

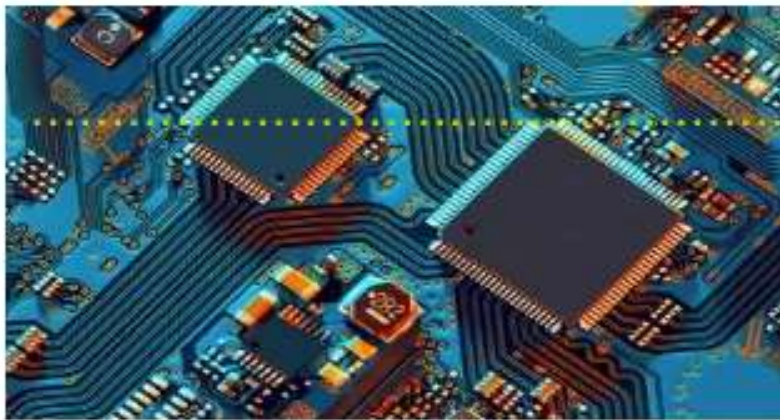


Electronica 20 of Electronics & Telecommunication Department

Date; 26/01/21

Vision

- To serve basic needs of rural society by imparting technical education training to electronics and communication engineering students.



HOD Desk



Mission

- M1- To provide excellent teaching and lifelong learning environment.
- M2- to contribute in the ethical, social and economic development of society by imparting updated technical education.
- M3- to develop institute industry interaction to produce competent professionals and promising entrepreneurs in the field of electronics and telecommunication

THE ELECTRONICS AND TELECOMMUNICATION DEPARTMENT NEWSLETTER IS A PLATFORM FOR SHARING EDUCATIONAL INFORMATION, ACTIVITIES AND RELATED EVENTS. I HOPE THAT THE NEWSLETTER WILL PROVIDE USEFUL AND RELEVANT INFORMATION. IT IS THE INTENT OF THE DEPARTMENT TO MAKE IT SEMI-ANNUAL PUBLICATION TO KEEP IN TOUCH WITH THE DEPARTMENTAL ACTIVITIES AND ACHIEVEMENTS.



Electronica 20 of Electronics & Telecommunication Department

Date; 26/01/21

Departmental Laboratories Department is having well equipped laboratories to have hands on practices of students.



Student Performance

**1. SHINDE HINDAVI
SUNIL=92**

**2. SHAIKH USMAN
AYYUB=90.53**

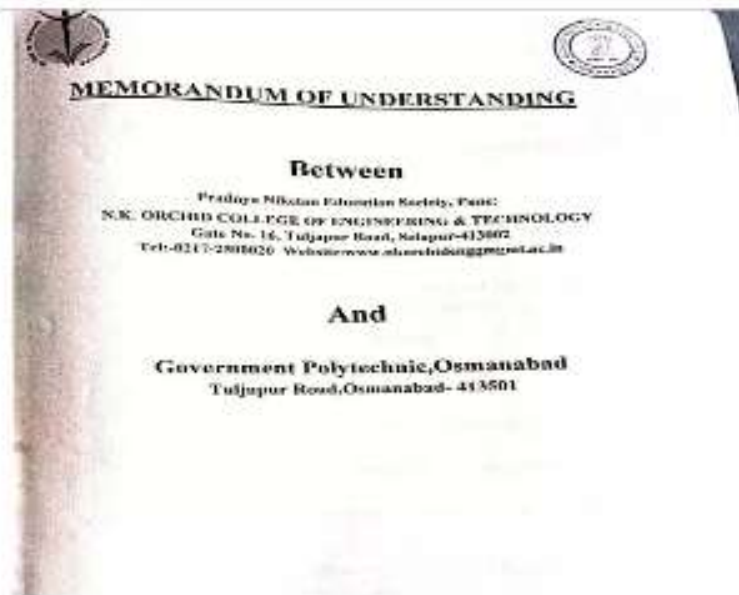
**3. PATHAN ASADKHAN
ASEFKHAN=89.87**



Electronica 20 of Electronics & Telecommunication Department

Date: 26/01/21

Due to COVID -19 Offline various activities havent done. Some of the activities are as following MOUs Signed : Four MOUs have signed by Department



3. Further understanding of N.K. ORCHID COLLEGE OF ENGINEERING & TECHNOLOGY

ORCHID COLLEGE OF ENGINEERING finds this alliance meaningful and agrees to be part of this alliance and abide by the responsibility of an alliance as specified in this MoU.

