

Ready-to-embed Wireless Modules



For product news and updates please visit www.connectblue.com

[illegible]



OEM Module
OWSPA311g



OEM Module
OWL221a*



OEM Module
OWL222a*



OEM Module
OZS311

Wireless LAN		Wireless LAN		Wireless LAN		IEEE 802.15.4	
-		-		-		-	
-		-		-		-	
802.11 b/g (54 Mbit/s)		802.11 a/b/g/n (dual band, 65 Mbit/s)		802.11 a/b/g/n (dual band, 65 Mbit/s)		-	
Int. ^{Note 1}	Ext. ^{Note 1}	Int. ^{Note 1}	Ext. ^{Note 1}	Int. ^{Note 1}	Ext. ^{Note 1}	Internal	External
20 dBm	20 dBm	20 dBm	20 dBm	20 dBm	20 dBm	2.5 dBm	4 dBm
400 m	400 m	400 m	400 m	400 m	400 m	200 m	200 m
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Option ^{Note 3}	-	-	-	-	-	Yes	-
-	-	-	-	-	-	-	-
2.7 M	-	-	-	-	-	57.6 k	-
Yes	-	-	-	-	-	Yes	-
-	Max 80 MHz	-	-	-	-	-	-
-	-	Max 50 MHz	-	-	-	-	-
Yes	-	-	-	-	-	Yes	-
7	-	-	-	-	-	1	-
-	-	-	-	-	-	-	-
WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	WEP WPA WPA2	Yes	-
-	802.11e	802.11e	802.11e	802.11e	802.11e	-	-
Point-to-point	Infrastructure	Infrastructure	Infrastructure	Infrastructure	Infrastructure	Point-to-point	Optional ZigBee
Point-to-multipoint	Ad-hoc	Ad-hoc	Ad-hoc	Ad-hoc	Ad-hoc	stack available	-
Mesh	Mesh	Mesh	Mesh	Mesh	Mesh	-	-
3.3 - 5.5 VDC	3.3 - 5.5 VDC	3.1 - 3.6 VDC	3.1 - 3.6 VDC	3.1 - 3.6 VDC	3.1 - 3.6 VDC	3.3 - 5.5 VDC	3.3 - 5.5 VDC
0.9 mA @3.3V	TBD	TBD	TBD	TBD	TBD	27 mA	27 mA
15 mA @3.3V	TBD	TBD	TBD	TBD	TBD	27 mA	27 mA
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
-	Option	Option	Option	Option	Option	-	-
Option	-	-	-	-	-	Option	-
-	-	-	-	-	-	-	-
Yes	-	-	-	-	-	Yes	-
-30 to +85° C	-30 to +85° C	-30 to +85° C	-30 to +85° C	-30 to +85° C	-30 to +85° C	-40 to +85° C	-40 to +85° C
Yes	-	-	-	-	-	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23x36x3.1	23x36x3.1	23x36x3.1	23x36x3.1	23x36x3.1	23x36x3.1	23x36x3.1	23x36x3.1
cB-ACC-24	TBD	TBD	TBD	TBD	TBD	cB-ACC-24	cB-ACC-24
cB-ACC-34	-	-	-	-	-	cB-ACC-34	cB-ACC-34



WIRELESS SNIFFERS & PROTOCOL ANALYZERS

connectBlue offers Wireless Sniffers & Analyzers by Frontline Test Equipment. The Bluetooth sniffer is a Multi-mode Bluetooth Protocol Analyzer that sniffs both radio traffic and high speed UART HCI packages. It is the only product on the market to handle Bluetooth up to v2.1+EDR.

connectBlue also offers the MeshDecoder which is a real-time debugging, verification and network display analyzer, that simplifies the understanding of IEEE 802.15.4 / ZigBee networks by simultaneously capturing, decoding, displaying and filtering data, and also detecting errors. The product range of Sniffers and Protocol Analyzers also includes Wireless LAN solutions.

With these tools, you get faster commissioning and development times, and thus also reduced engineering costs. The sniffers and analyzers can be used in combination with the following:

- Industrial communication network analyzer
- Serial, async-only protocol analyzer
- Serial, sync/async protocol analyzer



READY-TO-USE WIRELESS PRODUCTS

connectBlue also offers a wide range of Bluetooth, Wireless LAN and IEEE 802.15.4 / ZigBee ready-to-use products in industrial housings. For more information, see www.connectblue.com or request data sheets.

