



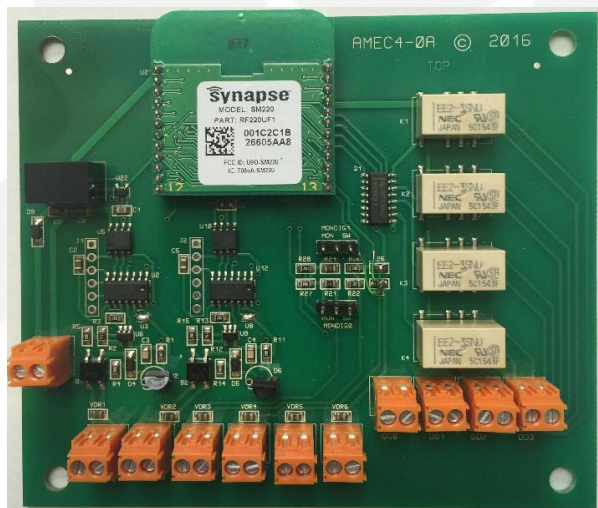
# AMEREX – 30109 Dual Analogue and 4 Digital Input

## 30109 Dual analogue input

AMEREX Integrated 30109 dual analogue and four digital inputs module is one of a range of base units that can be connected easily to other items of equipment, such as fire suppression systems, fire water tanks, gas detectors and many other applications.

AMEREX Integrated 30109 employs innovative ideas and technologies to provide the best possible mesh platform for the user.

The 30109 is an IEEE 802.15.4, low-power, highly reliable solution for embedded wireless control and monitoring networks requiring high data rates. The 30109 employs SNAP OS, the industry's first internet-enabled, wireless mesh network operating system, into the Atmel ATmega128RFA1 single-chip AVR® microcontroller with an integrated transceiver that delivers up to 2Mbits/sec.



SNAP OS on-board Python interpreter provides rapid application development and over-the-air programming, while Atmel's low-power RF single-chip design saves board space and lowers power consumption. The modules provide up to 16 channels of operation in the ISM 2.4GHz frequency band.

By default, the 30109 operating system automatically forms a mesh network with other nodes immediately on receiving power. No further configuration is necessary.

## Benefits

### AT A GLANCE:

- 2 x Analogue input for 4-20mA
- 4 x Digital inputs
- 4 x Relay output (Rated at 35v d.c. max at 2amps)
- Transmit Power output up to +20 dBm
- SNAP mesh enabled (2.4GHz, IEEE 802.15.4)
- RF Data rate up to 2Mbps
- Power requirements 24v d.c. / 250mA from a FM Approved Fire power supply and FM Approved FACP
- Mesh networking (2.4GHz)
- -40°C to +70°C Industrial operating temperature

## AMEREX—30109

AMEREX Integrated 30109 module has been especially designed for ease of use and to provide the user with a stable mesh network.

The 30109 provides two analogue input, four digital inputs and four digital outputs.

The 30115 is powered by 24v d.c. FM Approved Fire power supply or FM Approved FACP

\*The 30109 has the ability for the user to choose an on-board antenna or have an external antenna installed.

### In depth information:

- 32 GPIO with up to 7 A/D inputs
- 128k flash, 58.5k free for over-the-air uploaded user apps
- Two UART ports for control or transparent data
- Low power modes:
  - Timed Sleep Mode 1 : 1.27  $\mu$ A
  - Timed Sleep Mode 2 : 1.47  $\mu$ A
  - Untimed Sleep Mode : < 390 nA
- Spread Spectrum (DSSS) technology
- Up to 2 Mbps radio data rate
- 2.4 GHz RF Frequency
- AES 128-bit encryption
- Integrated on-board compact F antenna or U.FL connector\*
- Surface Mount, Solder-able
- 4K internal EEPROM
- 8 PWM outputs
- Supports over the air firmware upgrades. (see Portal users guide.)

