

# XN-180 WiFi + Bluetooth SDIO / SPI Module

802.11b/g/n + Bluetooth 3.0 + HS

In the world of SDIO embedded modules there is high demand to provide a device with a small footprint that still gives appropriate attention to both power consumption and reliability. The XN-180 SDIO module was designed with those considerations preeminently in mind. Designed specifically for mobile devices, the XN-180 is a low power consumption device and combines that with an 802.11n wireless interface that delivers up to 150Mbps throughput using a 40MHz channel or 72Mbps throughout using a 20MHz channel. This high performance makes the XN-180 capable to handle today's video, voice and multimedia throughput requirements.



Operating in the unlicensed 2.4GHz wireless spectrum, the XN-180 requires no special grants or licensing for expedient deployment. Security concerns are addressed via the XN-180's compatibility with 802.11i, 802.1x and 802.11e security standards. A Hirose u.FL RF connector assures a solid connection to your antenna. The XN-180 comes standard with an SDIO / G-SPI host interface via a Panasonic AXK850145WT board to board connector

The XN-180 is Zcomax's 802.11n solution for your SDIO and SPI needs. Please contact a sales professional today to learn more about this or any other of our wireless modules.

## XN-180 Embedded Module

### Key Features

- IEEE 802.11b/g/n compliant
- Bluetooth 3.0 + High Speed  
(also compliant with BT 2.1+EDR)
- U.FL external antenna connector
- Marvell Avastar chipset 88w8787
- Low power consumption
- RoHS compliant
- Advanced security features
- Supports 802.11e (QoS) for video, voice and multimedia applications
- Driver support for Windows 7 and Linux

### XN-180 at a Glance

<b>Chipset</b>	Marvell Avastar 88w8787 SoC
<b>Transmit Power</b>	17dBm maximum transmit power
<b>Host Interface</b>	SDIO / G-SPI
<b>Antenna Connector</b>	Hirose U.FL-R-SMT compatible connector

IEEE	Radio	RoHS	Interface

Radio Specification			
Radio Standards	IEEE 802.11b/g/n (1x1 SISO)		
	Bluetooth 3.0 + High Speed (HS) also complaint with Bluetooth 2.1 + Enhanced Data Rate (EDR)		
Radio Chipset	Marvell MAC/Baseband/Radio 88W8787 SoC		
RF Frequency	<b>USA (FCC)</b>	<b>Europe (ETSI)</b>	<b>Japan (TELEC)</b>
	2.412GHz ~ 2.462GHz	2.412GHz ~ 2.472GHz	2.412GHz ~ 2.462GHz
Modulation	<b>IEEE 802.11b DSSS</b>	<b>IEEE 802.11g OFDM / DSSS</b>	<b>802.11n</b>
	CCK = 5.5/11Mbps	QAM-64 = 48 / 54 Mbps	QAM-64= MCS 5 / 6 / 7
	2 Mbps = DQPSK	QAM-16 = 24 / 36 Mbps	QAM-16 = MCS 3 / 4
	1 Mbps = DBPSK	QPSK = 12 / 18 Mbps	QPSK = MCS 1 / 2
		BPSK = 6 / 9 Mbps	BPSK = MCS0
WLAN Output Power (± 2dB)	<b>IEEE 802.11b</b>	<b>IEEE 802.11g</b>	<b>802.11n</b>
	Channel 1-13: 17dBm	Channel 1-13: 14dBm	HT20 13dBm
	Channel 14: 10dBm	Channel 14: 14dBm	HT40 12dBm
Bluetooth Output Power	Bluetooth Class 1.5 > 1dBm		
Receiver Sensitivity	<b>IEEE 802.11b</b>	<b>IEEE 802.11g</b>	<b>802.11n</b>
	≤ -86dBm ± 2dBm @ 11Mbps	≤ -71dBm ± 2dBm @ 54Mbps	HT20 ≤ -68dBm @ MCS7 HT40 ≤ -65dBm @ MCS7
Antenna (Optional)	ACX AT1005-T2R4LGA / AT3216-B2R7HAA		
Antenna Connector	Hirose u.FL-R-SMT compliant connector		
EEPROM	TBD		
Processor	Integrated Marvell Feroceon © CPU (ARMv5TE-compliant)		
Standards	IEEE 802.11i (Security), 802.1x, 802.11e (QoS)		
Regulatory Approvals	FCC Part 15B / 15C		

