

Department of Electronics and Telecommunication Engineering

List of Major Equipment's in Laboratories

Sr. No	Name of Laboratory	Name of Important Equipment
01	Computer Vision and Pattern Recognition	<ul style="list-style-type: none"> • Dell work station Intel Xeon 4 core processor: 8GB DDR3 ECCRAM expandable up to 32GB, 4DIMM Slots, Intel C216 Chipset 1TB SATA HDD, 1GB NVIDIA Quadro FX1800 Graphics Card, Dell 23" LED Monitor 10/100/1000 Integrated Network GbEthernet Card Wireless WLAN card • Octave , Turbo C • Thermal camera: Detector Size: 160x120, Super resolution • Technology: 320x240, Thermal Sensitivity : <50mK , Video Out: USB2.0 • Visual Camera: 640x480 Pixels IFOV, File format: .bmt; export option in .bmp, .jpg, .png, .csv, .xls • Hi-resolution Color Vision Camera: (1392 x 1040) consisting of Video Output Type (Interface) Gigabit Ethernet • Compatible). Compatible with Windows XP and Windows 7 • Machine Vision kit: Consisting of - Hi-resolution Monochrome Camera (1024 x 768) with accessories. - Lens (25mm/50mm/Ext tube set). Supported by Sapera™ LT software libraries with Power Supply, interface card, I/O cables, Tripod mounts, standard lens etc. • Windows based machine vision software environment specifically intended to simplify development and deployment of high performance alignment, gauging, inspection, assembly verification, and machine guidance tasks. GUI and internal programming support. • Color camera kit: Imager Format Full frame interline CCD area scan with square pixel (1/3 inch diagonal) Resolution 1024 x 768 pixels with accessories. Minimum Frame Rate (free-running) 0.1 fps (one frame every 10 seconds) Maximum Frame Rate (free running) 20 fps Minimum Exposure 44µs Maximum Exposure 16seconds Lighting kit • Optics Kit Handy: Users can test at any WD (working distance) and FOV (field of views) Portable: All Items come in a Hard Case. Many Items: It consists of 5 C-mount Lenses, 7 Extension Tubes, 3 Rear Converter Lenses Vision: All the C-mount Lens come with iris and focus stops to lock the specific view. Focal Length Extenders includes different focal length lenses, extension tubes, focal extenders etc to approach different projects with different types of CCD/CMOS Cameras with C Mount\

		<ul style="list-style-type: none"> • Aphelion Developer GUI and SDK Imaging • Aphelion-DEV GUI and SDK S/W with vision tutor.
02	Embedded System Design Lab	<ul style="list-style-type: none"> • Desktop PC: Intel core i7 -3770(3.7 GHz 8M cache 4 core) O.S.Microsoft windows 8.0 2x4 GB 1660 DDR3 SDRAM DVD Writer Hard Drive, 1 TB 7200 RPM, 23' LED Dell Monitor , opticalKBD wireless LAN card OptiPlex 9010 , 2xUSB , Optical mouse • Turbo C • Side ARM • Proteus VSM(Microcontroller system simulator) • STK 2148, ARM 7 TDMI kits (10) • 8051 kits (10) • 8051 simulator with C cross compiler • DSP kits 6711 • Code composer studio • ARM 9 kit • 8085 boards with 8255 • ARM cortex board • ProASIC-3 board, fusion board • Keil's real view MDK for 8051 • Keil Real view for ARM • Wind River workbench3.x for Vxworks6.x RTOS • Mini ARM kits (LPC2138, SC-51 and SC-ARM complier with hardware/ USB locks • Tutors for ARM LPC2148 ARM9 • MUCOS-II, MATLAB)
03	VLSI Lab	<ul style="list-style-type: none"> • Desktop PC: Intel core i7 -3770(3.7 GHz 8M cache 4 core) O.S.Microsoft windows 8.0 2x4 GB 1660 DDR3 SDRAM DVD Writer Hard Drive, 1 TB 7200 RPM 23 " LED Dell Monitor, opticalKBD wireless LAN card OptiPlex 9010, USB, Optical mouse • Cadence XL bundle with virtuoso spectre simulator, virtuoso schematic editor, layout suite, verification system design rule checker, cadence QRC extraction. • Microwind full suite • Tanner tool • Xilinx 14.2 with 25 licences • Digilent Spartan 3E starter kits • Spartan 3A DSP 3400A development board • Xilinx ML505,ML506,ML507, virtex-5 development board • Xilinx ZYNQ video kit
04	Digital Signal Processing Lab	<ul style="list-style-type: none"> • Desktop PC: Intel core i7 -3770(3.7 GHz 8M cache 4 core) O.S.Microsoft windows 8.0 2x4 GB 1660 DDR3 SDRAM DVD Writer Hard Drive, 1 TB 7200 RPM 23' LED Dell Monitor,

