

SIGMA

Product List 2022

TRAINERS

ISO 9001 : 2015 Certified Manufacturer

**Since
35
Years**

01. Computer Network Lab
02. Computer Hardware Lab
03. Telecommunication Lab
04. Wireless Communication and Network Lab
05. Satellite Communication and Network Lab
06. Mobile Communication Lab
07. Software Defined Radio Lab
08. Embedded System Design and Micro Controllers Lab
09. Embedded Wireless Systems and Networking Lab
10. Advanced Micro Controller Lab
11. Wireless Sensor Network Lab
12. Internet of Things Lab (IoT)
13. Analog Communication Lab
14. Digital Communication Lab
15. Advanced Digital and Data Communication Lab
16. Antenna Lab
17. Fiber Optic Communication
18. Audio Engineering lab
19. Video and TV Lab
20. Consumer Electronics and Home Appliances Lab
21. Power and Industrial Electronics Lab
22. Instrumentation & Measurements Lab
23. Control Lab
24. Instruments Lab
25. Microprocessors Lab
26. VLSI Lab
27. Digital Signal Processing Lab
28. Robotics and Drones Lab
29. Basic Electronics Lab
30. Linear Electronics Lab
31. Digital Electronics Lab
32. Electrical Lab
33. Accessories for Training

**More
than
5000
Trainers**



EVERY THING FOR TRAINING

Complete Range of Indigenous World Class Trainers for all laboratories of IIT, Engg, Colleges, REC, TTTI, Polytechnics, Universities and ITIs as per syllabus.

- Trainers
- Demonstrators
- Simulators
- Instruments
- Project Kits & Circuits
- Softwares
- Books
- Electronic Teaching Slides
- Expert Lectures
- Training Workshop/Courses
- Instruments Training
- Laboratory Charts

ISO 9001 : 2015 Certificate



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ITIs

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Engineering Colleges

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ETDC

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IIIT

Regional Engineering Colleges

ESTC

Military colleges

Indian Navy

Schools

TTTI

Science college

CEDTs

	2. Computer Hardware Lab		
	Computer Hardware Trainers		
1	Basic Computer Trainer	COMP100	
2	Multimedia Computer Trainer	COMP101	
3	Computer Peripherals Trainer	COMP102	
4	Notebook Computer Trainer	COMP103	
	Computer Parts Trainers		
1	Mother Board Trainer with CPU, Memory	MB100	
2	Hard Disk Trainer	HDD100	
3	Floppy Drive Trainer	FDD100	
4	CD ROM Trainer	CD100	
5	DVD ROM Trainer	DVDROM100	
6	CD Writer Trainer	CDR100	
7	DVD Writer Trainer	DVDR100	
8	Blue Ray DVD Trainer	DVD100BLN	
9	SMPS Power supply Trainer	CSMPS100	
10	Monochrome Monitor Trainer	MONTB100	
11	Colour Monitor Trainer	MONTC100	
12	LCD Monitor Trainer	LCD100	
13	Keyboard Trainer	KB100	
14	Wireless Keyboard Trainer	WKB100	
15	Mouse Trainer	MOUSE100	
16	Cordless Mouse Trainer	CRDMOUSE100	
17	Optical Mouse Trainer	OPMOUSE100	
18	Pen Drive /Flash Drive Trainer	PEN100	
19	DeskJet Printer Trainer	DESKPRN100	
20	Dot Matrix Printer Trainer	DOTPRN100	
21	Laser Printer Trainer (Monochrome)	LASERPRN100	
22	Colour Laser Printer Trainer	LASERPRN100CN	
23	Laser Printer (Network Enabled) Trainer	LASERPRN100NT	
24	Bubble Jet Printer Trainer	BUBBLE100	
25	Scanner Trainer	SCAN100	
26	Modem Trainer	MODEM100	
27	Different Types of Modems (Dial up, ADSL, Wireless Modem) Trainer	MODEM200	
28	FSK Modem Trainer	COM127	
29	Hub Trainer	HUB100	
30	Bridge Trainer	BRIDGE100	
31	Switch Trainer	SWITCH100	
32	Router Trainer	ROUTER100	
33	Computer Sockets Display Board	SKT100	
34	Computer Cables Display Board	CABLE100	
35	Motherboard Diagnostic Card	DIAG100	
36	Network Cabling Trainer	NTCABLE100	
37	Structure Cabling LAN Trainer	STLAN100	