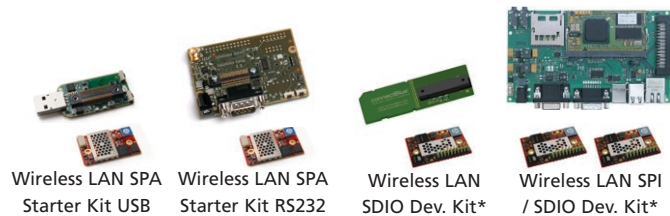


Certified and pre-tested

Benefit from the advantages of low-power modules, fully certified and pre-tested



WIRELESS STANDARD	Bluetooth	Bluetooth	Bluetooth	-	-
CONTENTS					
Wireless module	OEMSPA311i	OEMSPA311i	2x OEMSPA311i	-	-
Development/adaptor board	USB adapter	RS232 adapter	2x I/O boards	RS232 adapter	USB adapter
Others	USB extension cable, documentation and configuration tools	9-pin serial cable, USB Power cable, documentation and configuration tools	2x 9-pin serial cables, 2x USB Power cable, documentation and config tools	9-pin serial cable, USB Power cable, documentation and configuration tools	USB extension cable, documentation and configuration tools
COMPATIBLE MODULES					
Bluetooth, OHCI406i/x	-	-	-	-	-
Bluetooth, OHCI411i/x	Yes	Yes	-	Yes	Yes
Bluetooth, OEMSPA310i	Yes	Yes	Yes	Yes	Yes
Bluetooth, OEMSPA311i/x	Yes (included)	Yes (included)	Yes (2 included)	Yes	Yes
Bluetooth, OEMSPA331i/x	Yes	Yes	Yes	Yes	Yes
Bluetooth, OEMSPA312i/x	Yes	Yes	Yes	Yes	Yes
Bluetooth, OEMSPA332i/x	Yes	Yes	Yes	Yes	Yes
Bluetooth, OEMSPA333i/x	Yes	Yes	-	Yes	Yes
Wireless LAN, OWSPA311gi/x	Yes	Yes	-	Yes	Yes
Wireless LAN, OWL221ai/x	-	-	-	-	-
Wireless LAN, OWL222ai/x	-	-	-	-	-
802.15.4, OZS311i/x	Yes	Yes	-	Yes	Yes
ORDER NUMBER	cB-OEMSPA311i-00	cB-OEMSPA311i-01	cB-BTI0DK311i-01	cB-ACC-26	cB-ACC-41



WIRELESS STANDARD	Wireless LAN	Wireless LAN	Wireless LAN	Wireless LAN
CONTENTS				
Wireless module	OWSPA311gi	OWSPA311i	OWL222ai	OWL221ax / 222ai
Development/adaptor board	USB adapter	RS232 adapter	SDIO adapter	Keith&Koep µConXS
Others	USB extension cable, documentation and configuration tools	9-pin serial cable, USB Power cable, CD with documentation and config tools	Drivers in binary code ^{Note 8}	Trizeps IV board, µConXS adapter, SDIO adapter, Drivers in binary code ^{Note 8}
COMPATIBLE MODULES				
Bluetooth, OHCI406i/x	-	-	-	-
Bluetooth, OHCI411i/x	Yes	Yes	-	-
Bluetooth, OEMSPA310i	Yes	Yes	-	-
Bluetooth, OEMSPA311i/x	Yes	Yes	-	-
Bluetooth, OEMSPA331i/x	Yes	Yes	-	-
Bluetooth, OEMSPA312i/x	Yes	Yes	-	-
Bluetooth, OEMSPA332i/x	Yes	Yes	-	-
Bluetooth, OEMSPA333i/x	Yes	Yes	-	-
Wireless LAN, OWSPA311gi/x	Yes (included)	Yes (included)	-	-
Wireless LAN, OWL221ai/x	-	-	-	Yes (included)
Wireless LAN, OWL222ai/x	-	-	Yes (included)	Yes (included)
802.15.4, OZS311i/x	Yes	Yes	-	-
ORDER NUMBER	cB-OWSPA311gi-00	cB-OWSPA311gi-01	TBD	TBD

