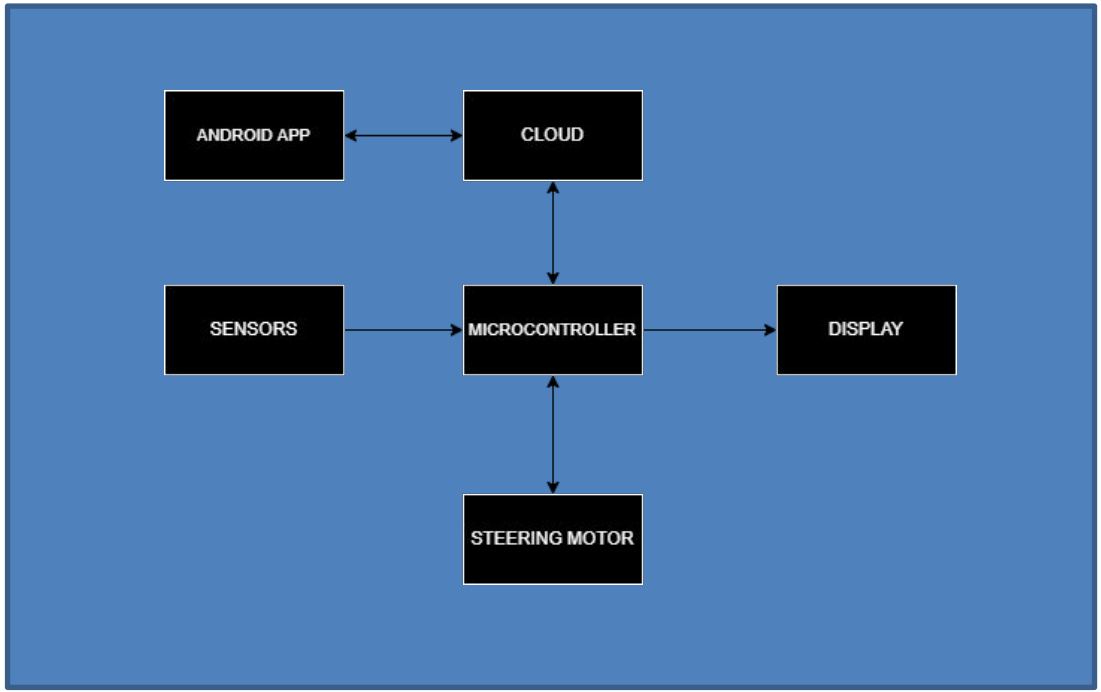
Team ASTRA
Sri Krishna College of Engineering and Technology
Innovation REPORT

Innovation Topic/Statement	Automated/Manual Remote control system
Field to Which Innovation Belongs	Safety and Precaution
Innovation Description	Our idea involves the use of both hardware and software. The important component includes a transponder and a positioning sensor which helps us monitor the kart's speed and other activities. The control system developed will be connected with the android app through wifi. It controls the motor's speed to ensure the kart and its driver's safety if the kart loses control. it can also be manually controlled through the app in our mobile phone.
Benefit/Result	We can control the kart's activities just through a phone. This ensures the driver's safety when he can't control the kart in times of emergencies. It also makes the kart easily accessible.
Is the innovation applied in the Vehicle?	It is not yet applied because the kart is still under fabrication. Once the research and development team completes the work regarding RC system then further information will be provided.

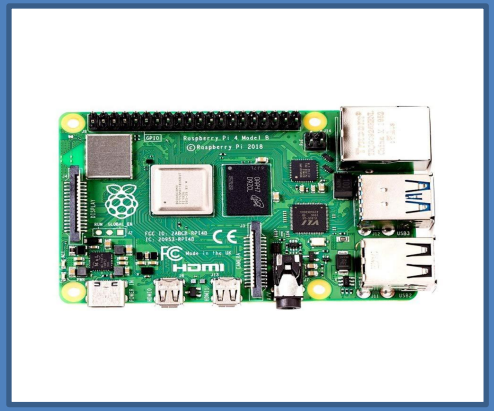
Team ASTRA
Sri Krishna College of Engineering and Technology
Innovation REPORT

