



**IDT Technology Limited**

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### **Technical description of THN122N**

( FCCID: NMTTHN122N-01)

THN122N is a remote thermo sensor transmitter, and it transmits temperature measurement data to the main unit.

The unit is operated by 2 pieces of size-AA batteries. This voltage will be then stepped down to 1.5V, which is the operating voltage for the MCU, OKI MSM64162A. This MCU will drive the LCD display, store the max/min temperature, and also control the transmitter circuit.

A crystal with frequency of 32.768KHz is used for providing time reference for the internal programming execution and time accuracy.

The temperature is measured by the thermister. The MCU will convert temperature measurement into OOK signal format and transmits through the RF channel of 433.92MHz. It is consisted of 2 parts: Control part and transmitter part. The MCU outputs the digital data, then this data will be modulated into the Colipittis oscillator, where the capacitor C33 and SAW X2 are used to adjust the operating frequency to 433.92MHz. The transistor Q10, with its fT greater than 6GHz, provide a good frequency response to the oscillator circuitry. The high frequency component of the data is suppressed by the LC filter.

The LED on the front casing will function as an indicator of a successful transmission.