参考資料

XBee Wi-Fi
S6 vs. S6B

A Guide to Migrating from XBee Wi-Fi S6 to S6B.

Scope

The scope of this white paper is to introduce current XBee Wi-Fi (S6) users to the next generation of XBee Wi-Fi, the S6B. The XBee Wi-Fi (S6B) introduces some changes that are of great benefit. This paper will lay these changes out to help current S6 users migrate to the new S6B.

General Specifications

Specification	S6	S6B
Processor Speed	32 MHz	48 MHz
SPI Data Rate	3.5 Mbps	6.5 Mbps
Supply Voltage	3.1 – 3.6 VDC	3.14 – 3.46 VDC
Transmit Current		
802.11b	260 mA	309 mA
802.11g	170 – 240 mA	222 – 275 mA
802.11n	180 – 230 mA	184 – 262 mA
Receive Current	140 mA	100 mA
Sleep Current		
Associated Sleep	Varies	2 mA
Deep Sleep	<2 uA	6 uA
RF Data Rate	Up to 65 Mbps	Up to 72 Mbps
Operating Temperature	-40 to 85 C	-30 to 85 C
FCC ID	Through-hole: MCQ-XBS6	Through-hole: MCQ-XBS6B SMT: MCQ-S6BSM

参考資料

Power Supply Requirements

One of the biggest advantages of the new S6B module over the S6 is that it does not require a large capacitor on the VCC line to compensate for inrush current, thus saving extra costs in the design of support circuitry.

Sleep Options

While the S6 had slightly lower current consumption, the S6B uses less power overall. This is due to faster wake/rejoin times.

The S6 could take as long as 6-10 seconds to rejoin when waking from Associated Sleep, while the S6B rejoins in a fraction of a second.

Pin Layout

The pin layout on the S6B is the same as it was on the S6. This requires no redesign to current interface boards or applications.

XBee IP Services (0xBee port)

The S6B uses a new packet structure for IP services. The new structure allows for more options than did the old structure. These options include over-the-air firmware updates and access to General Purpose Memory. Minor changes will need to be made to your software code if you use the XBee IP Services.

iDigi Device Cloud Integration

Due to the increased amount of memory, direct iDigi connectivity is planned in a future release of the firmware. This means that the XBee WiFi S6B will be able to upload data to applications via the Device Cloud with greater ease. This makes that data accessible anywhere an end-user has access to the Internet.

Increased Processor Speed

The S6B processor running at 48MHz is a substantial improvement (50%) over the 32 MHz processor used by the S6. This enables the S6B to have improved throughput and application processing than the S6.

Memory

Increased internal RAM/Flash memory from 16/128 KB to 32/1256 KB allows us to provide a more robust feature set and customized solutions to our customers.