and uplink 5.76Mbps

■ **Easy Deployment and Management**

- Local and remotely configure the IP3012 via CLI, web interface and InHand *Device Manager* to quickly configure thousands of routers.
- Efficient Remote Centralized Network Management: IP3012 supports InHand *Device Manager* and SNMP standard network protocol for remote centralized network management.

■ **Robust Security**

● **VPN**

IPSec VPN, DMVPN, L2TP, SSL VPN, and CA certification ensure data security.

● **Network Security**

Firewall functions protect from network attacks, such as: Stateful Packet Inspection (SPI), Access Control List (ACLs), DoS attack prevention, intrusion protection and IP/MAC binding.

● **Device Management Security**

AAA, TACACS, Radius, local authentication, and multi levels user authority establish a secured mechanism on centralized authentication and authorization of device access.

■ **Internet Behavior Management**

Application layerL7 filtering with URL white lists and black lists.

■ **QOS Traffic Management**

QoS options limit user bandwidth, preventing overages and protecting latency-sensitive traffic.

■ **High Reliability**

● **Automatic Link Detection**

PPP Layer Detection: Maintain mobile network connection, prevent forced hibernation and detect link instability and auto-reconnect.

VPN Tunnel Detection: ensure the stability of VPN tunnel and the continuity of data transmission.

- **Auto-Recovery**

Embedded hardware watchdog automatically recovers from failures, ensuring the highest level of availability.

- **InHand Networks Operation System: INOS 2.0**

InHand Networks Operation System (INOS) is modular in design as an expandable and adaptable platform for all M2M applications.

Specifications

InPortal3012 Software Specification

| Items | | InPortal3012 |
|--------------------|-----------------------|---|
| Network Connection | Network Access | APN, VPDN |
| | Access Authentication | CHAP/PAP/MS-CHAP/MS-CHAPV2 |
| | Cellular Type | LTE, WCDMA(HSPA+), EDGE, GPRS |
| | LAN | ARP, Ethernet |
| | WAN | Static IP, DHCP, PPPoE |
| Protocols | IP | Ping, Traceroute, DHCP Server/Relay/Client, DNS Relay, Dynamic DNS, Telnet, SSH, HTTP, HTTPS, TFTP, FTP, SFTP |
| | IP Routing | Static Routing, RIP, OSPF, IGMP Proxy |
| Applications | Support Web Server | Embedded NGINX Web Server; access to local portal and contents via Wi-Fi when 2G/4G disconnects |
| | Support shell Script | Custom shell server scripts |
| GPS | GPS | Embedded GPS module to provide location data; InHand Device Manager Cloud shows location of devices in map view |
| Security | Multi-Level Authority | Full Authority and Read-Only Users |
| | AAA | Local Authentication, Radius, TACACS+, LDAP |
| | Firewall | Stateful Packet Inspection (SPI), Anti-DoS Attack |

| Items | | InPortal3012 |
|-------------------------------|------------------------------|---|
| | | Filtering Multicast/Ping package, Access Control Lists (ACLs) |
| | | NAT, PAT, DMZ, Port Mapping, Virtual Server |
| | Data Security | IPSec VPN, L2TP, PPTP, GRE, OpenVPN, DMVPN, CA(Automatic Registration) |
| | CA Certificate | PEM, PKCS12, SCEP |
| | Access Authentication | Portal Authentication |
| | Internet Behavior Management | Layer seven filtering, URL white list, black list |
| | Anti-attack | ARP AttackProtection, MAC Address Filtering |
| Reliability | Link Backup | Floating Route, VRRP |
| | Link Detection | Various Heartbeat Packets, Automatic Recovery from Failure |
| | Watchdog | Self-diagnostics, Automatic recovery from failure |
| QoS | Bandwidth Management | Limit maximum bandwidth by IP and interface |
| | Traffic Priority | Assign different priority levels to different traffic |
| Firewall | Firewall | ACL; DoS; URL filtering, limit video access, download, etc |
| WLAN | WiFi Standard | 802.11a/b/g/n/ac |
| | WiFi Speed | 2*2 MIMO,300Mbps+1.3Gbps |
| | Frequency Range | 2.4GHz-2.4835GHz, 5.15~5.825GHz |
| | Working Mode | Access Point |
| | Max. No. of Clients | 128 |
| | Multiple SSID | 8 Max.SSID |
| | Hide SSID | Support |
| | Security | Open system/shared key, WPA, WPA2 64/128 WEP, dynamic WEP, TKIP |
| | Wi-Fi Service Quality | WMM |
| | PortalAuthentication | Portal Authentication, login webpage |
| | 802.11 特性 | Support Single, Double Space, A-MPDU, A-MSDU, 20/40MHZ, Short GI, 11n access, and 802.11a/b/g compatibility |
| Adaptive Dynamic Rate Control | Support | |
| Management | Configuration | Configure via Console, local or remote HTTP, HTTPS, |