		<p>opticalKBD wireless LAN card OptiPlex 9010, USB, Optical mouse</p> <ul style="list-style-type: none"> • Turbo C • MATLAB license copy • DSP starter kits
05	Project Lab	<ul style="list-style-type: none"> • Desktop PC: Intel core i5-6400 (2.7GHz, upto 3.3GHz, 6MB cache, 4 cores), chipset Intel H170 RAM :4 GB DDR4-2133 • SDRAM (1*4 GB) HDD:1TB 7200rpm SATA Graphics Card: Intel HD Graphics 530 or equivalent HDD 1TB(8 GB cache) • SATA SSHD (7200 rpm) integrated Realtek HD ALC21-VB audio or equivalent PORTS:USB 3.0:2(min) port, USB 2.0:4(min) Display :LED monitor -21”
06	Center for VLSI Design and Verification Lab	<ul style="list-style-type: none"> • CPU- Intel® Xeon® E3-1220v2 3.10 GHz, 8M Cache, Turbo,Quad Core/4T (69W) • Memory- 16 GB Memory (1x8GB), 1600Mhz, Dual Ranked, Low Volt UDIMM (speed is CPU dependent) • Hard disk- 4 TB 7.2K RPM SATA 3Gbps 3.5in Cabled Hard Drive • Operating system- Windows Server® 2012,Foundation Ed, Factory Install or higher • Monitor- Monitor 24” Widescreen LED Professional Monitor • Ethernet- Integrated 10/100/1000 Mbps Ethernet controller with PXE and WOL support.
07	Center of Excellence in Signal and Image Processing	<ul style="list-style-type: none"> • Fundus camera • Near IR camera • Biometric camera • 3-D camera • 3-D scanner • Multi-channel EEG/ECG machines • Polygraph machine • High resolution thermal imaging camera • Real time application Unit • MATLAB (50 users) with all toolboxes • CADENCE for VLSI signal/Image Processing • ERDAS for satellite image processing • Patseerpatent database • Turnitin Anti Plagiarism software (100 users)
08	Electronics Devices and Circuits lab	<ul style="list-style-type: none"> • Digital Multimeter • Function generator 1MHz • Dual trace oscilloscope transistorized multi output power supply • 20MHz CRO with frequency counter
09	Communication Lab	<ul style="list-style-type: none"> • Sampling and reconstruction trainer • TDM-PCM receiver trainer • Delta sigma modulation demodulation trainer • ONIDA 21” color television oxygen thunder with stand

		<ul style="list-style-type: none"> • SAMSUNG plasma television with wall mounting bracket • Dish antenna set top box • CDMA trainer • Digital Multimeter • Mobile phone trainer • 150MHz RF generator • Digital capacitance meter • Dual trace oscilloscope 20 MHz • Signal generator 2 MHz • transistorised multi output power supply • IC tester • TINA software • Optical fiber communication trainer kit
10	Advance Communication Lab	<ul style="list-style-type: none"> • 20 MHz CRO with frequency counter • Transistorised multi output power supply • Function generator 1 MHz • Dual trace oscilloscope 30 MHz • Digital power supply 0-5V,0-15V • Pulse generator 2 MHz (Sin+ square) • Digital Multimeter • Spectrum analyser 7 GHz • Laser fiber optics kit • 50 MHz digital storage oscilloscope • Multiplexer/ Demultiplexer, • 100MHz digital storage oscilloscope
11	Data Communication Network Lab	<ul style="list-style-type: none"> • Desktop PC: Intel core to Dual Processor Server with 19" TFT LCD Monitor DELL MAKE Key board: 104 keys OEM keyboard, Mouse: Scroll mouse with mouse pad • Octave • Turbo C • Keil Software
12	Computer Lab	<ul style="list-style-type: none"> • Desktop computer systems: Pentium –IV processor model no. DX 6120 P-IV 3.2 GHz 800 MHz FSB make HP Memory: 1 GB DDR –I 400 MHz HP MAKE Hard Disk: 80 GB serial ATA 7200 RPM, FDD: 1.44 MB, Monitor: 17" SVGA CRT, Key board: 104 keys OEM keyboard, Mouse: Scroll mouse with mouse pad • MATLAB licence copy • Keil: real view for ARM • Turbo C