Explanations on Table Notes

- 1 Diversity supported
- 2 Approximate range measures in line-of-sight
- 3 Via external transceiver
- 4 Special multipoint firmware for 3 or 7 slaves available
- 5 Encryption and Link level authentication on/off
- 6 Dependent on used Bluetooth host stack
- 7 Applies to OHCI411 only
- 8 SDIO drivers for WinCE 6.0 (ARM) and WinXP (x86). SPI drivers for WinCE 6.0 and Linux 2.6 (ARM)

* In progress

Compatible and futuresafe

All modules share the connectBlue standard for form factor and fitting, connectors, antennas as well as configuration and control software tools



	1/2 wave length antenna	Rugged Puck antenna	Rugged Stub antenna	1/4 wave length stub antenna
MECHANICAL				
Type	½ wave dipole	Patch antenna	½ wave dipole	¼ wave dipole
Polarization	Vertical	-	Vertical	Vertical
Gain	+2.5 dBi	+1 dBi	+2 dBi	0 dBi
Dimensions (mm)	Ø10 x 100	Ø76 x 20.7	Ø14.3 x 61.1	Ø9 x 26
IP classification	-	IP67	IP54	-
Mounting	-	M16x13.6 mm	-	-
Cable Length	-	3 m	-	-
Cable Loss	-	-	-	-
Manufacturer	Laird Tech.	Reel (Reel planTec)	Radiall/Larsen	Mobile Mark Communications
CONNECTOR OPTIONS				
SMA male (order number)	Yes (ACC-16)	Yes (ACC-17)	Yes (ACC-21)	Yes (ACC-23)
RPSMA male (order number)	Yes (ACC-36)	Yes (ACC-37)	-	-
U.FL. (order number)	-	-	-	-



	Antenna Cable U.FL-SMA/RPSMA	1/2 wave length antenna with u.fl	1/2 wave length antenna with u.fl	NanoBlue PCB antenna with u.fl
MECHANICAL				
Type	-	½ wave dipole	½ wave dipole	PCB antenna
Polarization	-	Vertical	Vertical	Linear
Gain	-	+2 dBi	+2 dBi	+2 dBi
Dimensions (mm)	-	Ø10 x 108	Ø10 x 108	48 x 13 x 0.8
Housing	-	-	-	-
Mounting	-	Snap-in	Snap-in	-
Cable Length	12 cm	10 cm	25 cm	10 cm
Cable Loss	Less than 0.5 dB	-	-	-
Manufacturer	-	Laird Tech.	Laird Tech.	Laird Tech.
CONNECTOR OPTIONS				
SMA male (order number)	Yes (ACC-18)	-	-	-
RPSMA male (order number)	Yes (ACC-38)	-	-	-
U.FL. (order number)	Yes (mandatory)	Yes (ACC-27)	Yes (ACC-29)	Yes (ACC-28)

Maximum throughput and robustness ready to embed

For nearly a decade, connectBlue has helped some of the world's most demanding brands to exploit the new possibilities of wireless technology. By applying a connectBlue wireless mindset, and by adapting that to their specific environment, companies achieve improved productivity, logistics and safety. Now comes the next phase in the wireless revolution: the demand for greater data throughput and reliability. All modules presented in this folder comply with connectBlue quality standards with outstanding performance in range, data capacity and field proven robustness.

connectBlueTM

*The strongest connection in a **wireless** world*

HEAD OFFICE: connectBlue AB | Norra Vallgatan 64 3V | SE-211 22 Malmö | Sweden | Phone +46 40 630 7100 | Fax +46 40 23 7137
US OFFICE: connectBlue Inc. | 1460 N. Sandburg Terrace, Suite 2412 | Chicago, IL 60610 | USA | Phone +1 312 927 5859 | Fax +1 312 277 3209
GERMAN OFFICE: connectBlue GmbH | Raiffeisenstrasse 19 | DE-85276 Pfaffenhofen | Germany | Phone +49 8441 786 4160 | Fax +49 8441 786 4161
info@connectblue.com | us-info@connectblue.com | www.connectblue.com

Printed in Sweden. ©2009 connectBlue AB. All rights reserved. All specifications are subject to change without notice. The connectBlue word mark and logo are owned by connectBlue AB. The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by connectBlue is under license.