Multiradio IoT solution
HMS, Sweden

Additional Resources: • ODIN-W2

Wireless connectivity for machines and devices: Anybus Wireless Bolt

HMS Industrial Networks develops and manufactures software and hardware for industrial communication world-wide. The HMS products connect automation devices such as robots, sensors, control systems and motors to different industrial networks and control systems.

Challenge

For their industrial customers, HMS needed a solution offering wireless access to machines and cabinets via Wireless LAN (WLAN) / Wi-Fi, Bluetooth and/or Bluetooth low energy (BLE). HMS wanted to enable their customers to do machine configuration via a standard tablet or smartphone as well as to connect to a cloud service realizing Industrial IoT. The solution was to be integrated with existing infrastructure and needed to be flexible, small and cost-efficient.

The u-blox solutions

The HMS product realized was named Anybus Wireless Bolt. It was designed to be mounted onto a cabinet or a machine, just like a bolt as the name suggests. All that is needed is a 50 mm hole in diameter. The interior part of the Anybus Wireless Bolt has an 18 pin plug connector that is able to connect to power as well as to a host device via serial (RS232/485), Controller Area Network (CAN) or Ethernet interface supporting industry standards like Ethernet/IP, PROFINET, Modbus TCP or Ethernet TCP/IP and UDP. The exterior part of the Anybus Wireless Bolt connects to a wireless network via WLAN / Wi-Fi, Bluetooth or BLE.

The u-blox stand-alone IoT gateway module ODIN-W2 turned out to be the ideal fit for the Anybus Wireless Bolt. The ODIN-W2 offers cost-efficient and compact multiradio gateway functionality supporting the above interfaces and wireless standards. Thanks to the ODIN-W2 support for ARM mbed, HMS could flexibly integrate customer applications.

"ODIN-W2 with ARM mbed offers us the performance and flexibility we need in order to develop customized applications. ODIN-W2 is furthermore a slim and cost-optimized module, and it was thus not an option to develop such a solution using discrete components"

says Martin Falkman, Product Manager at HMS Industrial Networks. The Anybus Wireless Bolt was introduced in the fall of 2016 and was awarded "Best Network Technology 2016" by the readers of the automation portal Automation Inside.

HMS has seen a great interest from the market for the the Anybus Wireless Bolt. "We have found a sweet spot when it comes to form factor and functionality and we are currently unique on the market with such a solution" continues Martin Falkman.

HMS and u-blox have a long history of cooperation. "u-blox is a partner with long experience from the industrial market. Our solutions need to be on the market for many years and we need to work with long-term partners" concludes Martin Falkman.

Key benefits

- Flexible wireless technology choice (WiFi / Bluetooth / Bluetooth low energy)
- Support for serial, CAN and Ethernet interfaces.
- Efficient customer application possibilities with ARM mbed
- Long-term availability

About u-blox

Swiss u-blox (SIX:UBXN) is a global leader in wireless and positioning semiconductors and modules for the automotive, industrial and consumer markets. u-blox solutions enable people, vehicles and machines to locate their exact position and communicate wirelessly over cellular and short range networks. With a broad portfolio of chips, modules and software solutions, u-blox is uniquely positioned to empower OEMs to develop innovative solutions for the Internet of Things, quickly and cost-effectively. With headquarters in Thalwil, Switzerland, u-blox is globally present with offices in Europe, Asia and the USA. (www.u-blox.com)

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