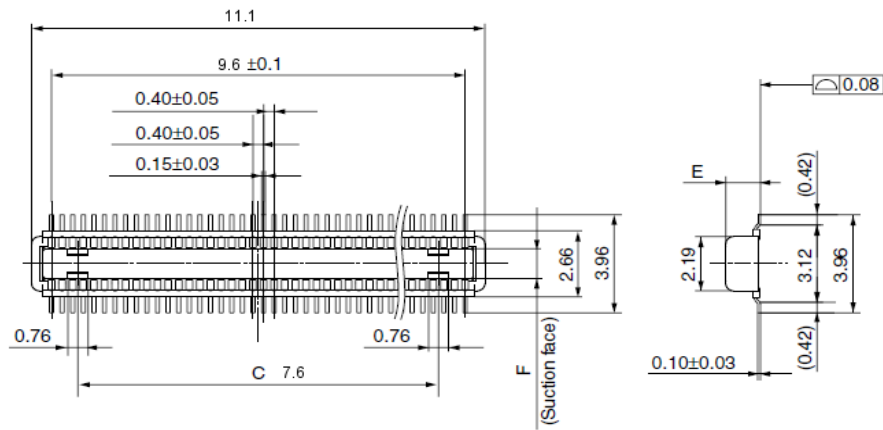
Physical Specification			
Host Interface	SDIO / G-SPI for WLAN		
	SDIO for Bluetooth		
Host Connector	Panasonic AXK850145WG board to board connector		
Dimensions	20mm (L) * 23mm(W)*4.25 mm(H) height includes connector		
Weight	TBD		
Operating Voltage	+3.3V DC ± 10%		
Internal Voltage	+3.3V, +2.6V, +1.8V		
Operating Temperature	-20 ~ + 70 ° C @ 10 ~ 90 % Relative humidity, non-condensing		
Storage Temperature	-20 ~ + 80 ° C @ 10 ~ 90 % Relative humidity, non-condensing		
Green	RoHs compliant		
Power Consumption	<b>Transmit</b>	<b>Receive</b>	<b>Peak</b>
	TBD	TBD	TBD
Power Management	Power Save mode and Deep Sleep mode supported		

Driver and WLAN MAC Features	
Supported OS	Windows 7
	Linux / Open Source code <a href="http://wireless.kernel.org">http://wireless.kernel.org</a> mwifiex package, BT source = btmrvl
Security	WAPI (WLAN Authentication and Privacy Infrastructure)
	WPA / WPA2 / WPA-PSK / WPA2-PSK
	64-bit and 128-bit WEP
	EAP-TLS / EAP-TTLS / EAP-PEAP
Operating Modes	Infrastructure and Ad-hoc
Standard Feature set	Supports WiFi required features
Advanced Features (only a partial list)	Transmit Power Control
	Reduced Inter-Frame Spacing (RIFS) bursting
	A-MPDU Rx (de-aggregation) and Tx (aggregation)
	20 / 40MHz coexistence

Packaging		
Item	Description	Quantity
Anti-Static Bag	55 * 100mm	1 unit
Inner box	570 * 380 * 108mm	200 per Box
Carton	585 * 395 * 243mm	400 per Carton
XN-180	20 * 23 * 4.25mm	1 unit

