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Contents:

Google Pixel-3 XL (2)

Lithium Coin Cell Range (2)

MediaTek Helio P70 SoC (3)

**Power-efficient generation of
ultrashort pulses on a chip(3)**

Cell-sized robots (4)

Electro-optic laser Pulse(4)

Expert

**Lecture/Seminars/Courses/In
dustrial Visits Organized (5)**

Campus Placement (7)

e-Ganesh Competition (7)

**Project Based Learning
Exhibition (8)**

Training by staff (11)

Google Pixel-3 XL

Google Pixel 3 XL smartphone was launched in October 2018. The phone comes with a 6.30-inch touchscreen display with a resolution of 1440 pixels by 2960 pixels.

The Google Pixel 3 XL is powered by 2.5GHz octa-core (4x2.5GHz + 4x1.6GHz) processor and it comes with 4GB of RAM. The phone packs 64GB of internal storage that cannot be expanded. As far as the cameras are concerned, the Google Pixel

3 XL packs a 12.2-megapixel (f/1.8, 1.4-micron) primary camera on the rear. On the front, it packs an 8-megapixel (f/2.2) primary camera and a 8-megapixel (f/1.8) secondary camera.

Source: <https://store.google.com>

Specification of model Google Pixel-3 XL

Capacity: 64GB

Size:

Height: 158 mm

Width: 76 mm

Depth: 7.9 mm

Weight: 184 grams

Display: 6.30"

1440x2960 pixel resolution

Gorilla glass

Aspect ratio 18.5:9

oleophobic coating

Processor: Snapdragon 845

RAM: 4GB

Sensors:

3D face recognition, Fingerprint sensor, Compass/ Magnetometer, Proximity sensor, Accelerometer, Ambient light sensor, Gyroscope, Barometer



High drain and extended temperature models for its lithium coin cell range

Murata has announced the development of two high drain and extended temperature additional ranges for its offering of lithium coin cell batteries.

Building on Murata's standard and heat-resistant ranges of 'CR' battery sizes, the high current type, designated suffix 'R', has twice the maximum pulsed discharge rating of conventional models at 50mA (three seconds at 2V or higher, at 50 % nominal capacity, 23°C) and three times the discharge time (45mA pulsed for three seconds, 23°C). These

characteristics make the parts suitable for Low-Power Wide-Area (LPWA) communications devices, including LoRa and SIGFOX with their high peak current requirements.

New extended temperature types designated suffix 'X' are available in package sizes CR2032, CR2450, CR2477 and CR3677 and have an extended operating temperature range of -40°C to +85°C compared with standard types rated at -30°C to +70°C.

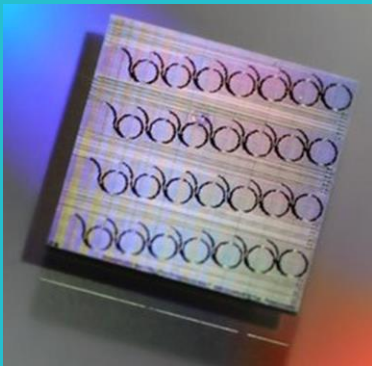
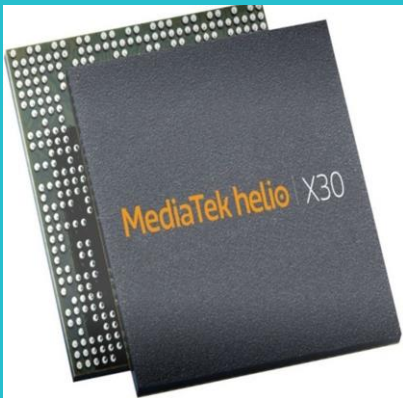
Source:

www.newelectronics.co.uk



MediaTek Helio P70 SoC

***“The Fast, fluid
and Fun Gaming
Multi- Threaded
Processor”***



The MediaTek Helio P70 builds on the P60's global success and critically acclaimed mix of class-leading hardware to provide even better experience for users, while brands can build powerful devices with great diversity.

It achieves this through deep power efficiency improvements, further feature upgrades and clock-speed enhancements. For the user it means longer battery life, a more sustainable, higher performance and up to 4.5°C lower temperature versus competitor alternatives.

The MediaTek Helio P70 incorporates a powerful Arm

Cortex-A73/A53 octa-core CPU complex with an impressive Arm Mali-G72 class GPU. Versus the prior P60, the faster clock speeds generate up to 13% more performance. In-hand, there's support for 20:9 displays at Full HD+ resolution that allow users to enjoy the most beautiful and modern smartphone designs with full fascia coverage.

Source:

<https://www.mediatek.com>

Power-efficient generation of ultrashort pulses on a chip

Ultrashort optical pulses are useful for a wide range of applications such as processing materials via strong light-matter interaction. In the frequency domain, a train of pulses represents an equidistant grid of frequency lines, known as an “optical frequency comb”, which is essential for timing, metrology and spectroscopy.