	3. Telecommunication Lab		
1	Telephone Trainer	PHONE100	
2	Cordless Telephone Trainer	RPHONE100	
3	Video Phone Trainer	VIDPH100	
4	FAX Machine Trainer	FAXDM100	
5	KTS (Key Telephone System) Phone Trainer	KTS100	
6	Intercom Trainer	ICOM100	
7	DTMF Encoder Decoder Trainer	DTMF100	
8	PSTN Switch Configuration T/S/T Switch Trainer	PSTN100	
9	Cross Bar Switching Trainer	CROBAR100	
10	EPBX (Electronic Private Branch Exchange) Trainer	EPBX100	
11	EPBX (Electronic Private Branch Exchange) Trainer - 2 to 4 Line	EPBX100M	
12	EPBX (Electronic Private Branch Exchange) Trainer - 1 to 4 Line	EPBX100L	
13	Telecommunication Traffic Analysis Software Trainer	TCOMTRAFFIC101	
14	ISDN Trainer	ISDN100	
15	ISDN Video Phone Trainer	ISVPH100	
16	ISDN Protocol Analyser	ISDNPROTO100	
17	POS (Point of Sales Terminal) Trainer	POS100	
18	Simulation of Circuit Switching	CKTSIM100	
	4. Wireless Communication and Network Lab		
1	Infrared Networking Trainer	INFRARED100	
2	Bluetooth Networking Trainer	BT101	
3	Bluetooth Networking Trainer with Bluetooth Access Point	BT102	
4	Bluetooth Technology Trainer	BT100	
5	Wireless PAN Trainer	WPAN100	
6	Wireless LAN Trainer - Wifi Trainer	WLAN100	
7	Zigbee Networking Trainer	ZIGBEE100	
8	433 MHz Wirelss Transmitter Receiver Trainer	433RFWLNET100	
9	2.4 G Wirelss Transmitter Receiver Trainer	2.4GRFWLNET100	
10	RFID Reader Writer Trainer	RFID100	
11	LoRa Wireless Networking Trainer	LORA100	
12	Powerline Wireless Networking Trainer	POWERLINE100	
13	Wireless Hot Spot Trainer	HOTSPOT100	
14	Wireless Access Point Trainer	WACSP100	
15	Wireless Router Trainer	WLR100	
16	UWB Networking Trainer	UWB100	
17	Wireless Channel Simulation Software Trainer	WSIM100	
18	Wireless WAN Trainer	WWAN100	
19	WIMAX Trainer	WIMAX100	
20	All Wireless Networking Trainer	WLNET100	
21	Wireless Communication System Trainer	WCS100	

	5. Satellite Communication and Network Lab		
1	Satellite Communication Trainer - 2.4 Ghz	SATCOM100	
2	Satellite Communication Trainer - 5.8 Ghz	SATCOM200	
3	Real Satellite Communication Trainer	SATCOM100R	
4	Satellite Networking Trainer	SATNET100	
5	Digital Satellite Communication System	SATCOM100D	
6	DTH Receiver and Set Top Box Trainer	DTH100	
7	GPS Trainer	GPS100	
	6. Mobile Communication Lab		
1	5G Massive MIMO Trainer	5G100	
2	4G LTE Transmitter Receiver Real System Trainer	4GLTE100	
3	4G WIMAX Transmitter Receiver Trainer	4GWIMAX100	
4	4G VOIP SIP SoftSwitch Trainer	VOIPSW100	
5	4G AT Commands Trainer	4GLTE100AT	
6	4G Networking Trainer	4G100	
7	4G Mobile Trainer	4GMOBILE100	
8	3G Mobile Transmitter Receiver Real System Trainer	3G-OPENBTS100	
9	3G AT Commands Trainer	3GUMTS100AT	
10	3G Networking Trainer	3G100	
11	3G Mobile Trainer	3GMOBILE100	
12	2.5G Mobile Transmitter Receiver Real System Trainer	2.5G-OPENBTS100	
13	2.5G GPRS Trainer	GPRS100	
14	GPRS Networking Trainer	GPRSNET100	
15	Mobile Tablet Trainer	TABLET100	
16	2G Mobile Trainer	MOBILE100	
17	Mobile Trainer with Camera	MOBILE100C	
18	GSM AT commands Trainer	GSM100AT	
19	GSM Application Module	GSM100AM	
20	GSM Networking Trainer	GSM100NT	
21	Mobile TV Trainer	MTV100	
22	Edge - 2.75G (USB) Networking Trainer	EDGE100U	
23	HSDPA - 3.5G Networking Trainer	HSDPA100	
	7. Software Defined Radio Lab		
1	Software Defined Radio Trainer - Low Cost	SDR100L	
2	Software Defined Radio Trainer - Single Channel	SDR200B	
3	Software Defined Radio Trainer - Dual Channel	SDR210B	
4	Software Defined Radio Trainer for Matlab Integration	SDR210N	
5	MIMO Wireless Transmitter Receiver Trainer	MIMO100	
6	Massive MIMO Trainer	MU-MIMO100	
7	CR (Cognitive Radio) Trainer	CR100	