Warranty	
Warranty Period	1 Year limited warranty from the date of purchase

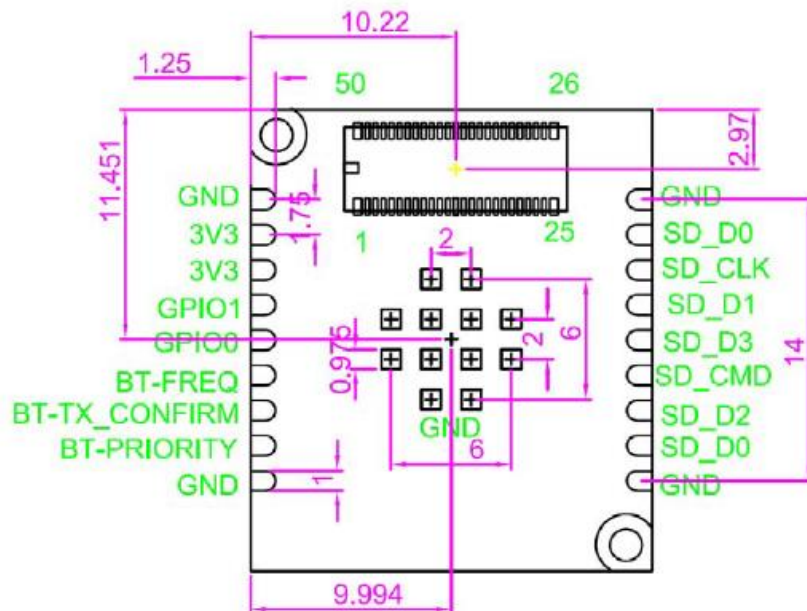
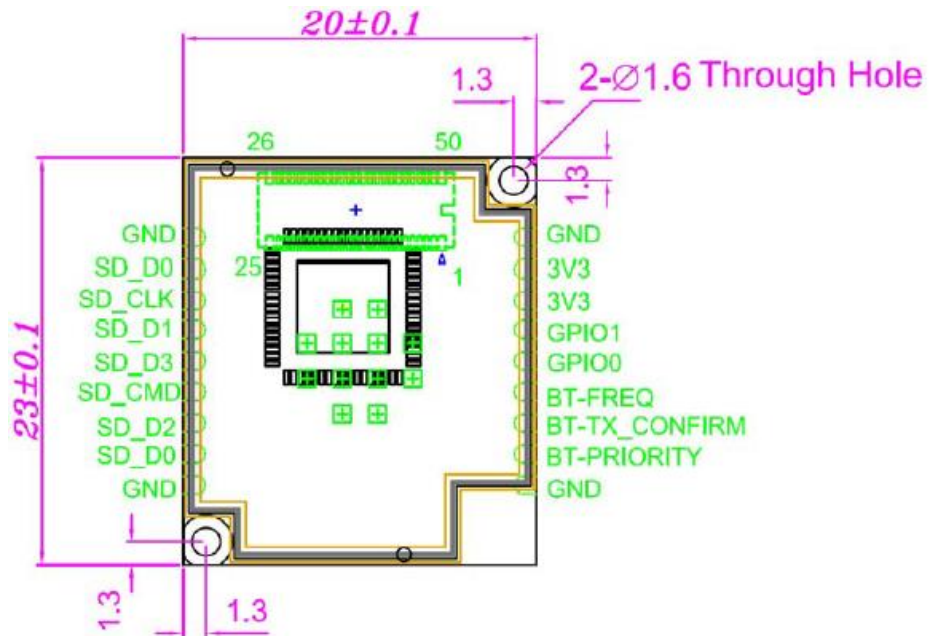
Board Connector Drawing (Panasonic AXK850145WG Header) with compatible sockets		
Mated Height	Socket	Header
1.5mm	AXK750147G	AXK850145WG
2.0mm	AXK750247G	
2.5mm	AXK750347G	



**Pin Definition**

TBD

Product Outline Drawing



**Product Height (including connector)**

