

# SMART TRAFFIC LIGHT

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## ABSTRACT

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With the rapid growth of industrializations, the productions of cars also growing everyday which cause heavy congestions , increasing idling time which cause unnecessary fuel consumption and pollutes the environment on the road every day. Because of that, the standard traffic lights on intersections of the road becoming less efficient. New ways of controlling the traffic systems are need to be researched and tested. This project fulfills one the traffic system controlling ideas to implement on the road. This project is suitable to use in T-junctions. It has two modes, Day and Night. The IR sensors are installed in each lane of the road to detect the incoming vehicles that are going to the traffic lights. During the Day Mode The sensors are connected to the PIC and count the incoming vehicles on the red light, then PIC determines whether that particular lane is overflow of vehicles or not overflow. If the lane is overflow, the traffic light for that lane will have an extra time on next green phase. Each lane is programmed to control that way. The PIC also will send data to LCD, then LCD will show the traffic data whether it is overflow or normal traffic. During the emergency, for example, ambulance, the light turns green and the rest of the traffic light turns red, this is to give priority for the emergency cars.