

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

| | |
|--------------------------|--|
| Chipset | Marvell Avastar 88w8787 SoC |
| Transmit Power | 17dBm maximum transmit power |
| Host Interface | SDIO / G-SPI |
| Antenna Connector | 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 | USA (FCC) | Europe (ETSI) | Japan (TELEC) |
| | 2.412GHz ~ 2.462GHz | 2.412GHz ~ 2.472GHz | 2.412GHz ~ 2.462GHz |
| Modulation | IEEE 802.11b DSSS | IEEE 802.11g OFDM / DSSS | 802.11n |
| | 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) | IEEE 802.11b | IEEE 802.11g | 802.11n |
| | 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 | IEEE 802.11b | IEEE 802.11g | 802.11n |
| | ≤ -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 | | |

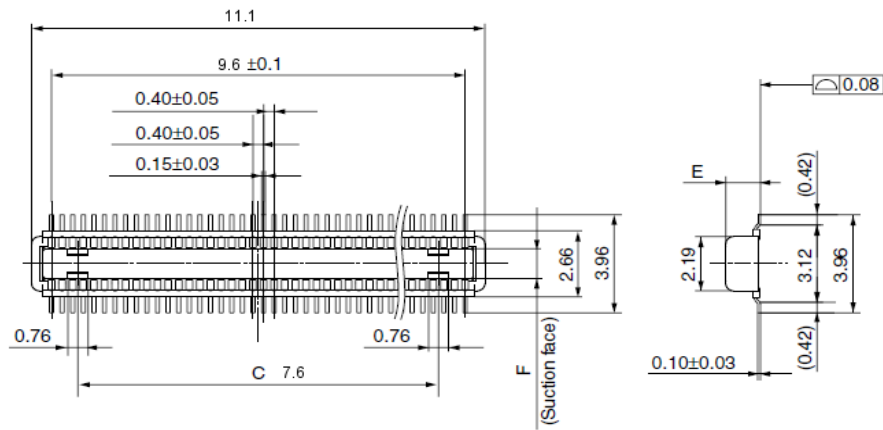
| Physical Specification | | | |
|------------------------|--|----------------|-------------|
| Host Interface | SDIO / G-SPI for WLAN | | |
| | SDIO for Bluetooth | | |
| Host Connector | Panasonic AXK850145WG board to board connector | | |
| Dimensions | 20mm (L) * 23mm(W)*4.25 mm(H) height includes 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 | Transmit | Receive | Peak |
| | 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 http://wireless.kernel.org 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 |

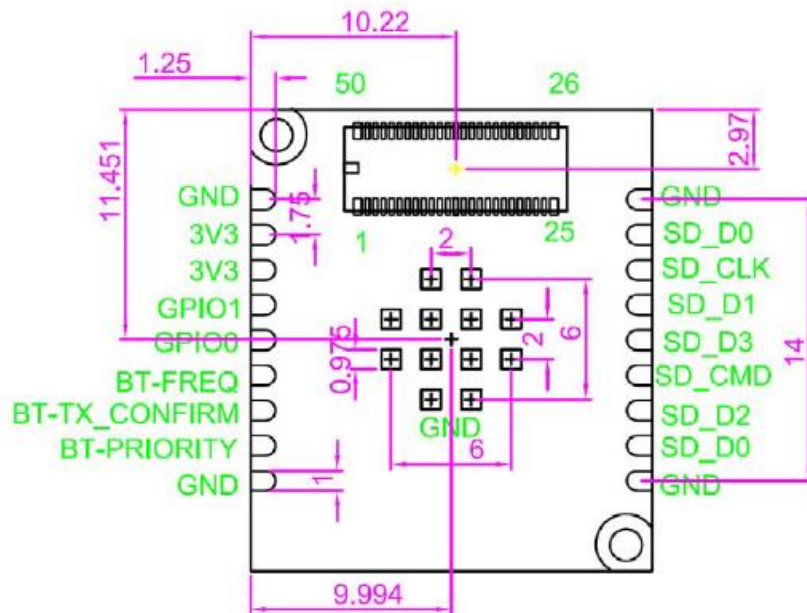
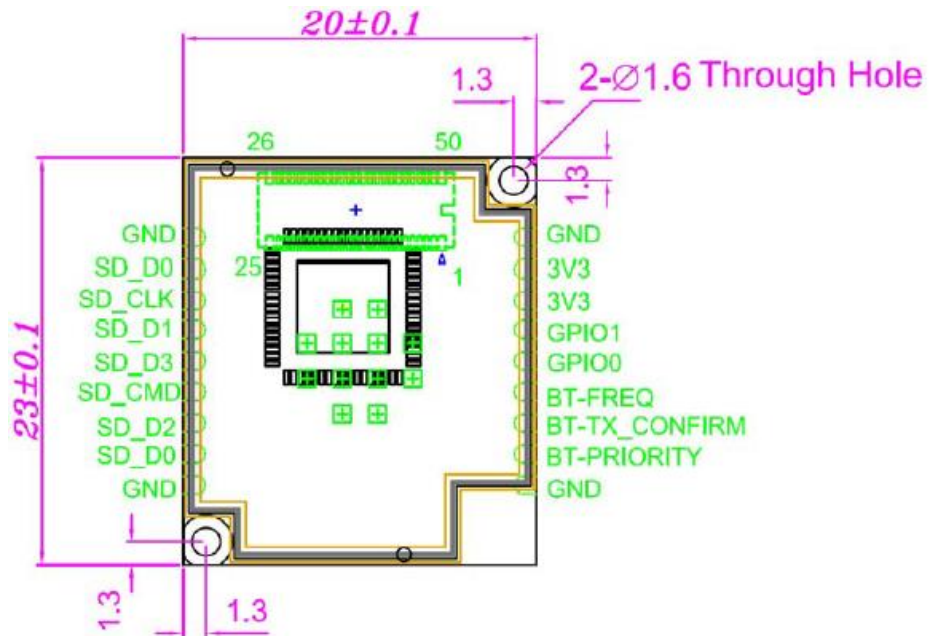
| Board Connector Drawing (Panasonic AXK850145WG Header) with compatible sockets | | |
|--|------------|-------------|
| Mated Height | Socket | Header |
| 1.5mm | AXK750147G | AXK850145WG |
| 2.0mm | AXK750247G | |
| 2.5mm | AXK750347G | |



Pin Definition

TBD

Product Outline Drawing



Product Height (including connector)

