Specification AX1800

Model Name: R818S

(Use Broadcom Wirless Router solution BCM6755 platform)

WAN（GE）+ 4-Eth ports (4GE)+WiFi 11ax(2*2) + WiFi 11ax(2*2)

Support Mesh Network and Smart Roaming

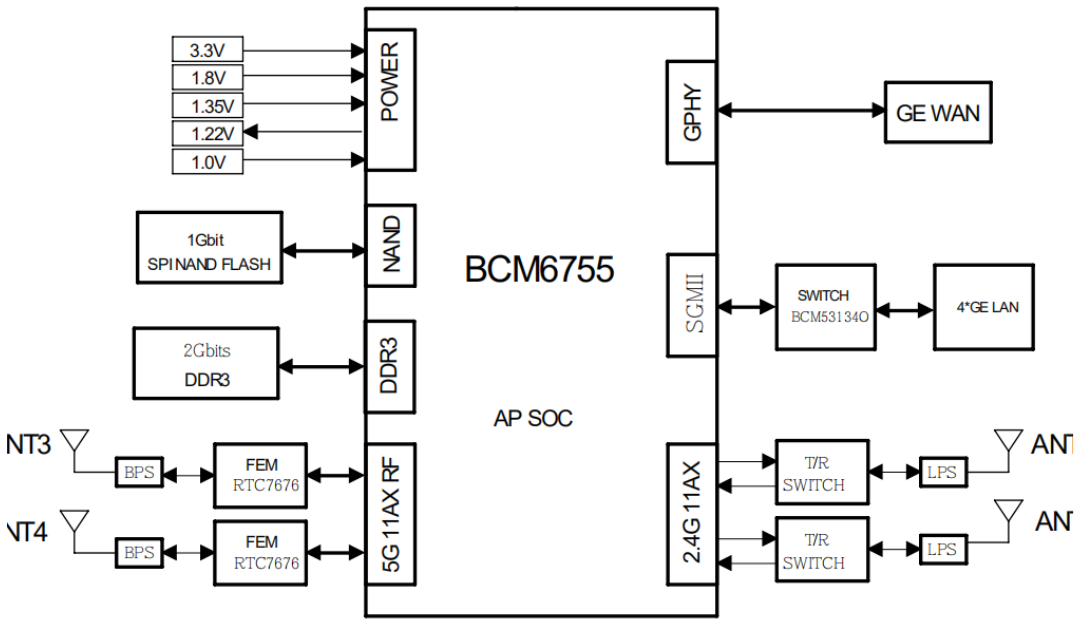


1. Product Descriptions

R818S Wireless Router can establish 2.4GHz 600Mbps and 5GHz 1.2Gbps connections simultaneously for 1.2Gbps of total available bandwidth , can easily support online HD video playback, 3D games and other high speed applications.

2. Product Specifications and Features

2.1 Block_ diagram



2.2 Main Components

Key Components	
SOC Chipset	BCM6755
Flash Memory	Flash 1Gbit
SDRAM for CPU	DDR3 2Gbit
Console	Internal console port (4 pin)

2.3 Interfaces

- Power Supply : Power adapter (12V/1A)
- Ethernet Ports : Five (5) 10/100/1000 (1 WAN and 4 LAN) Gigabit Ethernet ports with auto-sensing technology； IEEE802.3 , IEEE802.3u
- Button : Reset Push Button 、 WPS Push Button
- Ports : 4x LAN Ports , WAN Port , WPS Button , Reset Button , DC Port (12V) (Looking from left to right)

- LED : Power、Internet、WPS、2.4G、5G

3. WIFI Performance

2.4GHz （802.11ax，2*2）	
Standard	2.4GHz: IEEE802.11n/IEEE802.11g/EEE 802.11b
RF Power	MCS7:19dBm
RF Sensitivity	MCS7:-74dBm
Antenna	Two (2) external 2.4G-bandomni antennas 5dBi
Connection rate	600Mbps
Throughput	430Mbps
5GHz（802.11ax,2*2)	
Standard	5.0GHz: 802.11ax/802.11ac/IEEE 802.11n/IEEE 802.11a
RF Power	MCS9: 19dBm
	MCS11: 17dBm
RF Sensitivity	MCS9: -61dBm
	MCS11: -54dBm
Antenna	Two (2) external 5G-bandomni antennas 5dBi
Connection rate	1.2Gbps
Throughput	850Mbps