	8. IOT (Internet of Things) Lab		
(A)	Basic Fundamentals Trainers required for IOT		
1	All Networking Methods Trainer	NET100	
2	LAN, Router and Gateways Trainer	LANRTGT100	
3	Servers Trainer - All Types of Servers	SERVER100	
4	All Wireless Networking Trainer	WLNET100	
5	Static IP and Port Forwarding Trainer	WLNET100	
6	PWM (Pulse Width Modulation) Control Trainer	PWMC100	
7	Relays ON/OFF Controller Trainer	RELAYONOFF100	
8	Motors Controller Trainer	MOTORS100	
9	UART Serial Communication Trainer - RS232	UART100	
10	RS485 Communication Trainer	RS485100	
11	I2C Protocol Communication Trainer	I2C100	
12	SPI Protocol Communication Trainer	SPI100	
13	Linux Operating System Trainer	LINUX100	
14	C++ Language Software Trainer	C++100	
15	Python Language Software Trainer	PYTHON100	
16	Database, Cloud and Dedicated Server Trainer	DEDISERVER100	
(B)	Hardware and Embedded Micro Controller Trainers for IOT		
1	8051 Micro Controller Trainer	MP8051A	
2	MSP430 Micro Controller Trainer	MSP430A	
3	PIC Micro Controller Trainer	PMICRO100	
4	AVR Micro Controller Trainer	AVR100	
5	ARM-7 Micro Controller Trainer	ARM7-100	
6	ARM-9 Micro Controller Trainer	ARM9-100	
7	ARM-9 RTOS Micro Controller Trainer	ARM9RTOS100	
8	ARM-11 Micro Controller Trainer	ARM11-100	
9	ARM Cortex M3 Micro Controller Trainer	ARMCORTEX100	
10	Arduino Micro Controller Trainer	ARDUINO100	
11	Raspberry Micro Controller Trainer	RASPBERRY100	
12	Beagle Bone Micro Controller Trainer	BEAGLE100	
13	Intel Galelio Micro Controller Trainer	INT-GALILEO100	
14	Intel Edison Micro Controller Trainer	INT-EDISON100	
15	Arduino Lilypad Micro Controller Trainer	LILYPAD100	
16	Adafruit Gemma Micro Contraoller Trainer	GEMMA100	
17	Adafruit Trinket Micro Contraoller Trainer	TRINKET100	
18	Wearable Micro Controller Trainer	WMICRO100	