BLOCK DIAGRAM



Team ASTRA
Sri Krishna College of Engineering and Technology
Innovation REPORT

Raspberry Pi 4 with 8GB RAM

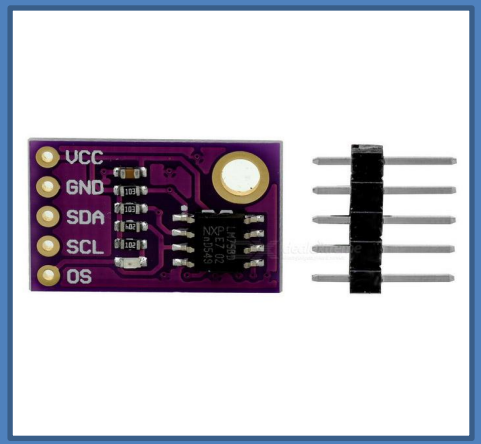


DESCRIPTION:

Raspberry pi 4 is integrated with a 64 bit quad core cortex-A72 ARM v8 , broadcom BCM2711 and runs at a speed of 1.5GHz . It is equipped with bluetooth 5.0 ,BLE, gigabit ethernet and has 802.11ac wireless at 2.4Ghz and 5GHz. It can be used to run data-intensive server loads.

Team ASTRA
Sri Krishna College of Engineering and Technology
Innovation REPORT

LM75 Temperature sensor

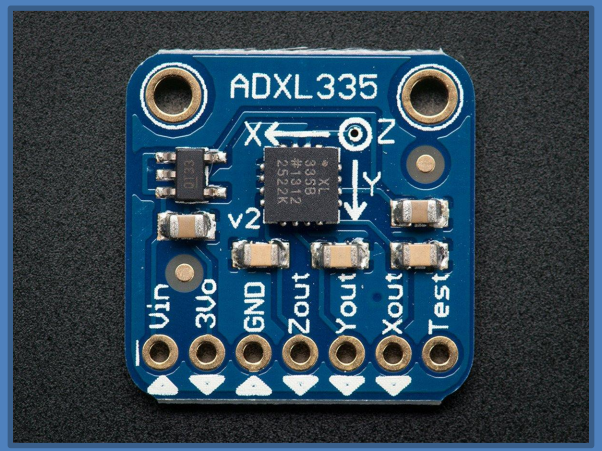


DESCRIPTION:

The LM75 is a temperature sensor, Delta-Sigma analog-to-digital convertor, and digital over temperature detector with I2C interface. The user can program both the temperature alarm threshold and the temperature at which the alarm condition goes away.

Team ASTRA
Sri Krishna College of Engineering and Technology
Innovation REPORT

ADXL335 Module(Accelerometer sensor)



DESCRIPTION:

The ADXL335 is a low power 3 axis accelerometer with signal conditioned voltage outputs. It can measure the static acceleration of gravity in tilt sensing applications, as well dynamic acceleration resulting from motion , shock or vibration.

Team ASTRA
Sri Krishna College of Engineering and Technology
Innovation REPORT

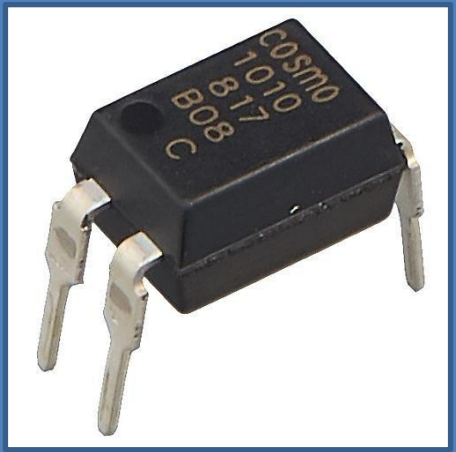
NEO-6M GPS Module

DESCRIPTION:

The NEO-6M GPS module is a well-performing complete GPS receiver with a built-in 25*25*4mm ceramic antenna, which provides a strong satellite search capability. With the power and signal indicators you can monitor the status of the module. This includes pins required for communication with a microcontroller over UART.

Team ASTRA
Sri Krishna College of Engineering and Technology
Innovation REPORT

Opto Coupler (pc817 module)



DESCRIPTION:

PC817 IC is an optocoupler that includes a photo transistor and an IR diode. This IC includes 4 pins like two input pins and two output pins namely anode , cathode , collector and emitter . It is mainly used for isolation of circuits.

Team ASTRA
Sri Krishna College of Engineering and Technology
Innovation REPORT

EXPENDITURE:

Raspberry Pi 4 with 8GB RAM	- Rs.7,000/-
LM75 Temperature sensor	- Rs.200/-
ADXL335 Module(Accelerometer sensor)	- Rs.400/-
NEO-6M GPS Module	- Rs.400/-
Opto Coupler(pc817 module)	- Rs.100/-
Steering motor	- Rs.1,000/-
Others	- Rs.900/-
TOTAL	- Rs.10,000/-