KMS-820 Wireless/network modules

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Product overview

KMS-820 Data acquisition unit (DAU) has variety wireless modes, which are for remote acquisition control, remote QA/QC and calibration, web-access & backup and real-time access data from anywhere.

NOISE is usually an issue with MT measurements and only our Wi-Fi interface box overcomes this issue.

KMS-820 wireless modes:
- ➢ Long range wireless (build-in)
- ➢ Wi-Fi module (optional build-in)
- ➢ Wi-Fi interface box (optional add-on)

Long range wireless & Wi-Fi module
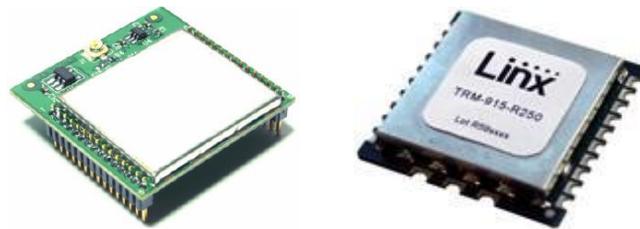
KMS-820 Wi-Fi module (left) & Long range wireless network module (right)

The KMS-820 Wi-Fi module is designed to use with KMS-820. It is for easy field setup and QA/QC check.

The long range wireless network is standard, the Wi-Fi module is optional. The long range wireless ranges up to 6 km (under favorable line-of-sight conditions) at 115.2 kbps.

KMS-820 Wi-Fi module specifications:
- ➢ Standard Wi-Fi; any Wi-Fi device can connect (laptop, tablet, phone)
- ➢ Ad hoc protocol (peer-to-peer)
- ➢ Server mode (KMS-820 to server)
- ➢ Operating temperature up to + 85 C
- ➢ Multiple units operation available
- ➢ Complement KMS-820 native long range wireless

KMS-820 systems mesh network configuration
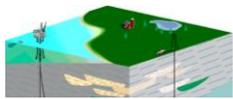
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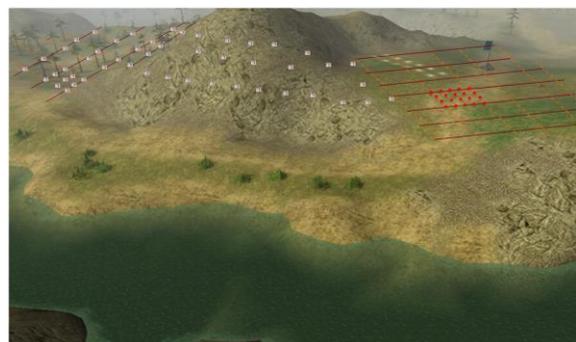
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KMS Wi-Fi interface box

The KMS-820 connectivity can be enhanced by adding a micro-computer controller as shown below. It allows FULL real time data streaming through wireless or wired connection.

For MT applications we use a short Wi-Fi connection to this box that generates little to no noise in the MT sensors.

The KMS-820 acquires the data and write files that are then accessed by the controller. The controller uses high level operating system and can control addition SD cards and hard disks for observatory mode.

To simplify control of KMS-820 configuration and real-time data monitoring, we run a web server providing access to file system and shared the system. The KMS-820 will be accessible from anywhere.

KMS-820 systems with network server micro-computer

KMS Wi-Fi interface box

KMS Wi-Fi interface box top panel

Addition of the micro-computer board to the DAU provides following advantages:

- ➢ Separating data acquisition of KMS-820 from networking data delivery (less acquisition interrupts, FIREWALL, faster delivery)
- ➢ Almost unlimited expansion of data storage (via multiple USB ports)
- ➢ Custom processing power for specific on site processing
- ➢ Full implementation of the TCP/IP stack, support to most of the low-level communication protocol (UART, I2C, SPI, etc)
- ➢ Ability to provide 100 Mbps throughput
- ➢ Optional support to external display unit (HDMI)

Product details

- • Low power < 1 W
- • OS: Windows 10 or Linux 64 or 32 bit
- • Bluetooth 4.1
- • Ethernet 10/100 Mbps
- • Wi-Fi 802.11 at 2.4 GHz
- • Interfaces: HDMI, USB, Multiple hard disk interfaces
- • SD card slot(s) for multiple SD cards
- • CPU: 4 x ARM 1.2 GHz
- • Access via basic web browser from any device