ANT+ to WiFi Bridge

A significant ease of use to the customer could be achieved by providing a secondary wireless technology ANT+, 2.4 GHz radio technology, at the temperature probe. This would prevent the customer from having to wire the temperature probe from the WiFi enabled Web Server, 2.4 GHz radio technology.

The unit would consist of the temperature probe, microprocessor, ANT+ radio, and a battery. The unit would be encased in a box with magnets and would attach to the cooler like a refrigerator magnet. The temperature probe would be attached to the unit with a small amount of wire to wrap around the edge under the door into the cooler. The unit takes a reading from the temperature probe and sends it to the WiFi units over the ANT+ wireless communication. The ANT+ radio technology is selected to replace the wire due to its cost of operation, the small amount of energy required, and the simplicity of the communication protocol.

The wire replacement with ANT+ radio technology prevents the customer from having to move the coolers to route the wires from the current device, WiFi web Server, into each individual cooler. Also, the cost of the currently selected wire is fifty cents per foot, therefore, the cost of the designed unit could be comparable to the wire of a system for long hauls attaching coolers. The unit would considerably ease the installation process and would not add to the cost of system.

The current device you have installed already performs this function at a significant cost due to the WiFi radio technology. Two characteristics of WiFi that make it higher priced are longer range of communication, and extensive communication protocol. This communication is not a suitable wire replacement, but if the customer would pay the price there is no need to design the wire replacement with simpler radio technology like ANT+.