

## HSMM on 220 MHz?

Steve Lampereur - KB9MWR

This is an interesting product with lots of possibilities. It's a powerful 802.11 non line of sight radio module designed for Metering Applications - 180-280 MHz Frequency Band. The reason I point it out is because it is the first VHF 802.11 radio I have run across.

The XR1 would fit into the 1.25m amateur (220MHz) band frequency wise. However, there is a gap in the band. As most hams are aware, we have 219-220 MHz secondary and 222-225 MHz primary. It would be nice if the full 219 to 225 MHz was available. [Curse you, UPS! - Ed.]

Like all Atheros based radios, the XR1 specs references that channel size can be set. Even with the minimum channel size 5 MHz it wouldn't fit into 222MHz band, but there may be ways to reduce the overall spectrum requirements. Could the transmission envelope be modified to be narrower channel? That would be a good question for the guys at Ubiquiti Networks, or the Atheros MadWifi project.

### Ubiquiti XR (XtremeRange)



Let's not forget the channel may be 5 MHz but keep in mind Carson's Rule; the channel may be 5 MHz but the signal bandwidth could be much higher. If a 2.5 MHz channel option was coded the throughput would still be very usable.

This card does not have these capabilities and is not legal for sale in the US, but I don't think that would be a major obstacle for hams if it could be modified to fit into the 220 MHz ham band.

## Wisconsin Amateur Radio Club Digital Backbone Project

from the WIARC

The Wisconsin Amateur Radio Club is deploying a 5.6 - 5.825 GHz high speed digital network in southeast Wisconsin. This high reliability mesh network is designed to support the served agencies of the club as well as act as a backbone for remote receive sites for repeaters and point-to-point links for communications for members.

Several manufacturers are now making transceivers capable of operating in the 5 GHz spectrum that are compatible with the network. The Wisconsin Amateur Radio club has selected the Bullet 5HP by Ubiquiti Networks. This 1 watt transceiver will be available for less than \$100 and is enclosed in a waterproof tube that mounts directly to the antenna eliminating the need for coax or any type. A waterproof cat-5 cable is run into the shack. This inexpensive cable carries the digital data and feeds power to the transceiver.

All amateur radio license classes can deploy and operate this technology. If you would like to participate, lend your expertise, or put up your own station please come to a meeting or contact WIARC's technical committee chairman, Glenn Schulz, at W9IQ@arrl.net.

The Wisconsin Amateur Radio Club meets the last Wednesday of each month at 7PM at the Germantown Police Department EOC [Jawohl! - Ed.]. Guests are warmly welcomed and refreshments are served. Visit them on the web at [www.wiarc.org](http://www.wiarc.org) for more information.