



Telephone Exchange, Temperature Monitoring and Control System

System integrator EMAS in Warsaw (Poland) used the Advantech ADAM-4000 series and Slim Panel PC to protect and monitor an extensive telephone exchange station.

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values has to be sent to various points, such as the operators, the operators of relevant air-conditioners, and the general control center. Furthermore, the system has to control and monitor the air-conditioners - any malfunction must be detected. In addition, the monitoring system has to be very flexible and easy to modify to facilitate future expansions.

SYSTEM DESCRIPTION

The main part of the temperature monitoring system consists out of several ADAM-4011D units with

SYSTEM REQUIREMENTS

An efficient temperature monitoring system has to "know" the temperature everywhere in the telephone exchange room. Data concerning temperature

thermocouples, which are mounted across the telephony exchange cupboards. Every ADAM-4011D unit is linked through an RS-485 network to a Panel PC wall-mounted in the room. The ADAM-4011D units are supplied

INTRODUCTION

The main part of any telephone system is the telephone exchange. Its function is to maintain the proper environmental conditions for the system's sensitive devices. Temperature, for instance, is one of the most important environmental parameters that big telephone companies have to take into consideration since their telephone exchanges are very expensive. Every system repair means large costs for the owner and is highly inconvenient for the users. In this context, it is justifiable to make an investment in a good security and monitoring system.



by an independent power source and every digital alarm output is connected to an independent system of sirens and alarm lights, which guarantees efficiency even during computer system failures. The Panel PC is a touch screen PPC-102T bundled with VisiDAQ software. Its main function is to collect data from every ADAM-4011D unit and display temperature information on screen. Authorized operators change easily set or change alarm

parameters by using the touch screen.

The ADAM-4050 modules formed the second part of the system and are located in a different room to monitor the air-conditioners. The ADAM-4050 units detect every alarm and have some primary control capabilities, such as START, STOP, TEMP DOWN / UP. In this room an additional PPC-102T unit facilitates user-friendly monitoring and control.

In the top flow, a PPC-140T unit enables monitoring of the entire system

and maintains the proper temperature in the telephone exchange room. All Panel PCs are connected by 100MB Ethernet with IPX/SPX protocol, which allows data exchange between the three parts of the system.

CONCLUSION

This solution was based on three groups of Advantech products: the ADAM modules, the Panel PCs, and the VisiDAQ software package. The combination provided the customer with a complete system, which can be easily modified and upgraded. ■

