

# Weather Station – Development of Existing Model - Hardware

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## Abstract

*The weather station project has two main parts: a hardware part and a software part and it represents a new version of an already existing project; the objective was to create a complex application based on microcontroller ATmega16 in the purpose of producing in-line and to commercialize this prototype.*

*The weather station card can store the data from the sensors during one week in the conditions of taking samples each 20 seconds. The data can be transferred to a computer using a serial cable or IrDA. The already existing model had only one 64Kbytes EEPROM memory which was not enough for storing data during one week; the card was very big and the communication paths were no longer safe.*

*The improvement requirements are: all components must be SMD, enlargement of memory size, minimization of the card's dimensions, the use of a LCD module together with 3 buttons for accessing the menu, and a minimum consumption. The prototype obtained is based on the requirements and a first conclusion is that the card has low power consumption (225mW), is smaller (9cm x 8.5cm), and it has a large scale o applications in meteo domain.*