4. SoftWare Features

Feature Item	Feature	Detailed Description
Networking Protocols	802.1q/1p VLAN over RFC2684 bridge encapsulation	
	PPPoE	Support AUTO,PAP,CHAP,MS‐CHAP authentication.Auto or static IP address assignment.
	PPPoE passthrough	Supports concurrent PPPoE clients inside the modem and PPPoE clients on the LAN devices.
	PPPoE filtering of non‐PPPoE packets between WAN and LAN	Support filtered non‐PPPoE packets.
	Auto clean up of remote stalled PPP sessions at BRAS	
	IpoE	Support dhcp and static ip config
	Transparent bridging between all LAN and WAN interfaces	
	WAN to WAN blocking in bridgemode	
	Ethernet as WAN	
Networking	Full Cone NAT	
	DMZ Host	
ALGs	FTP	
	TFTP	
	SIP	

	RTSP	
	H.323	
	Port Triggering	
	PPTP	
	IPSec/VPN and IPSec/L2TP	
VPNs	IPSec VPN	
	L2TP client	
	PPTP client	
Firewall/ Filtering	Stateful Inspection	
	Denial of Service suppression	ARP, Ping, Ping of Death, Land, SYNC, Smurf, unreachable, teardrop, SYN flood, fragggle, echo.
	Packet filtering	ackets can be blocked based on interface, mac address, IP address, protocol, and port number.
	LAN side firewall	By default, LAN side firewall is disable d
Parental Control	Time of day usage restriction	
	URI/URL Filtering	Supports INCLUDE and EXCLUDE modes
QoS	IP/Bridge/802.1p	
	Rate Control on upstream traffic	
	Support SP, WRR,WFQ priority VLAN stacking (Q-in-Q)	
Routing	RIP v1/v2	Enable RIP over multiple WAN interfaces
	Policy Routing	Routes packets based on criteria other than destination IP address
IGMP	Proxy and snooping	
	IGMP v2 and v3	
	Support for IPv6	
IPv6	IPv6 Ready Logo Certified	
	IPv6 Firewall	
	IPv6 capable apps	telnetd, ftpd, sshd, httpd
File systems	SquashFS	Filesystem used on NOR flash systems
	JFFS2	Filesystem used on NAND flash system s
	tmpfs	small read/write filesystem
	VFAT	For USB automount feature
	NTFS	For USB automount feature. Support for Unicode and files greater than 2GB requires a different toolchain.
DHCP Server	Support for multiple subnets	
	Static IP lease	
	DHCP relay	
DHCP client		
LAN services	Second IP address on LAN interface	
DNS Proxy	Built in DNS server	
	Caching previous requests	
WebUI	Protection against Cross Site Request Forgery attack	

UPnP	Internet Gateway Device (IGDv1.0)	
	Finite(24 hour) duration of virtual server entries created using UPnP	To protect against a scenario where a PC client creates a virtual server entry on the Broadband Router and then leaves the network without deleting the virtual server entry, virtual server entries created by UPnP has a maximum lifetime of 24 hours.
Security	Three level login(local admin, local user, remote support)	
	Service access based on incoming interface and/or source IP address	
	Automatic logout from CLI after inactivity	
Audit and Logging	Send log to remote syslog server	
Diagnostics	Interface Connectivity	Ethernet
	Internet Connectivity	ISP authentication, assigned IP address, default gateway/primary DNS server connectivity
WIFI Compliance	IEEE 802.11b/g/n/ac/ax	
	Dual Band concurrent	
	Support 2.4G 20M and 40M bandwidth	
	Support 5G 20M/40M/80M bandwidth	
	Support for STBC in both TX and RX	
	WEP encryption	Support 64, 128 Bit WEP encryption
	802.1x	
	WPA/WPA2	
	WPA-PSK/WPA2-PSK	
	Mac Filter base on each SSID	
	Multiple SSID	Up to 4 SSID
	Support SSID hidden	
	SSID User Isolation	
	WPS	WPS Push and WPS PIN methode supported.Housing WPS push button (optional)
	Enable or disable WIFI through GUI	
Other Features	sntp time synchronization	
	telnet	
	DLNA Support	

5. Operating Conditions

- Working Temperature : 0°C ~ 40°C
- Working Humidity : 10% ~ 90% RH (No condensation)
- Storage Temperature : -10°C ~ 70°C
- Storage Humidity : 5% ~ 95% RH (No condensation)

6. Dimensions and Housing

- PCB Dimensions (LxWxH) : approx.120 x 100 x 14 mm
- Housing Dimensions (LxWxH) : approx.130 x 110 x 20 mm