(C)	Wireless Communication and Networking for IOT		
1	Infrared Wireless		
1	Infrared Wireless Networking Trainer using Arduino Micro Controller	ARDINFRA100	
2	Infrared Wireless Networking Trainer using Raspberry PI Micro Controller	RASPINFRA100	
3	Infrared Wireless Networking Trainer using Beaglebone Micro Controller	BBINFRA100	
4	Infrared Wireless Networking Trainer using Intel Galileo Micro Controller	GALINFRA100	
5	Infrared Wireless Networking Trainer using Intel Edison Micro Controller	EDIINFRA100	
2	Bluetooth Wireless		
1	Bluetooth Wireless Networking Trainer using Arduino Micro Controller	ARDBL100	
2	Bluetooth Wireless Networking Trainer using Raspberry PI Micro Controller	RASPBL100	
3	Bluetooth Wireless Networking Trainer using Beaglebone Micro Controller	BBBL100	
4	Bluetooth Wireless Networking Trainer using Intel Galileo Micro Controller	GALBL100	
5	Bluetooth Wireless Networking Trainer using Intel Edison Micro Controller	EDIBL100	
3	Wifi Wireless		
1	Wifi Wireless Networking Trainer using Arduino Micro Controller	ARDWIFI100	
2	Wifi Wireless Networking Trainer using Raspberry PI Micro Controller	RASPWIFI100	
3	Wifi Wireless Networking Trainer using Beaglebone Micro Controller	BBWIFI100	
4	Wifi Wireless Networking Trainer using Intel Galileo Micro Controller	GALWIFI100	
5	Wifi Wireless Networking Trainer using Intel Edison Micro Controller	EDIWIFI100	
4	Zigbee Wireless		
1	Zigbee Wireless Networking Trainer using Arduino Micro Controller	ARDZB100	
2	Zigbee Wireless Networking Trainer using Raspberry PI Micro Controller	RASPZB100	
3	Zigbee Wireless Networking Trainer using Beaglebone Micro Controller	BBZB100	
4	Zigbee Wireless Networking Trainer using Intel Galileo Micro Controller	GALZB100	
5	Zigbee Wireless Networking Trainer using Intel Edison Micro Controller	EDIZB100	
5	RF Wireless - 433 MHz, 2.4 GHz		
1	RF Wireless Networking Trainer using Arduino Micro Controller	ARDRF100	
2	RF Wireless Networking Trainer using Raspberry PI Micro Controller	RASPRF100	
3	RF Wireless Networking Trainer using Beaglebone Micro Controller	BBRF100	
4	RF Wireless Networking Trainer using Intel Galileo Micro Controller	GALRF100	
5	RF Wireless Networking Trainer using Intel Edison Micro Controller	EDIRF100	
6	GSM / 3G / 4G Mobile Wireless		
1	GSM Wireless Networking Trainer using Arduino Micro Controller	ARDGSM100	
2	GSM Wireless Networking Trainer using Raspberry PI Micro Controller	RASPGSM100	
3	GSM Wireless Networking Trainer using Beaglebone Micro Controller	BBGSM100	
4	GSM Wireless Networking Trainer using Intel Galileo Micro Controller	GALGSM100	
5	GSM Wireless Networking Trainer using Intel Edison Micro Controller	EDIGSM100	

7	GPS Wireless		
1	GPS Wireless Receiver Trainer using Ardunio Micro Controller	ARDGPS100	
2	GPS Wireless Receiver Trainer using Raspberry PI Micro Controller	RASPGPS100	
3	GPS Wireless Receiver Trainer using Beaglebone Micro Controller	BBGPS100	
4	GPS Wireless Receiver Trainer r using Intel Galileo Micro Controller	GALGPS100	
5	GPS Wireless Receiver Trainer using Intel Edision Micro Controller	EDIGPS100	
8	RFID Wireless		
1	RFID Wireless Receiver Trainer using Ardunio Micro Controller	ARDRFID100	
2	RFID Wireless Receiver Trainer using Raspberry PI Micro Controller	RASPRFID100	
3	RFID Wireless Receiver Trainer using Beaglebone Micro Controller	BBRFID100	
4	RFID Wireless Receiver Trainer r using Intel Galileo Micro Controller	GALRFID100	
5	RFID Wireless Receiver Trainer using Intel Edision Micro Controller	EDIRFID100	
9	LoRa (Long Range) Wireless		
1	LoRa Wireless Networking Trainer using Ardunio Micro Controller	ARDLORA100	
2	LoRa Wireless Networking Trainer using Raspberry PI Micro Controller	RASPLORA100	
3	LoRa Wireless Networking Trainer using Beaglebone Micro Controller	BBLORA100	
4	LoRa Wireless Networking Trainer using Intel Galileo Micro Controller	GALLORA100	
5	LoRa Wireless Networking Trainer using Intel Edision Micro Controller	EDILORA100	
10	Ethernet		
1	Ethenet Networking Trainer using Ardunio Micro Controller	ARDETH100	
2	Ethenet Networking Trainer using Raspberry PI Micro Controller	RASPETH100	
3	Ethenet Networking Trainer using Beaglebone Micro Controller	BBETH100	
4	Ethenet Wireless Networking Trainer using Intel Galileo Micro Controller	GALETH100	
5	Ethenet Wireless Networking Trainer using Intel Edision Micro Controller	EDIETH100	
11	Powerline Wireless		
1	Powerline Wireless Networking Trainer using Ardunio Micro Controller	ARDPWL100	
2	Powerline Wireless Networking Trainer using Raspberry PI Micro Controller	RASPPWL100	
3	Powerline Wireless Networking Trainer using Beaglebone Micro Controller	BBPWL100	
4	Powerline Wireless Networking Trainer using Intel Galileo Micro Controller	GALPWL100	
5	Powerline Wireless Networking Trainer using Intel Edision Micro Controller	EDIPWL100	
12	Latest Hightech Wireless		
1	6LoWPAN IOT Trainer	6LOWPAN100	
2	Bluetooth Low Energy (BLE) Networks IOT Trainer	BLE100	
3	Low-Power Wide Area Network (LPWAN) IOT Trainer	LPWAN100	
4	Bluetooth Smart 4.0 IOT Trainer	BT4-100	
5	LoRaWAN IOT Trainer	LORAWAN100	
6	Bluetooth 5.0 IOT Trainer	BT5-100	
7	SigFox IOT Trainer	SIGFOX100	
8	Cat-1	CAT1-100	
9	EC-GSM-IoT	EC-GSM-IOT100	
10	EPS32	EPS32-100	
11	FIPY	FIPY100	

