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iPhone Xs

APPLE has got fan bois hot under the collar with the unveiling of the iPhone XS, iPhone XS Max and iPhone XR.

The iDevice trio had few surprises in store thanks to the huge number of leaks building up to Apple's launch event; the iPhone XS and XS Max pack 5.8in and 6.5in OLED screens, respectively, while the "low-end" XR features a 6.1in LCD 'Liquid Retina' screen.

All three models are the first to feature Apple's homegrown A12 Bionic CPU, the first commercially available 7nm processor, and all come adorned with the notched display that first debuted on last year's iPhone X.

Source: www.apple.com

A12 Bionic Chip

The Apple A12 Bionic is a 64-bit ARM-based system on a chip (SoC) designed by Apple Inc. It first appeared in the iPhone XS, XS Max and XR which were introduced on September 12, 2018. It has two high-performance cores which are claimed to be 15% faster than the Apple A11 and four high-efficiency cores which are claimed to use 50% less power than the energy-efficient cores in the A11. The A12 features an Apple-designed 64-bit ARMv8.3-A six-core CPU, with two high-performance cores running at 2.49 GHz called Vortex and four energy-efficient cores called Tempest. The A12 also integrates an Apple-designed four-core graphics processing unit (GPU) with 50% faster graphics performance than the A11. The A12 includes dedicated neural network hardware that Apple calls a "Next-generation Neural Engine". This neural network hardware has eight core and can perform up to 5 trillion operations per second.

Specification of model iPhone Xs

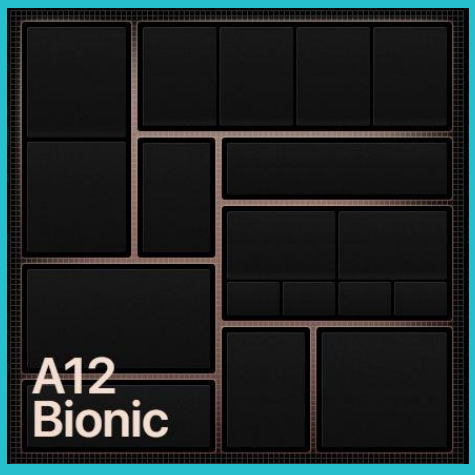
Capacity: 64GB, 256GB, 512GB
Size:
- Height: 5.65 inches
- Width: 2.79 inches
- Depth: 0.30 inches

Weight: 177grams
Display: 5.8''
- Super Retina HD display
- All-screen OLED
- 2436x1125 pixel resolution
- 3D Touch
- Fingerprint-resistant oleophobic coating

Chip: A12 Bionic
Camera: Dual 12-MP wide-angle and telephoto cameras and Six-Element lens
Image format:
- HEIF and JPEG

Video Recording:
- 4K video at 24fps, 30fps or 60fps
- Slow motion video for 1080p at 120fps or 240fps

Face ID: TrueDepth camera for facial recognition
OS: iOS 12
SIM Card: Dual SIM(nano-sim, eSIM)



TI's mmWave Sensors

"The world's most precise millimeter wave sensor available today on a single chip."

Texas Instruments (TI) (NASDAQ: TXN) is bringing an unprecedented degree of precision and intelligence to a range of applications spanning the automotive, factory and building automation, and medical markets. TI's new millimeter wave (mmWave) single-chip complementary metal-oxide semiconductor (CMOS) portfolio includes five solutions across two families of 76- to 81-GHz sensors with a complete end-to-end development platform. Available for sampling today, the AWR1x and IWR1x sensor portfolio delivers up to three times more accurate sensing than current mmWave solutions on the market. The combination of sophisticated analog design techniques paired with digital signal processing enables designers to implement intelligent and contactless sensing in their systems.

mmWave sensor to Industrial application

Servicing the need for improved efficiency in factory, building automation systems and smart infrastructure, developers are now able to leverage TI's intelligent and robust portfolio of mmWave sensors. In addition, this sensing technology can be used to transform existing capabilities in growing areas such as medical equipment, tank-level sensing, robotic vision and drones. TI's IWR1x mmWave contactless sensors can be used in environments without interference from lighting, rain, dust, fog or frost, making them uniquely robust indoors or outdoors. By determining the range, velocity and angle of objects around the equipment, the sensors can adapt to dynamic scenarios instantaneously.

The TI mmWave sensor portfolio for industrial applications includes two single-chip devices.

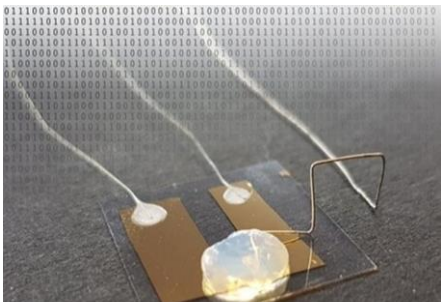
"The IWR1443 mmWave sensors integrate a hardware accelerator for radar signal processing," explains Delagi, "while the IWR1642 sensors use a DSP to perform the required processing."

According to Delagi, the DSP provides users with more flexibility and allows for further software integration of other higher-level algorithms, such as tracking and classification.
TI believes these single-chip devices will provide simple access to high-accuracy object data, including range, velocity and angle. That, it contends, will enable advanced sensing in a range of new applications that demand performance and efficiency, including smart infrastructure and Industry 4.0 in factory and building automation products.
The mmWave sensor portfolio has been designed so that it can adapt dynamically to changing conditions, bringing multi modal functionality to avoid false positives and delivering a broad range of sensing to multiple applications.

