Enhancement Cards
IPC/WLB Series
Industrial wireless board with WLAN, Bluetooth, GPS and GSM/UMTS

GPS
Power
UMTS
USB
SIM Card
Bluetooth
WLAN
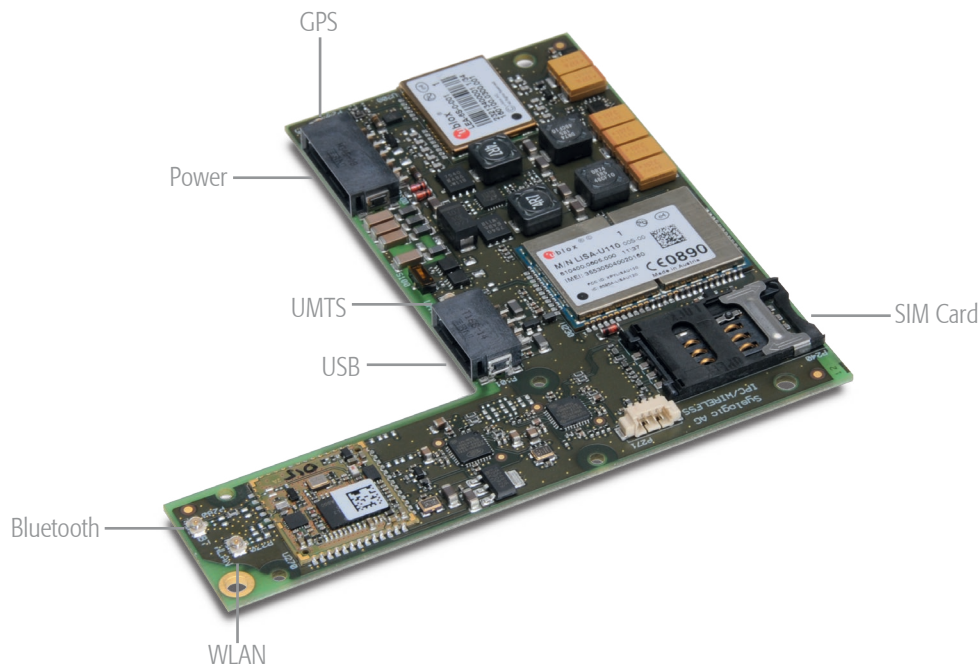
IPC/WLB-xxxx

The IPC/WLB Series brings wireless technology to the Syslogic embedded products.
According tho the customers needs, WiFi, GPS, GSM/UMTS and Bluetooth can be individually combined to a one board solution. This offers a low power wireless extension at lowest cost.

- **Extended temperature range**
- **24/7 continuous operation**
- **Wireless LAN (WiFi)**
- **Bluetooth**
- **GPS**
- **UMTS/HSPA GSM/GPRS/EDGE**

Windows Embedded Standard 2009
Windows Embedded Standard 7
Debian 6.0
CE

Product Highlights

Low Power
Fan less design
Industrial design
Operating temperature -40°C to +85°C
Long term availability

Product Feature

WLAN IEEE802.11b, IEEE802.11g
Bluetooth IEEE802.15.1
GPS
GPS Galileo
Dual-band UMTS/HSPA
Quad-band GSM/GPRS/EDGE, class 12

Markets / Applications

Industrial automation
Railway industry
Transportation and vehicle construction
PLC replacement
Cleantech
Maritime

Your partner for reliable embedded computer and display solutions.

Order Code	IPC/WLB-WBGU[1]	IPC/WLB-GU[1]	IPC/WLB-WB[1]	IPC/WLB-G[1]
WLAN (uBlox Ella-W163A)[2]				
WLAN Standards: IEEE 802.11a, b, g, n, i, e, j, h, s, h, d, k, r, w	•		•	
Data transfer rate: IEEE 802.11b: 11, 5.5, 2, 1 Mbps	•		•	
Data transfer rate: IEEE802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps	•		•	
Data transfer rate: IEEE 802.11n: max.150 Mbps (40 MHz channel)	•		•	
Frequency range: 2.4 - 2.497 GHz (ISM Band) and 4.900 – 5.830 GHz	•		•	
Protocols: Enables Ethernet NIC on host	•		•	
Security encryption: WEP 64/128 Bit-Key / WPA (TKIP, AES) / WPA2	•		•	
Antenna connector U.FL-R on board	•		•	
Bluetooth (uBlox Ella-W163A)[2]				
Bluetooth Standard: IEEE802.15.1	•		•	
Bluetooth 3.0+High Speed (HS)	•		•	
Bluetooth 2.1 and enhanced data rate (EDR) operation	•		•	
UART HCI protocol support	•		•	
Antenna connector U.FL-R on board	•		•	
GPS (uBlox LEA-6N)				
Positioning Stadards GPS and GLONASS	•	•		•
Galileo ready[1]	optional	optional		optional
Receiver type: 50-channel engine	•	•		•
Hybrid GPS/SBAS engine (WAAS, EGNOS, MSAS)	•	•		•
Accurancy: GPS Position 2.5m CEP	•	•		•
Time to first fix: less than 40 sec	•	•		•
GPS aiding support	•	•		•
Antenna connector U.FL-R on board	•	•		•
UMTS (uBlox LISA-U200)				
UMTS/HSPA 800 / 850 / 900 / 1700 / 1900 / 2100 MHz	•	•		
UMTS/HSPA 5.76 Mb/s uplink, 21.1 Mb/s downlink	•	•		
GSM 850 / 900 / 1800 / 1900 MHz	•	•		
GPRS Class 12, CS1-CS4 - up to 85.6 kb/s	•	•		
EDGE Class 12, MCS1-MCS9 - up to 236.8 kb/s	•	•		
SMS MT/MO PDU / Text mode	•	•		
TCP/IP, UDP/IP (multiple sockets)	•	•		
Internet (FTP, HTTP)	•	•		
SSL	•	•		
Socket for mini SIM card	•	•		
Antenna connector U.FL-R on board	•	•		
Communication Interfaces				
USB 2.0 interface (to host computer)	1	1	1	1
Technical Data				
Dimensions W x D x H [mm]	100 x 110 x 7	100 x 110 x 7	100 x 110 x 7	100 x 110 x 7
Net weight [gram]	42	42	40	38
Input Voltage 5VDC non-isolated (over USB)	•	•	•	•
Power consumption typ. in Watt @ 5V	1.3	1.1	0.8	0.5
Software support				
Linux Kernel 2.3.x an higher	•	•	•	•
Windows Embedded Compact 7		•		•
Windows Embedded Standard 2009, Windows Embedded Standard 7		•		•
Environmental Conditions				
Operating temperature (ambient) -40°C to +85°C	•	•	•	•
Storage temperature -40°C to +85°C	•	•	•	•
Shock: designed to meet EN60068-2-27	•	•	•	•
Vibration: designed to meet EN60068-2-6	•	•	•	•
EMI Conformity EN-55022/55024/61000-6-2/61000-6-4	•	•	•	•
MTBF ~200 000h @ 25°C (22.8 years)	•	•	•	•

[1] Please contact factory for minimum order quantities

[2] Only Linux driver support (former lesswire WiBear11n)

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industrial computing