Each party agrees that the usage of the trademark and trade name by the other is only for the limited purpose as envisaged in this clause and does not grant any rights to either party to use the trade mark / trade name of the other for any other purpose.

This MoU is not exclusive and *NK ORCHID college of Engg & Tech, Solapur* is free to enter into similar alliance with any other educational institution. Similarly, *Government Polytechnic Osmanabad* can continue to have alliance with other institution/industry. However, the following terms are being agreed upon.

4. Term of the MoU: This MoU will be in force for a period of Two years from the date of signing. Either party may terminate this MoU by giving a prior written notice of 30 days to the other party. In the event of this MoU being terminated *N K ORCHID college of Engg & Tech, Solapur* and *Government Polytechnic Osmanabad* will not be responsible for providing the further education services to students.

a. This MoU can further be extended, subject to mutual agreement of terms and conditions at the end of two years, on the expiry of this MOU. The intimation of desire to continue should be intimated in writing to *NK ORCHID college of Engg & Tech, Solapur* two months prior to the date of expiry of this MoU.

b. This MoU or any action of the parties with respect thereto does not constitute legally binding obligations by both the parties. It only intends to lay out the spirit and understanding of the arrangement for mutual benefit of the respective parties.

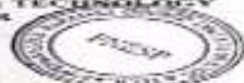
7. The Parties shall be responsible for their respective costs, loss and expense and no party shall be responsible to the other for any loss, cost, expense or damages.

IN WITNESS WHEREOF, the parties have caused this Memorandum of Understanding to be signed, in duplicate, with each being treated as original, in their names as of date first mentioned above.

The period of MOU will be two years effective from ...01/09/2019 to ...30/09/2021.

Date:
Place:

(Dr. J. H. ...)
Principal
N.K. ORCHID COLLEGE OF
ENGINEERING & TECHNOLOGY
SOLAPUR



(Dr. Chaitanya D.M.)
Principal
Government Polytechnic Osmanabad

o/c





Technical Articles

1. Robust Protection Technologies for Mobile POS Devices
By: SHINDE RAKHI ANNARAO

CIRCUIT PROTECTION

Robust Protection Technologies for Mobile POS Devices



The article explains how to increase the Reliability of Mobile Point of Sale (POS) Devices with Robust Protection Technologies and latest design considerations help avoid damage caused by overcurrent, overvoltage and over-temperature conditions.

Today's increasingly sophisticated mobile... of highly advanced assembly... of heat (THM) solutions... of heat (THM) solutions...

Today's increasingly sophisticated mobile... of heat (THM) solutions... of heat (THM) solutions...

Today's increasingly sophisticated mobile... of heat (THM) solutions... of heat (THM) solutions...

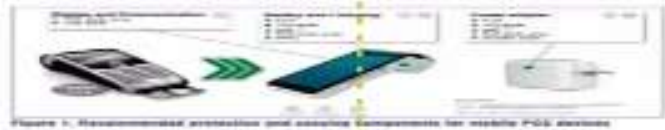


Figure 1. Recommended protection and control components for mobile POS devices

2. Spectrum Compact Solutions and Benefits
By: NAWADE KALPANA PRADIP

METERS

The 4 water flow meter types - which is right for your organisation?

There are plenty of reasons why you might want to measure the way in which liquids, gases or another materials flow, and for every single one of those reasons, your organisation will need a flow meter. You can also pick one up at any high-quality supplier e.g. RS Components. However, 'flow meter' is a phrase like 'work clothes' or 'sports shoes' - and we all know there's a big difference between an astronaut's suit and boots and a construction worker's high-viz gear.