| Items | | InPortal3012 |
|-------|---------------------------------------|---|
| | | Telnet and SSH |
| | Upgrade | Upgrade via local or remote Web, <i>InHand Device Manager</i> , TFTP, FTP or SFTP server; Double image backup, image restored when upgrade fails |
| | Log | Local or remote log export |
| | | Important Log Backups in Flash Memory |
| | Alarming | Support |
| | SMS | SMS to Inquiry Status, Configure, Reboot |
| | On-Demand Dial Up | Activate cellular connection by data or SMS, Scheduled uptime and downtime |
| | SNMP | SNMP v1/2/3 with InHand MIBs |
| | <i>InHand Device Manager Platform</i> | Centralized remote batch configuration, upgrades, data plan management |
| | AAA | Local authentication, RADIUS, TACACS+ |
| | Custom Scripts | CLI Scripts, Shell Script |
| | Multilevel Authority | Multiple levels of user authority |
| | Diagnostic | Ping, traceroute, packet sniffer |
| | Time | SNTP |
| | GPS | Optional |

3G/4G Specifications

| Items | Description |
|-------|--|
| 3G/4G | LTE-TDD Quad-band: Band 38/39/40/41(61Mbps downlink , 18Mbps uplink) LTE-FDD Tri-band: Band1/3/5(100Mbps downlink , 50Mbps uplink) TD-SCDMA Dual-band: Band 34/39(4.2Mbps downlink , 2.2Mbps uplink) UMTS Dual-band: Band 1/5(42Mbps downlink , 5.76Mbps uplink) GSM Quad-band: 850/900/1800/1900(237kbps downlink , 118kbps uplink) |

InPortal3012 Hardware Specifications

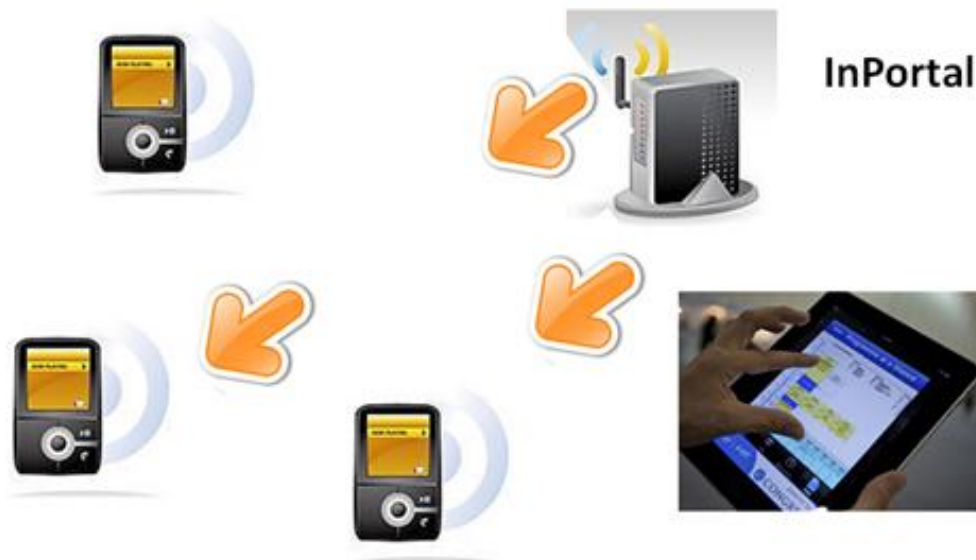
| Items | | InPortal3012 |
|-----------|----------------|--------------------------------------|
| Features | CPU | BCM53012, 1GHz, dual core A9 |
| | Memory | 1GB |
| | Flash | 32MB |
| | Module | 3G, 4G-LTE |
| Interface | Ethernet Ports | 2*10/100/1000Mbps Fast Ethernet port |
| | Console | RJ-45 serial port |
| | SIM Holder | Push-pull SIM Card Holder *1 |

