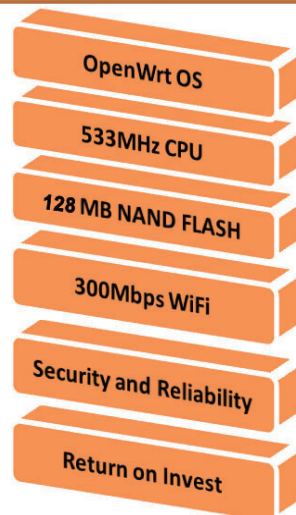## Over View

WLINK WL-R220 4G/3G OpenWrt router is the internet of thing mobile broadband router and a machine to machine (M2M) industrial cellular router, which can works on 4G/3G cellular network to provide reliable, secure and high speed wireless connectivity for remote management, telemetry, condition monitoring, CCTV, ATMs, vending machine and other M2M applications. Using one of the world's leading Atheros scheme, the CPU basic frequency 533 MHZ, wireless support 802.11 N 300Mbps, highest , Perfect compatible OPENWRT third parties firmware, meet customer secondary development.

What can OpenWrt use for? OpenWrt is as a Linux distribution of Router, it offers a built-in package manager that allows you to install package from a software repository. It can used for anything that an embedded Linux system can be used for, including functioning as an SSH server, VPN, traffic shaping system and so on. WLINK WL-R220 4G/3G OpenWrt router is based on the Openwrt trunk system, which is configured using a web interface (LuCI). Customers can be allowed to customize WL-R220 series router to fit any application from the selection and configuration by WLINK provided.

Hence WL-R220 OpenWrt 4G/3G Router are suitable for the users who want a drop-in replacement firmware. Instead of trying to cram every possible feature into one firmware, OpenWrt provides only a minimal firmware with support for add-on packages. For users this means the ability to custom tune feature, removing unwanted package to make room for other package and for developers this means being able to focus on package without having to test and release an entire firmware.

Highlights

- OpenWrt OS
- 533MHz CPU
- 128 MB NAND FLASH
- 300Mbps WiFi
- Security and Reliability
- Return on Invest

Basic Features

◎ Industrial robust design and compact metal housing, heat endurance and radiation abillity

◎ High data speed via FDD / TDD 4G or 3G network, 2G backward compatible

◎ Strong electromagnetic interference Resistance

◎ Support DIN-Rail Mounting for industrial

◎ Built-in watch dog, Multi-link detection

◎ 802.11b/g/n Wi-Fi support, 300Mbps data rate

◎ 2x Digital Input(DI), 1x Digital Output (DO), suit for I/O communication

◎ MIMO antenna for 4G

◎ Atheros AR9344, 533MHz CPU.

◎ Standard equipped with Dual SIM Single Module for Failover or Backup between two network

◎ Always online, reboot automatically if disconnected to ensure continual connection

◎ SPI Nor Flash - 8MB
◎ NAND Flash 128MB
◎ DDR2：16Bit 64MB
◎ Shock and vibration resistant

Typical Diagram and Application

Energy	Digital Oil Field, Coal Mine, Solar, Smart Grid
Utilities	Smart City, Traffic, Street lighting, Public Safty, 4G Public hotspot, Environment monitoring, Video Surveillance
Industrial	Remote Telemetry, Tanking Monitoring, Automation, Remote PLC, Remote AMR, Remote Monitoring and control
Retail	ATM, POS(Point-of-Sale), Vending Machine, Lottery Machine, Branch network, Digital Signage, Video Surveillance, failover between WAN&4G/3G
Transportation	Bus WiFi, WiFi on Board, Vehicle video surveillance, Fleet tracking and management, Bus Advertising

Shenzhen Wlink Technology Co., LTD
深圳市德传物联技术有限公司

Specification

Optional Supports Mobile Network	◎FDD-LTE / TDD-LTE ◎DC-HSPA+/HSPA+/HSPA/HSDPA/WCDMA/UMTS ◎EDGE/GPRS ◎CDMA2000 EVDO/CDMA 1X	**Ethernet Standard**	◎IEEE 802.3 ◎IEEE 802.3u
Interface	◎2×10/100Mb LAN ◎1×10/100Mb WAN ◎1× RS-232 console port(RJ45) ◎2xGPIO Inout, 1xGPRIO Output ◎4× SMA-K antenna interface ◎2× Standard SIM/R-UIM interface ◎1× Standard DC power interface	**LED instruction**	◎PWR ◎WLAN ◎ERR ◎Signal ◎LAN (LAN1~LAN2) ◎WAN
WiFi	◎Standard: IEEE 802.11b/g/n ◎WEP, WPA and WPA2 encryption ◎Standard 150Mbps, 300Mbps optional ◎AP, Client, station, bridge mode support	**Power supply**	◎ 7.5 - 32VDC
Power Consumption	◎Idle: 213mA@+12VDC ◎Single Module Communications: 265mA@+12VDC ◎Dual Module Communications: 600mA@+12VDC	**Other**	◎Dimension: 102mm x 100mm x 42mm (not including antenna) ◎Weight: 350g ◎Operation temperature: -30~+70℃ ◎Store temperature: -40~+85℃ ◎Related humidity: <95% (non-condensing) ◎Guarantee: one year

Partial Order Number List

Model	4G	3G	Interface	Dual SIM	WiFi	GPS	DL	UL
WL-R220LF-d	FDD: B1/B3/B5/B7/B8/B20 TDD: B38/B40/B41	HSPA+ B1/B5/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs		FDD: 150M TDD: 130M	FDD: 50M TDD: 35M
WL-R220LF-g	FDD: B1/B3/B5/B7/B8/B20 TDD: B38/B40/B41	HSPA+ B1/B5/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs	√	FDD: 150M TDD: 130M	FDD: 50M TDD: 35M
WL-R220LF1-d	FDD: B1/B2/B3/B4/B5/B7/B8/B28 TDD: B40	HSPA+ B1/B2/B5/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs		FDD: 150M TDD: 130M	FDD: 50M TDD: 35M
WL-R220LF1-g	FDD: B1/B2/B3/B4/B5/B7/B8/B28 TDD: B40	HSPA+ B1/B2/B5/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs	√	FDD: 150M TDD: 130M	FDD: 50M TDD: 35M
WL-R220LH-d	FDD: B1/B2/B3/B4/B5/B7/B8/B20	HSPA+ B1/B2/B5/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs		150M	50M
WL-R220LS4-d	FDD: B2/B4/B5/B12/B13/B17/B66	HSPA+ B2/B4/B5	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs	√	150M	50M
WL-R220LS4-g	FDD: B2/B4/B5/B12/B13/B17/B66	HSPA+ B2/B4/B5	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs		150M	50M
WL-R220LZ-d	FDD: B1/B2/B4/B5/B7/B12/B17 TDD: B38	HSPA+ B1/B2/B4/B5/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs		FDD: 100M TDD: 60M	FDD: 50M TDD: 35M
WL-R220LZ-g	FDD: B1/B2/B4/B5/B7/B12/B17 TDD: B38	HSPA+ B1/B2/B4/B5/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs		FDD: 100M TDD: 60M	FDD: 50M TDD: 35M
WL-R220H-d		HSPA+ B1/B2/B5	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs	√	21M	5.76M
WL-R220H2-d		HSPA B1/B2/B5/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs		14M	5.76M
WL-R220H4-d		HSPA+ B1/B8	2x LAN,1xWAN 1x RS232 3x I/O	√	300Mpbs	√	21M	5.76M