

CASE STUDY

Applications of NPE – Built-in Industrial Computers

Air conditioning monitoring in a server room

Data Warehouses

The modern server is not just a common computer. It is a data warehouse, and every measure must be taken to protect the data contained in it. Maintaining the appropriate and defined work parameters, such as temperature and humidity, is a very important matter. With the creation and maintenance of optimal conditions for data storage and processing in mind, we offer an air conditioning monitoring system in server rooms. This system utilizes **NPE 9201-EDGE** industrial computers. The TechBase company ensures the appliances necessary to the system, the system project for a specific partner, as well as its realization.



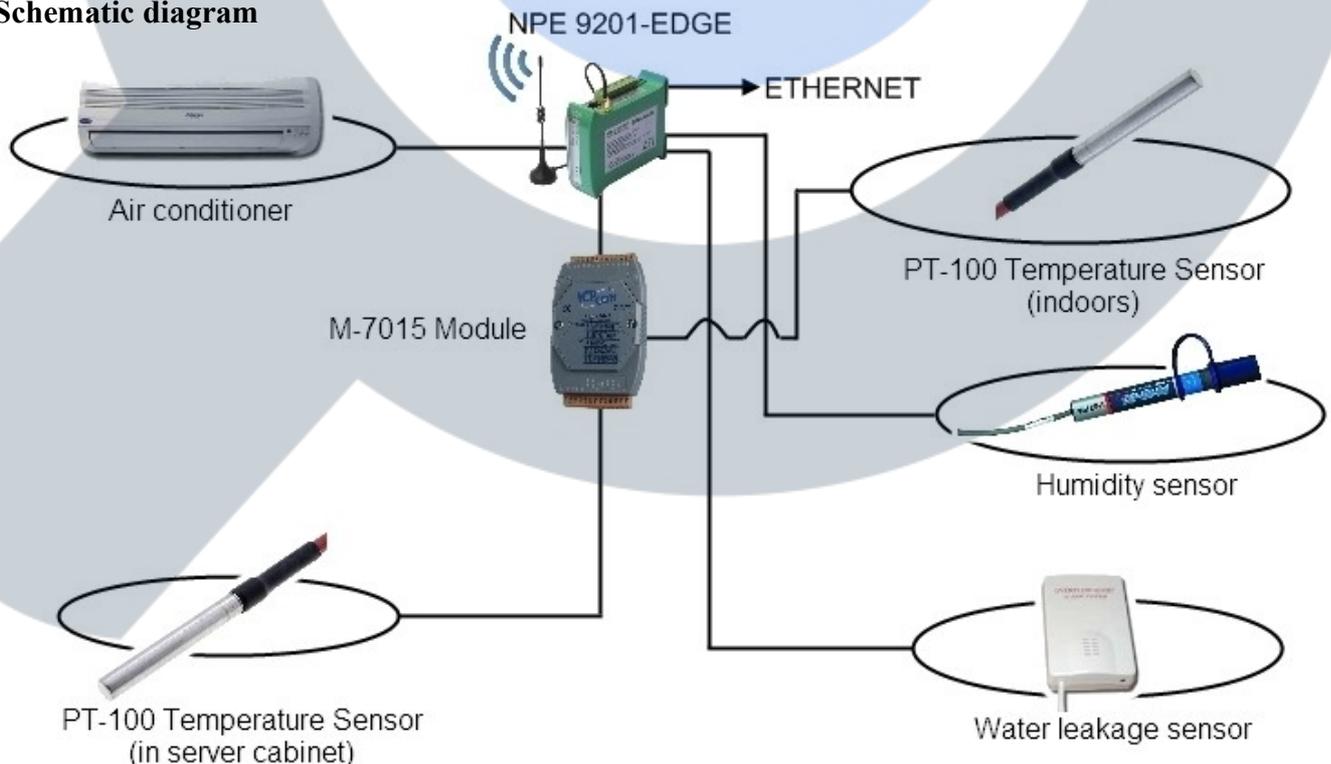
Air conditioning control

The method of the system's functioning is easy to understand even for those without a technical education. The NPE 9201-EDGE industrial computer effects control over air conditioning and measuring devices. It registers all changes of significant parameters, such as temperature and humidity. It also gives warnings of deviations from the norm.

Servicing the monitoring system

Servicing the system does not require any special skills or any kind of training from our partner. In the event of the exceeding of any critical values, the system instantly sends a message by text message or email directly to the company responsible for service and maintenance of the devices as well as to the persons responsible for the efficient functioning of the system.

Schematic diagram



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Operating the air conditioning unit

The air conditioning unit in the server room is operated using NPE. This computer, by monitoring the state of each of the connected devices, determines if a change in temperature or any other parameter, is necessary and how much is needed.

Readings and communication

Temperature readings are carried out on the basis of data from two sensors. One is located inside of the server cabinet, the second is outside- in the room. These sensors are connected to the input module for M-7015 thermometers. This appliance sends received information to NPE using the Modbus protocol.

Humidity and water leakage sensors

The sensor measuring the humidity level in the room is connected to NPE by an analog input in the computer. The water leakage sensor checks if any uncontrolled accumulation of liquid has taken place in the room and if it poses a threat to the system under protection. It is connected to NPE by an analog input.

Utilizing the Internet and GSM

NPE informs the persons responsible by sending an email through the Internet. If at a given moment, the network is unavailable or if such a preference has been selected, the system sends a text message by means of the built-in EDGE modem. The message sent through the Internet and that sent by GSM reaches the group defined earlier. The default group is: the company responsible for the system and service workers.

Our system makes it possible to:

- ✓ **Monitor the parameters of the server's functioning and its surroundings**
- ✓ **Ensure the quick reaction of the supervising team**
- ✓ **Send information about problems by various means**
- ✓ **Precise diagnostics of a problem**
- ✓ **Flexibility in the system's realization, depending on the client's needs**

Our solution distinguishes itself with:

- ✓ **The application of the newest technological solutions**
- ✓ **The application of universal and efficient means of communication – text messaging and email**
- ✓ **The lack of a need to employ or train any additional workers**
- ✓ **Very high reliability**
- ✓ **Low costs**

Do you want to learn more? We invite you to visit our Internet site: www.a2s.pl. Please send any questions, suggestions and concerns to the following address info@a2s.pl, or call us at: +48 58 345 39 22 or 23. Our experts will gladly and thoroughly answer your questions.