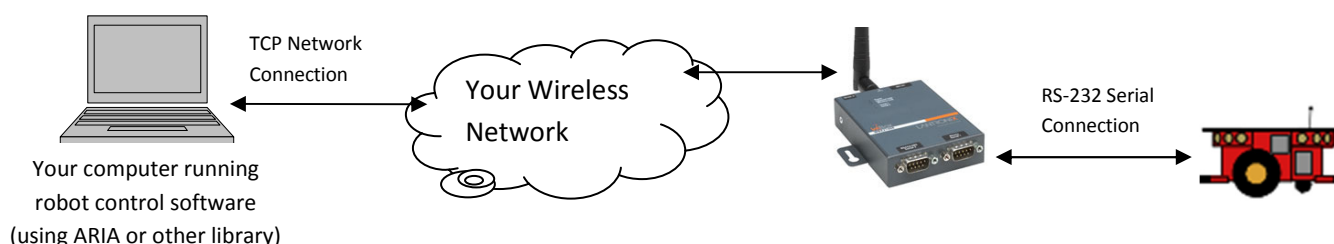


Wireless Ethernet-Serial Bridge

ACT0106, AMI0013

Your robot is equipped with a Lantronix WiBox ethernet-serial bridge device. This device joins a wireless (wifi) network, and allows software such as programs using ARIA to connect to the robot using a TCP/IP connection wirelessly, rather than through a direct serial cable connection. This allows wireless control of the robot when a robot does not have its own onboard computer.



If you also purchased a wireless access point from MobileRobots, then the ethernet-serial bridge will join that wireless network ("Wireless Network"). Otherwise, you must configure the ethernet-serial bridge to join your existing wireless network, by giving it appropriate network ESSID, IP address, and other parameters. Details on configuring the device are available at <http://robots.mobilerobots.com/wiki/WiBox>.

To connect an ARIA program to an ethernet-serial bridge, you must supply the network IP address or hostname of the device via the **-remoteHost** command-line parameter. When this parameter is given, ARIA uses a TCP connection instead of a local serial connection. The default port is 8101, but this may be specified with the **-remotePort** parameter. For example, to connect ARIA's **demo** example to a robot whose ethernet-serial bridge device has an IP address of 10.0.125.11, use the following command. Use the **-help** option and see the ARIA reference documentation for more information on supplying parameters.

```
demo -remoteHost 10.0.126.11
```

Installation:

When installed on a Pioneer 3, the ethernet-serial bridge is attached to the top of the robot. When installed on an AmigoBot, it is installed in the bottom (the AmigoBot has an antenna on top of the robot.)

The Lantronix WiBox has two serial ports. To install in a Pioneer 3 or PowerBot robot, connect Serial 1 to the robot microcontroller serial cable and power input to the 12V power cable which have been preinstalled in the robot, available through the cable port in the top plate of the robot. Screw on the supplied antenna to the WiBox if necessary. Attach the WiBox to the top plate of the robot using Velcro (hook and loop) or double-sided tape. (See illustration below.)