**Abstract** Vehicle traffic congestion and monitoring has become one of the critical issues in road transport. With the help of Intelligent Transportation System (ITS), current information of traffic can be used by control room to improve the traffic efficiency. In this paper, we propose a new context-aware approach to find the current status and density of traffic and dynamic management of traffic signals along with the environmental conditions. To facilitate this, our proposed architecture of Vehicle Traffic Congestion Control & Monitoring System in IoT would perform well. Basically, this architecture is divided into two major modules i.e. hardware module (Microcontroller, Bluetooth controller, Sensors, etc) and software module (Server, Data Mining techniques, Android Applications, etc). The system utilize new technologies for real-time collection, organization and transmission of information to provide an efficient and accurate estimation of traffic density and weather condition, which can be exploited by traffic-aware applications.