Though frequency combs were first demonstrated in complex mode-locked laser setups, it was demonstrated more than a

decade ago that they can also be generated in microresonators with sufficiently high quality (Q) factor. This technology, known as “soliton microcomb”, has been rapidly evolving in the past years, yielding new techniques in compact forms and simplified structures, such as frequency synthesis and dual comb spectroscopy.

A key goal in the field is to build high-Q microresonators on a microphotonic chip that can be integrated into electronic devices for portable applications. To this end, modern CMOS-compatible.

fabrication techniques must be utilized, which have been developed for decades and used in the semiconductor industry.

Silicon nitride (SiN), widely used as diffusion barriers in integrated circuits, is the most promising material to construct microresonators based on integrated waveguides. Yet, currently the Q factor of SiN microresonators is still

comparatively low. Therefore, to generate soliton microcombs in SiN microresonators, complicated and power-hungry

setups including optical fiber amplifiers are still needed, which makes the target – “building a soliton microcomb on a chip” – extremely challenging.

With the SiN microphotonic chip, which is only 0.5 mm * 0.5 mm, the LPQM team demonstrated

soliton microcomb generation with only 10 mW laser power, and a train of coherent pulses with less than 100 GHz repetition rate.

Source:

J. Liu, A. S. Raja, M. Karpov, B. Ghadiani, M. H. Pfeiffer, B. Du, N. J. Engelsen, H. Guo, M. Zervas, and T. J. Kippenberg, “Ultralow-power chip-based soliton microcomb for photonic integration

How to mass produce cell-sized robots

Tiny robots no bigger than a cell could be mass-produced using a new method developed by researchers at MIT. The microscopic devices, which the team calls “syncells” (short for synthetic cells), might eventually be used to monitor conditions inside an oil or gas pipeline, or to search out disease while floating through the bloodstream.

This photo shows circles on a graphene sheet where the sheet is draped over an array of round posts, creating stresses that will cause these discs to separate from the sheet. The gray bar across the sheet is liquid being used to lift the discs from the surface.

Source: Massachusetts Institute for Technologie(MIT)



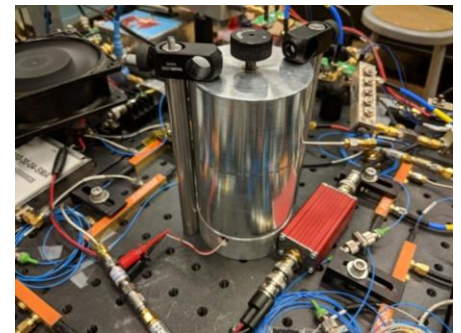
New electro-optic laser pulses 100 times faster than usual ultrafast light

Physicists at the National Institute of Standards and Technology (NIST) have used common electronics to build a laser that pulses 100 times more often than conventional ultrafast lasers. The advance could extend the benefits of ultrafast science to new applications such as imaging of biological materials in real time.

NIST's ultrafast electro-optic laser relies on this aluminum “can” to

stabilize and filter the electronic signals, which bounce back and forth inside until fixed waves emerge at the strongest frequencies and block or filter out other frequencies.

Source: National Institute of Standards and Technology (NIST)



Expert Lecture/Seminars/Courses/Industrial Visits Organized

- An expert talk on “Application of Transformers and Motors in Indian Railways” was conducted by Mr. V. N. Bodade Sr. Section Engineer, Nasik Road Railway Station on 20th September 2018.



- An expert talk on “Linux Operating System” was conducted by Prof. Lalit Patil, Assistant Professor, KKWIEER, 24th September 2018.
- A workshop on “Internet of things” was organized for BE students. The workshop was conducted by Mr. R. S. Tiwari on 26th September 2018.



- An expert lecture on “What do you need to be an Entrepreneur” was conducted by Mr. Sanjeev Mishra, Founder & CEO, Staenz Solutions, Nashik, 27th September 2018.



- An expert talk on “Sacrifices Made by Armed Forces in Protecting the Borders” was conducted by Mr. J. B. Singh Ex. HFO on 29th September 2018.



- Industrial visit to Caprihans India Ltd. Nashik was organized for TE students on 20th September 2018.



- Industrial visit to Reliance Electronics, Nashik was organized for BE students on 21st September 2018.



Campus Placement

Sr. No.	Name of the Company	No. of students Placed
1.	TCS	10

e-Ganesh Competition

The E-Ganesha Competition was held in E & TC department of K. K. Wagh Institute of Engineering Education & Research, Nashik in collaboration with IETE on 24th September 2018. The theme was to combine advanced Electronics with spirituality, to decorate our Bappa using Electronics.

