

## ABSTRACT

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Control Design Conveyor used Android Via Bluetooth with Atmega 328  
Arduino Uno and PLC

Conveyor control planning and design has so far been carried out manually or through programmed automation with a PLC or microcontroller, however the use of wireless control with easy and cheap devices for multi-control work is still difficult to find. In this thesis, the planning and design of a conveyor control system uses an Android-based cell phone or smartphone as a communication medium, where the operator operates the conveyor from an Android cellphone. The conveyor is driven by a single phase motor which can rotate in two directions (forward/backward) and is equipped with two light sensors and the conveyor is connected to an Omron CPM-1A PLC. This PLC is connected to an 8 channel relay module which is connected to the ATmega 328 microcontroller - on the Arduino Uno board which is equipped with the HC05 module as a Bluetooth communication module between the Android cellphone and the microcontroller. The cellphone is programmed with MIT App Inventor 2 software and the microcontroller is programmed with Arduino IDE software, where both of these software are free and open-source software, while the Omron CPM-1A PLC is programmed with CX-One Programmer software.

### Keywords:

*Conveyor, Bluetooth modul HC-05, Android, MIT App Inventor 2, ATmega 328 Arduino Uno, PLC CPM 1A, CX-One Programmer.*

( xvii+99+attachments+84 pictures+8 tables )

Bibliography( 1997 – 2015 )