

V.D. Khas, t G.V.Stupak

PROFINET WITHIN THE IoT CONCEPT

В.Д. Хас, Г.В. Ступак

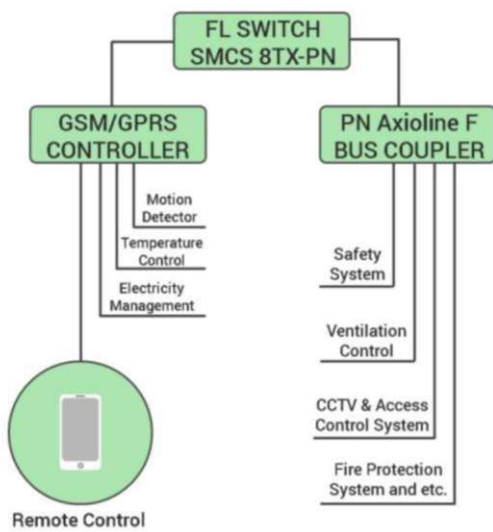
PROFINET В РАМКАХ КОНЦЕПЦІЇ ІОТ

The Internet of Things (IoT) is the network of physical objects embedded with electronics, sensors, software and network connectivity that enables these objects to

the Internet of Everything (IoE), where each thing is uniquely identifiable through its embedded computing system but is able to interact within the existing Internet infrastructure. Importantly, the IoE ambitions and scope are designed to respond to the need for real-time, context-specific information and analytics.

There is no generally accepted standard for the Internet of Everything at the moment, so researching of possible implementations is very relevant. The purpose of this study is to research the possibility of using PROFINET networks within the principles of the Internet of Everything and smart houses in particular. It is proposed to use ‘Phoenix Contact ILC 151 GSM/GPRS Inline controller’, ‘Phoenix Contact FL SWITCH SMCS 8TX-PN’ and ‘AXL F BK PN Axioline F bus coupler for PROFINET’ for these purposes.

The research shows that this system has some prospects to using it in formation of the smart homes and smart offices. The equipment we use was designed for industrial purposes and it has a strict QoS policy, so it provides better control and accuracy for the whole system, that satisfies the requirements of the IoE. Further study of the issue involves getting more concrete results and conclusions regarding the use of the system for providing IoE principles and smart homes in particular.



Pic. 1. Equipment connection diagram

collect and exchange data. The IoT provides to control objects remotely across network infrastructure. That creates opportunities for more direct integration of the physical world into computer systems, and resulting in improved efficiency, accuracy and economic benefit. When IoT is augmented with sensors, it's also encompasses technologies such as smart homes, intelligent vehicles and smart cities. That way technology can be called as