In short, there's an awful lot of flow meters out there... which are specifically designed for water or water-like liquids. And just like all of these other flow meter types, not every water flow meter is created alike. In fact, there are four main types of water flow meters and they are all unique in the basic working principles, benefits and costs that make them suitable for their highly specific applications.

1. The mechanical water flow meter
The most affordable, common and simple of the water flow



meter type is the mechanical version, which is often referred to as a turbine flow meter. That's because it does its measuring with the use of a rotating turbine or propeller, which is a highly effective way to measure the speed of flowing water through a pipe. Basically, the turbine blades rotate at exactly the same rate as the water that is flowing. However, because the meter has mechanical moving parts, the presence of dirty water or liquid will wear up the measurement coil and frequency and drive

down the reliability. Another issue is that the turbine may not rotate correctly when the water flow is very low.

2. The vortex water flow meter

Another way to measure water flow is with a more sophisticated water meter, which operates with the help of a sensor that creates vortices or 'whirls' in the liquid which are then turned into proportional frequency outputs.



Technical Articles 3. Artificial Intelligence By: SHINDE RAKHI ANNARAO



Artificial Intelligence in the Automotive Industry

Blackbox neural network: Interactive visualization improves understanding of decision-making processes in autonomous vehicles

In self-driving cars, reliable Computational Intelligence (CI) is essential. With their help, artificial intelligence (AI) to support the autonomous driving system. However, the more intricately the AI works, the greater the difficulty in the way of the objectives, as well as the process. It is often difficult to understand the inner workings of these neural networks in necessary. However, a CI/ML Computer can do much better as the complex decision making is difficult to understand and analyzing it based on some data safety risk. These

challenges can be solved by appropriate visualization. For this purpose, IEEE Engineering Council has developed a solution for analyzing the decision-making processes. Thanks to its interactive visualization, the program allows to detect insight into each layer of a CNN. All weights of the neurons can be manually adjusted to see their impact on the final output recognition. Furthermore, the influence of different sub-networks can be seen clearly. Existing methods can be easily detected and thus the CI/ML can be optimized in a few steps.

The current methods for analyzing and evaluating neural networks progress primarily from academic research. However, these methods rarely take into account industry standard functional safety requirements. For example, IEC61508 and IEC60318 require systematic methods to keep a track of the comprehensive knowledge of the system. Learning and debugging with all neural networks from this level discussed in article abstract by this. Therefore, in order to better understand the issue of output recognition by CNNs,

4. Spectrum Compact Solutions and Benefits By: NAWADE KALPANA PRADIP



Spectrum Compact Solutions and Benefits

Spectrum Analyzers are used for measuring and visualizing signal amplitudes on a specific frequency range. The screen of the instrument portrays it in the form of a graphic of frequency vs amplitude. Signal amplitude is seen on the Y-axis and the frequency gets displayed on X-axis. Today, we shall be taking a look at the Spectrum Compact solutions and the advantages it provides. The review shall also give you essential information regarding its usage so that you can make an informed choice.

Spectrum Compact by SAI Techno is the world's first portable microwave spectrum analyzer that can be handheld and covers frequency range between 0.3 and 80 GHz. This is a unique mix of portability and versatility of applications. The analyzer provides a complete product line that has 7 devices. Each of them has a dedicated frequency range so that you can choose the one according to your needs. Also, all of them come with a highly affordable price. Another benefit is that its battery-powered and therefore doesn't need any external converters and PC connection.

This is definitely a great tool if you are a field engineer that has been installing microwave equipment. In case your work demands high installation, maintenance, and site planning of the real field environment this will be a perfect instrument to have.

Spectrum Compact Technology

This analyzer makes use of real-time Fourier series technology. This allows the engineers to be able to wear glasses while they are using the device. A 2.92 inch screen on GHz will allow the device to be integrated directly with any



equipment or connect it to any external system. From other manufacturers, this device has industry-leading noise floor measuring high sensitivity. This makes it easy to detect particularly weak signals.