Source: Neil Tyler (www.newelectronics.co.uk) (www.ti.com)

Smallest transistor switch with single atom

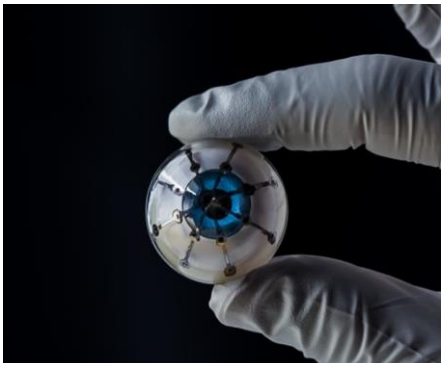
Researchers have developed a single-atom transistor, the world's smallest. This quantum electronics component switches electrical current by controlled repositioning of a single atom, now also in the solid state in a gel electrolyte. The single-atom transistor works at room temperature and consumes very little energy, which opens up entirely new perspectives for information technology.
The transistor exclusively consists of metal, no semiconductors are used. This results in extremely low electric voltages and, hence, an extremely low energy consumption.
Source: Karlsruher Institute for Technologie(KIT)



3D print prototype for 'bionic eye'

A team of researchers has, for the first time, fully 3D printed an array of light receptors on a hemispherical surface. This discovery marks a significant step toward creating a 'bionic eye' that could someday help blind people see or sighted people see better.

"Bionic eyes are usually thought of as science fiction, but now we are closer than ever using a multimaterial 3D printer," said Michael McAlpine, a co-author of the study and University of Minnesota Benjamin Mayhugh Associate Professor of Mechanical Engineering.
Source: University of Minnesota



Expert Lecture/Seminars/Courses/Industrial Visits Organized

- An expert talk on “How to become an Entrepreneur” was conducted by Mr. Akshay Jalgaonkar, alumni and Director of Yash Electro Atrs, Nashik on 3rd July 2018.

Felicitation of Mr. Akshay Jalgaonkar (Director- Yash Electro Arts) by Prof. Dr. D.M.Chandwadkar


Mr. Akshay Jalgaonkar interacting with B.E.(E&TC and Electronics) students

- An expert talk on “Different funding agencies for start-up” was conducted by Rohit Bagad, Founder & CEO Inuxu Digital Media Technologies Pvt Ltd., Pune on 5th July 2018.

Felicitation of Mr. Rohit Bagad (CEO- Inuxu Technologies) by Prof. Dr. D. M. Chandwadkar


Mr. Rohit Bagad (CEO- Inuxu Technologies) interacting with B.E.(E&TC and Electronics) students

- An expert talk on “Competitive Exam (UPSC-IES)” was conducted by Dhiraj Gurale, Indian Railways on 7th July 2018.


Felicitation of Mr. Dhiraj Gurale (IES-Indian Railways) by
Prof. Dr. D. M. Chandwadkar under
Career Development Cell of E&TC Department


Delivering expert lecture on "Competitive exam UPSC-IES" by
Mr. Dhiraj Gurale(UPSC-AIR-18)

- An expert lecture on “Importance of Entrepreneurship” was conducted by Mr. Varun Dabke (Director- Suntech Consulting), Nashik on 9th July 2018.

SE (E&TC ELTX) Orientation Program for AY 2018-19 Organized on 10th July 2018

- A session on “C-programming revision for KPIT interview " was conducted by Ms.Kanchan Naik on 10th July 2018.
- Orientation program was conducted for SE students to get familiar with department and facilities on 10th July.

SE (E&TC ELTX) Orientation Program for AY 2018-19 Organized on 10th July 2018

SE (E&TC ELTX) Orientation Program for AY 2018-19 Organized on 10th July 2018

- An expert talk on “Different modules and activities performed in an organization” was conducted by Mr. Archan Oke, Director- Craft Tech, Nashik on 11th July 2018.

Mr. Archan Oke (Director - Wave Systems) Guided T.E. & B.E.(E&TC) students

Mr. Archan Oke (Director- Wave Systems) Interacting with T.E. & B.E.(E&TC) students

- Workshop on seminar on “Introduction to measuring instruments and calibration process " conducted by Mr. Asim Kumar Saha from Aplab, Mumbai on 11th July 2018.
- Expert Lecture on "Recent Trends in Microwave Engineering" conducted by K. P. Singh, Technical Director, Anant Ultralab Industries on 14th July 2018.
- Mock interviews conducted for BE students for campus readiness of KPIT conducted by Mr. Sanket Karlekar and Mr. Sohan Desale from Crompton Greaves, Ltd, Nashik on 21st July 2018.


- Expert talk on “GATE-Competitive Exam” conducted by Mr. Sushil Kumar Suman, 136th Rank in DRDO exam on 16th August 2018.

- Expert talk on “Life Management” was conducted by Mr. Swami Shrikanthanand on 17th August 2018.

- Expert talk on “UPSC-IAS Exam” was conducted by Mr. Harshad Dhananjay Bele Director, Connect India IAS Academy on 30th August 2018.

- Industrial visit to TRACTION Machine Workshop, Nashik was organized for SE students on 18th August2018.

Campus Placement

Sr. No.	Name of the Company	No. of students Placed
1.	KPIT	15
2.	FINIQ	1

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Hirabai HaridasVidyanagari, Amrutdham, Panchavati Nashik-422003

Editor: Prof. Dipankar D. Khartad

E-mail: ddkhartad@kkwagh.edu.in

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.