| Items | | InPortal3012 |
|------------------|--|--|
| | Reset | Pinhole Reset Button |
| | Antenna | 3G/4G:SMA x 2 |
| | | Wi-Fi: RP-SMA x 4 |
| | | GPS x1(optional) |
| | Wi-Fi | 802.11a/b/g/n/ac |
| GPS | NMEA 0183 V3.0 | |
| Storage Function | SATA Storage | Embedded mSATA interface for SSD hard-drives |
| | SD Card | Standard SD card interface |
| | Network Storage Function | Supports a "Network Hard Disk" function to update storage contents without removing the disk |
| Mechanical | Installation | Wall Mounted |
| | Dimensions | 256*161.4*70mm (10*6.35*2.8in) |
| | Housing | Aluminium alloy |
| | Protection | IP40 |
| | Cooling | Fanless |
| | Weight(kg) | <1 |
| Power | Power Input | DC12V |
| | Power Interface | Aviation connector |
| | Standby Consumption | 11.5W@12V |
| | Working Consumption | 12W@12V |
| | Peak Consumption | 13.2W@12V |
| Environment | Humidity | 5 ~ 95% (noncondensing) |
| | Storage | -40 ~ 85℃ |
| | Working | -20~ 70℃ |
| Others | Real Time Clock (RTC) | RTC, super capacitor |
| Indicators | LED | POWER, STATUS, WARN, ERROR, 3G/4G Module, WIFI |
| EMC | ESD Electrostatic Discharge Immunity | EN61000-4-2,level 2 |
| | RFI Radio Frequency Immunity | EN61000-4-3,level 2 |
| | EFT Electrical Fast Transient/Burst Immunity | EN61000-4-4,level 2 |
| | Surge Immunity | EN61000-4-5,level 2 |
| | Immunity to Conducted Disturbances | EN61000-4-6,level 2 |

