Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Integrated Wireless LAN Modules with Integrated TCP/IP Stack
BP3580 / BP3591

BP3580 (Surface Mount)

BP3591
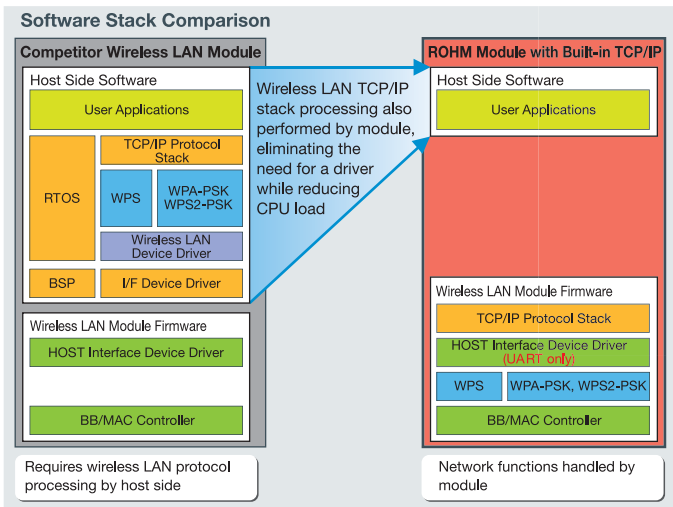(Built-in Antenna/
Connector Connection)

Integrated TCP/IP stack eliminates the need for device driver development

ROHM's BP3580 and BP3591 IEEE802.11b/g/n wireless LAN modules perform all LAN protocol processing, including WPS/WPA-PSK, and WPA2-PSK, significantly lightening host load. In addition, the units integrate a TCP/IP protocol stack* that eliminates the need for device driver development and enables wireless LAN functionality simply by adding application software.

*Modules with and without a TCP/IP stack feature the same firmware, resuilting common hardware specifications.
 Access Point (AP) functionality planned.

■ All-in-one wireless LAN modules

ROHM wireless LAN modules integrate all required protocols, including WPA-PSK,WPA2-PSK, and WPS. In addition, the built-in TCP/IP stack eliminates the need for a device driver, contributing to greater miniaturization.
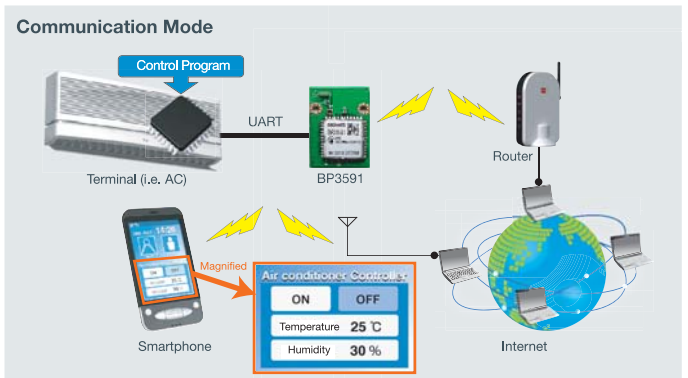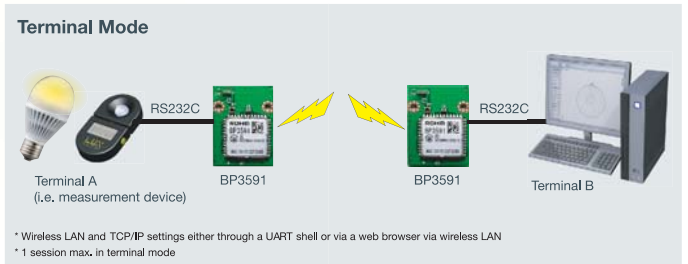
Software Stack Comparison

Competitor Wireless LAN Module	ROHM Module with Built-in TCP/IP
Host Side Software	Host Side Software
User Applications	User Applications
TCP/IP Protocol Stack / RTOS / WPS / WPA-PSK WPS2-PSK / Wireless LAN Device Driver / BSP / I/F Device Driver	
Wireless LAN Module Firmware	Wireless LAN Module Firmware
HOST Interface Device Driver	TCP/IP Protocol Stack / HOST Interface Device Driver (UART only) / WPS / WPA-PSK, WPS2-PSK
BB/MAC Controller	BB/MAC Controller
Requires wireless LAN protocol processing by host side	Network functions handled by module

Wireless LAN TCP/IP stack processing also performed by module, eliminating the need for a driver while reducing CPU load

■ Compatibility

Item		Function
ARP		Supported
ICMP		Supports ping requests
DHCP Client		Supported
DNS Client		Supported
TCP	Max. No. of Sessions	4
	Server	Supported
	Client	Supported
	Connect/Disconnect Notification	Supported
	Receive Timeout Notification	Supported
UDP	Max. No. of Ports	4
	Transfer	Unicast/broadcast supported
	Receive Timeout Notification	Supported
	Other	Data source/destination designations possible
HTTP	Settings Screen	Supported

■ Terminal/Communication modes

Connect the BP3580/BP3591 between terminals via RS232C to enable simple wireless communication in 'terminal mode' or opt for more advanced operation in 'communication mode'.

Terminal Mode

RS232C   BP3591   BP3591   RS232C

Terminal A (i.e. measurement device)   Terminal B

* Wireless LAN and TCP/IP settings either through a UART shell or via a web browser via wireless LAN
* 1 session max. in terminal mode

Communication Mode

Control Program

UART

Terminal (i.e. AC)   BP3591   Router

Magnified
Air conditioner Controls
ON	OFF
Temperature	25 ℃
Humidity	30 %

Smartphone   Internet

Applications

- AV equipment, industrial devices, sensor networks
- Wireless LAN devices connected to routers, including smartphones
- Devices that previously could not integrate wireless LAN due to insufficient microcontroller capability or prohibitive development costs

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