

## Stargate NetBridge Q & A

### **1. What is the Stargate NetBridge?**

The Stargate NetBridge is the Internet gateway for wireless sensors. It simplifies access to wireless sensor data by integrating sensor network management, data visualization and web server, data logging, and traffic management into a single compact package. It eases the process for connecting Crossbow's wireless sensor nodes to an existing IP network, thus helping to streamline the creation of wireless sensor network applications.

The Stargate NetBridge is based on the Intel IXP420 XScale processor running at 266MHz. It comes preloaded with Crossbow's sensor network management and data visualization software, XServe and MoteExplorer, enabling web access to sensor data from any browser. Its operating system is Debian Linux, a full fledged standard Linux distribution for the ARM architecture.

The Stargate NetBridge gateway, a wireless base station and wireless sensor nodes form a complete wireless sensor network solution.

### **2. What is unique about the Stargate NetBridge?**

The Stargate NetBridge's preloaded and preconfigured sensor network applications allow it to function as a standalone, truly plug-and-play sensor network appliance. It requires minimal overhead for configuration and administration and allows for immediate viewing of sensor data from any browser.

To achieve this ease of use the NetBridge comes preloaded with Crossbow's sensor network management and data visualization software, XServe and MoteExplorer, which are started automatically at boot time. The XServe sensor network management tool can automatically identify what types of sensor boards are plugged into the nodes of the wireless sensor network and will instruct MoteExplorer to display the data accordingly.

Furthermore, the Stargate NetBridge is a low-power embedded Linux computer that allows for a wide range of user customizations.

### **3. What are the benefits for developers?**

The Stargate NetBridge works as a standalone device and does not need to connect to a separate computer. It can be setup in minutes (not hours), thus expediting the overall configuration of wireless sensor networks. Finally, real-time data from wireless sensors can be viewed immediately from any web browser by connecting the Stargate NetBridge to an existing IP network.

### **4. What are the key features included in the Stargate NetBridge?**

The Stargate NetBridge contains one (wired) Ethernet and two USB 2.0 ports, 8MB of program FLASH, 32MB of RAM and a 2GB USB 2.0 system disk. In addition, it runs the Debian Linux operating system and comes preloaded with Crossbow's sensor network management and data visualization software, XServe and MoteExplorer.

### **5. What software is included with the Stargate NetBridge?**

Debian Linux (2.6.18 kernel) as well as two Crossbow-developed applications: MoteExplorer (beta version), a data visualization software with built-in web server and XServe, a Wireless Sensor Network management tool.



**6. What Crossbow accessories are supported with the Stargate NetBridge?**

Wireless base stations using the MICA2 (BU900), MICAz (BU2400), IRIS (BU2110), and the universal USB interface board (MIB520) are supported. The Crossbow Telos and Imote2 motes can also be connected via the USB port; however, Crossbow does not provide software support for such configurations.

**7. What types of external devices work with Stargate NetBridge?**

USB hubs, FLASH drives, memory card adapters, serial/parallel adapters, WIFI adapters, cellular modems, GPS devices, printers, webcams, audio adapters, and many others. In some cases, specific Linux drivers from the device manufacturers may be needed for proper operation. Please keep in mind that Crossbow does not support configurations that include 3rd party devices.

**8. What are the differences between the Stargate Gateway and Stargate NetBridge?**

The Stargate NetBridge is a packaged embedded device containing two key sensor network management and data visualization software packages, XServe and MoteExplorer. This allows it to provide visualization and management of real-time sensor data from any web browser without the need for a separate application on a PC.

**9. Can I still use my current MoteView and Postgres database to access data from Stargate NetBridge?**

Yes, you can view the live data using MoteView which is forwarded by the serial forwarder of the XServe running on Stargate NetBridge and log it into Postgres database running on your local PC. The historical data that is logged into the Stargate NetBridge can be only viewed using MoteExplorer via a simple web browser interface.

**10. What is the difference between the Crossbow NetBridge and the Linksys NSLU2?**

The Crossbow NetBridge is a modified Linksys NSLU2 device. Both hardware and software have been enhanced specifically for the sensor network data appliance application.

**11. What is the cost of the Stargate NetBridge?**

Please contact Crossbow or your local distributor for information regarding pricing and purchasing this item.

**12. When is the Stargate NetBridge available?**

It is available now and is currently shipping.

**13. Where can I purchase Stargate NetBridge?**

You can call, email or order directly, see below:

Call: 1-800-926-9832

Email: [sales@xbow.com](mailto:sales@xbow.com)

Order directly from: [www.xbow.com/NetBridge](http://www.xbow.com/NetBridge)

**14. Who supports Stargate NetBridge?**

The Stargate NetBridge is supported by Crossbow only; please do not call Linksys or Cisco for Support.

**15. Where can I get more information?**

[www.xbow.com/NetBridge](http://www.xbow.com/NetBridge)