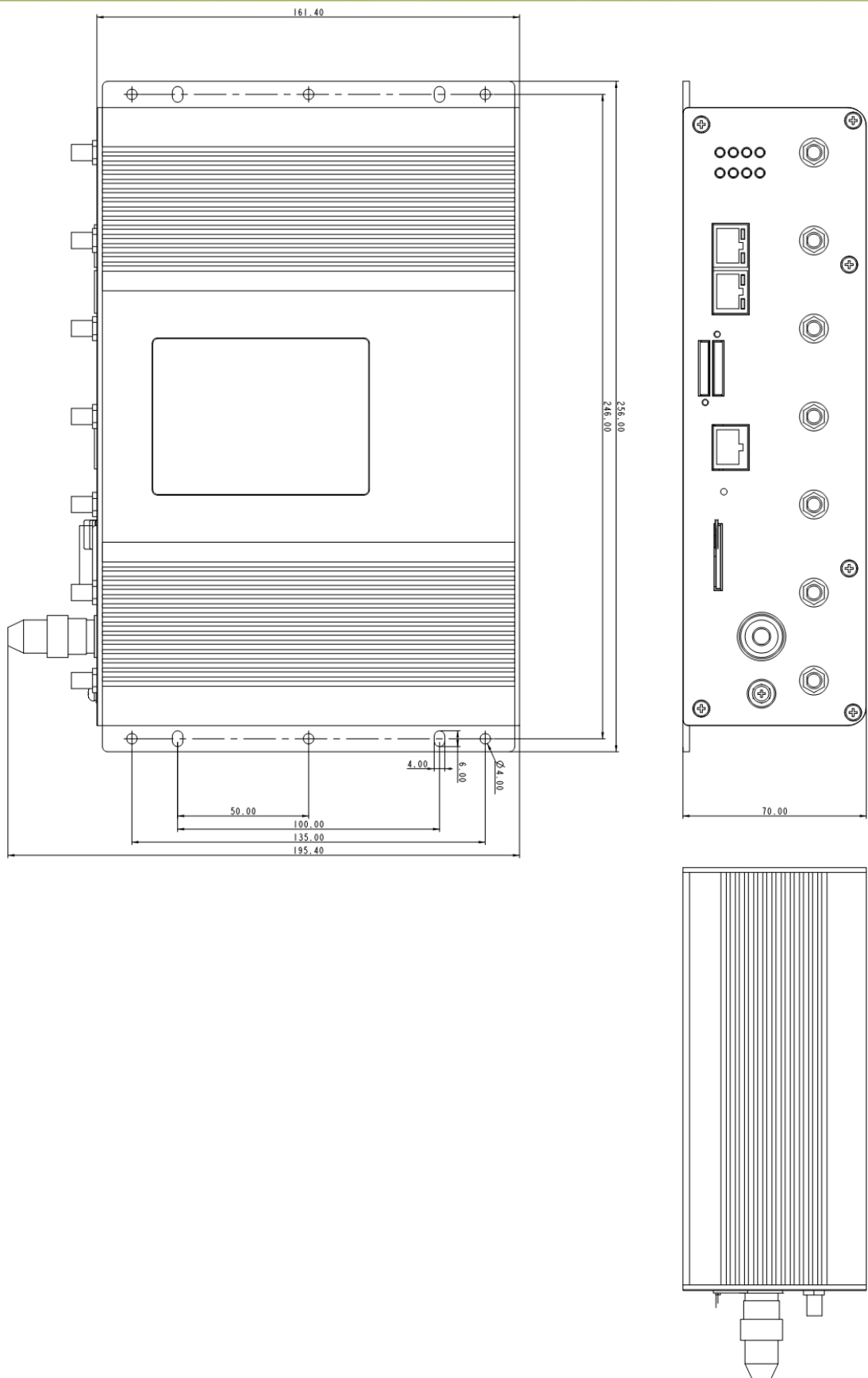
| Items | | InPortal3012 |
|----------|---|--|
| | Power Frequency Magnetic Field Immunity | EN61000-4-8, horizontal/vertical 400A/m (>level 2) |
| | Oscillatory Waves Immunity | EN61000-4-12,Level2 |
| Physical | Shock Test | IEC60068-2-27 |
| | Free Fall | IEC60068-2-32 |
| | Vibration | IEC60068-2-6 |

Applications

Installed on bus, the InPortal3012 Wi-Fi router allows passengers to access the internet via 3G/4G mobile network. When using smart phones and tablets to access Wi-Fi hotspot, passengers will be automatically redirected to a webpage that provides information, multimedia contents and download services via InPortal3012 Portal authentication. The multimedia contents can be locally stored in InPortal3012 and be Cloud sync via 3G/4G.



Dimensions (mm)



Ordering Information

| Items | InPortal3012 |
|------------------------|--|
| Part Number | IP3012<N>-<WMNN>-<U>-<GPS>-<M>-<GW> |
| N(Cellular Type) | P—Ethernet(no cellular module), L—LTE |
| WMNN (Cellular Module) | W=Networks F—FDD-LTE、T—TDD-LTE、P—Ethernet MNN= Module info |
| U | Aluminium alloy metal housing |
| GPS | GPS: support GPS, <NA>: no GPS |
| M | M16: embed 16GB SSD; M64: embed 64GB SSD; M128: embed 128GB SSD;<NA>: no SSD |
| <GW> | GW: Ethernet gateway, no Wi-fi module; <NA>:support Wi-Fi |
| Exmaple | IP3012L-TL00-STD-GPS-M16: 2*ETH ports, LTE, GPS, metal housing, 16GB SSD |

InHand Networks

InHand Networks provides reliable, secured and intelligent M2M solution for electric power, industrial automation, commercial and medical devices. Recognized by world class customers and partners. Proven by a large install base. Expanding with intensive investments in research and development. Enduring for long-term support.

InHand Networks has become leader in industrial grade network technology by providing industrial cellular routers, industrial Ethernet switches, wireless sensor network devices and cloud based M2M platforms.

Connecting devices, enabling service.



InHand Networks

7926 Jones Branch Dr. Suite 110
McLean, Virginia, 22102
USA
T: +1-703-348-2988
F:+1-703-348-2988
info@inhandnetworks.com
www.inhandnetworks.com