The objective of the competition was to show usage of electronics in Ganesha decoration & enhancement of students' interest in electronics field. The creativity was encouraged and innovativeness was judged. The responsibilities relevant to the professional engineering practice were developed among the students. They worked effectively as an individual, and as member in diverse teams, and in multidisciplinary settings.

The program was inaugurated by Dr. D. M. Chandwadkar, Head of Dept, E & TC and Dr. S.P. Ugale. The competition was judged by Ms. Poonam Deshmukh & Ms. Deepali Gangurde, Emerson, Nashik who are also alumni of the department. Prof. Rupali V. Chothe and Prof. S. S. Ansari organized the event. SAE (Students' Association of Electronics Engineering) students took great efforts to organize the same.

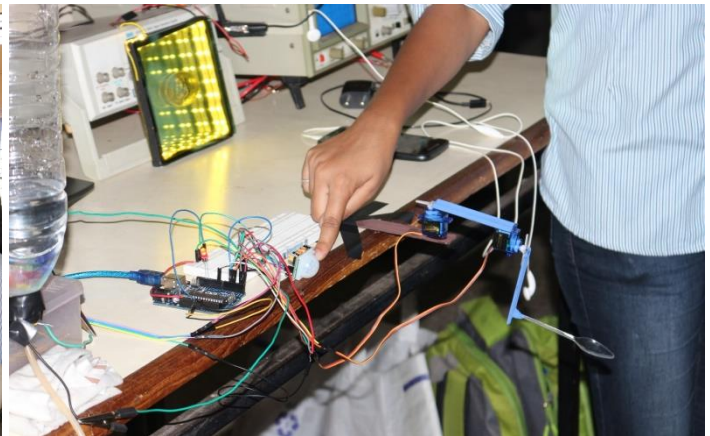
Many groups, each consisting of 3 to 4 students, enthusiastically participated in the competition, out of which 3 groups were declared winners. The participants used electronic concepts very innovatively for the decoration purpose. All projects were very nicely designed and developed by the students.

The winners of the competition are:

First Prize: Rs. 2500 (Vaibhav Jaipurkar, Tushar Joshi, Gaurav Biyani, Tanmay Pathak)

Second Prize: Rs. 2000 (Ruchita Yadav)

Third Prize: Rs. 1500 (Nupoor Patil, Vaishnavi Dusane, Tanvi Purohit, Pranal Kolhe)



Project Based Learning Exhibition

Project based learning exhibition is organized by Electronics & Telecommunication department on 13th Oct 2018 from 11.00 am to 2.00 pm.

Objectives of project based learning are

1. To improves technical skills in students like Circuit Designing, Circuit testing (Hardware, software), troubleshooting and Programming etc.
2. To improve soft skills in students like Communication skills , Presentation , Report writing etc
3. This approach gives students a relevant learning experience and encourages the transfer of knowledge to new situations.
4. To improve following abilities in students like critical thinking, communication and cooperation in students

Around 50 micro and mini projects done by second, third and fourth year students were presented in exhibition. Second year students have done projects under subject digital electronics and electronics test and measuring instruments. Third year students have done projects under subject electronics system design , project done by fourth year students are form the subject VLSI design and technology. Electronics hobby projects done by students were presented in open category. Major projects done by PG students are also kept in exhibition, there were 8 such projects.

Mr. Akshay Kulkarni from Crompton Greaves, Nashik ,Ms. Dipika Pawar from Motwane Pvt.Ltd, Ms. Surbhi Jalori from Emerson, Nashik and Mr. Rahul Patil are the experts from industry who was invited for inauguration and evaluation of projects. Dr. D.M. Chandwadkar H.O.D. E&TC and ELTX motivated students to design more innovative and application specific projects.

Photographs of event





Industrial Training / Seminar/Workshop done by Staff

Sr. No.	Type of Event	Name Of Staff	Duration
1	NPTEL course on "Stress Management"	Prof. D. C. Shimpi	4 Week
2	NPTEL course on "Introduction to Machine Learning"	Prof. Dr. M. R. Admane	8 Week
3	NPTEL course on "Introduction to Machine Learning"	Prof. P. J. Mondhe	8 Week



Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to
DEEPALI CHETAN SHIMPI
 for successfully completing the course
Stress Management
 with a consolidated score of **70 %**

Online Assignments	23.33/25	Proctored Exam	46.5/75
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Prof. Anupam Basu
NPTEL Coordinator
IIT Kharagpur

Total number of candidates certified in this course: **1082**

Aug-Sep 2018
(4 week course)



Prof. Adrijit Goswami
Dean
Continuing Education, IIT Kharagpur



Indian Institute of Technology Kharagpur



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Vision

Provide quality education to create engineering professionals of global standards by keeping pace with rapidly changing technologies to serve the society.

Mission

M1: To educate the students with the state-of-the-art technologies and value based education to meet the growing challenges of industry.

M2: To provide scholarly ambience & environment for creating competent professionals.

M3: To inculcate awareness towards societal needs.