

AVIS

A VERY INTELLIGENT SYSTEM

# DESCRIPTION

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AVIS is real-time data monitoring, control, and automation system which can be used in a wide range of scenarios. The device is a highly versatile, programmable micro-controller which has its core around IoT (Internet of Things).

The main concept of the entire system is to make data capture, device monitoring, automation, and data analysis easier. The system includes AVIS controllers which are installed at the point of application, and a website which is used to perform real-time operations. Below is a diagrammatic representation of how AVIS works.



# CONTROLLER

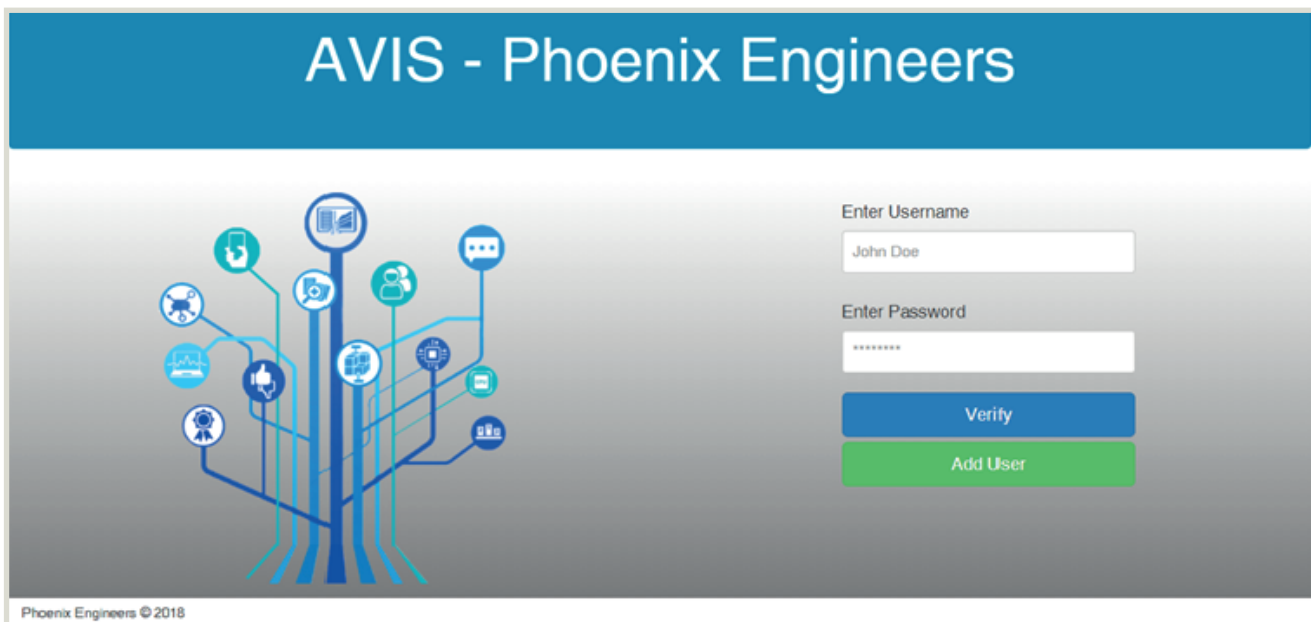
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The AVIS Controller is a highly resourceful device with the ability to handle multiple input and output streams of data. Overall, it can handle twenty-four inputs and outputs. It can also be used to perform real-time operations, control other devices, and run automation tasks.

The entire system has been so designed that extra functionality, within the scope of the device, can be added anytime, which makes it easy to install, maintain, and upgrade. This device comes pre-equipped with internet connectivity which makes it a ready for most real-time IoT applications.

# AVIS WEBSITE

The website is the interface to view the data collected by the AVIS Controller. The website displays all the necessary information from the controllers, and it can also be customised as per the requirements of the company. Below is a snapshot of the home page, and the main dashboard of the website.



AVIS Dashboard Logout

### Dashboard

100

Total Devices

52

Devices Working

48

Faulty Devices

52

Alarms

Device ID	Location	Fault	Alarm
AVIS_0001	Kadma	No	Yes
AVIS_0002	Sonari	No	Yes
AVIS_0003	Sonari	No	Yes
AVIS_0004	Sonari	Yes	No

Device ID	Location	Alarm
AVIS_0002	Sonari	Yes
AVIS_0003	Sonari	Yes
AVIS_0007	Sonari	Yes
AVIS_0008	Pune	Yes
AVIS_0010	Sonari	Yes
AVIS_0018	Sonari	Yes
AVIS_0020	Sonari	Yes
AVIS_0021	Sonari	Yes
AVIS_0023	Sonari	Yes
AVIS_0024	Sonari	Yes
AVIS_0025	Sonari	Yes
AVIS_0026	Sonari	Yes

To ensure sensor data is not manipulated or misused, access to the Dashboard is restricted wherein an admin is provided a predefined admin credentials which can be used to create user accounts for individuals who the company deems suitable to have access to the sensor data.

To ensure security, un-authorized access to the Dashboard through by-passing the login page has been blocked. In order to view the Dashboard, it is a must for individuals to enter valid username and password provided by the admin.








Dashboard would display the sensor data in real time of all the sensors connected to the AVIS system. The Dashboard also provides the feature to view all the systems which are faulty or in which the alarms have been triggered in a single page layout.

Added features to the website can include:

- Real-time data analysis
- Device control and Automation.
- Data Processing.
- Action centre to act on certain triggers based on data sets.

# HIGHLIGHTS

Finally, to conclude, AVIS can:

	Collect and transmit digital or analogue signal in real-time.
	Can monitor and control other devices.
	Can perform automation tasks.
	Allows one to view data in real-time.
	Comes pre-equipped with internet which makes it ready for IoT applications.
	Can perform real-time data analysis.
	Act as an action centre.

The most important feature about AVIS is that it can be customised according to the needs to user which makes it a very flexible device.

# SPECIFICATIONS

The system comes in an enclosure which holds different subsystems. The system runs on a 5V 2Amp dual USB connector. One USB cable powers the microcontroller, and the other one powers the internet module. The entire system comes pre-assembled, which makes it a plug and play device.

There are multiple (twenty-four) general purpose input and output (GPIO) pins provided with the system which can be take inputs or generate specific outputs.

AVIS, currently has three models:

P1A000120184	System without inbuilt internet connectivity. This system works on wired network connections (LAN).
P1A000220184	System with built in internet connectivity.
P1A000320184	Expandable system with a wide range of expandable units.

Power Specifications	Input Power Supply	220-240 V (AC)
	Input Frequency	50 Hz
	Input Power Supply	5V 2A (DC)
Device Specifications	I/O Ports	24
	Signal Types	D/A/PWM
	Interfacing Option	I2C/SPI/UART
	Bluetooth	Yes
	Wifi	Yes
Physical Specifications	Weight (gm)	500 (approx.)
	Dimensions (cm)	25.3(W)*32.3(H)

# DESIGNED BY:

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INFINITE POTENTIAL

5213, Vijaya Garden,  
Phase 7, Baridih,  
Jamshedpur,  
Jharkhand - 831017