12	INGENU	INGENU100	
13	LTE services in the 3.5 GHz Citizens Broadband Radio Service (CBRS)	LT335-100	
14	LTE-M	LTE-M-100	
15	NB IOT	NBIOT100	
16	NFC	NFC100	
17	RPMA	RPMA100	
18	THREAD	THREAD100	
19	WAPA - Symphony	WAPA100	
20	WASPMOTE	WASPMOT100	
21	Weightless	WTLESS100	
22	WiFi HaLow (802.11ah) and HEW (802.11ax).	WIFIHALOW100	
23	HEW (High Efficiency Wireless)	HEW100	
24	Z-WAVE	ZWAVE100	
(D) Advanced Micro Controller Trainers - Multi Wireless, Multi Platform and Voice Control			
1	Advanced Arduino Multi Wireless Network Trainer	ARDMWL100	
2	Advanced Raspberry pi Multi Wireless Network Trainer	RSSPMWL100	
3	Advanced Beaglebone Multi Wireless Network Trainer	BBMWL100	
4	Arduimo Advanced IOT Trainer - Using Voice Control	ARDIOT400	
5	Raspberry Advanced IOT Trainer - Using Voice Control	RASPIOT400	
6	BeagleBone Advanced IOT Trainer - Using Voice Control	BBIOT400	
7	Arduino to Raspberry Multi Wireless Network Trainer	ARDRASPWL100	
8	Arduino to Beaglebone Multi Wireless Network Trainer	ARDBBWL100	
9	Raspberry to Beaglebone Multi Wireless Network Trainer	RABBWL100	
(E) Wireless Sensor Network Trainers (WSN) for IOT			
1	All Sensors Charasteristics Trainer - 80 Sensors	SENSORCH100	
2	Wireless Sensors Network Trainer	WSN100	
3	Wireless Multiplexing Sensor Network Trainer	WSN200	
4	Arduino Multi Wireless Sensor Network Trainer	ARDUINOWSN100	
5	Raspberry Multi Wireless Sensor Network Trainer	RASBRWSN100	
6	Beaglebone Multi Wireless Sensor Network Trainer	BBONEWSN100	
7	Advance Wireless Sensors Network Trainer	WSN100S	
8	WSN Trainer using Arduinio Microcontroller and Wifi	ARDWIFIWSN100	
9	WSN Trainer using Raspberry Microcontroller and Wifi	RASPWIFIWSN100	
10	WSN Trainer using Beaglebone Microcontroller and Wifi	BBWIFIWSN100	
11	WSN Trainer using Raspberry Microcontroller and Zigbee	RASPZBWSN100	
12	WSN Trainer using Beaglebone Microcontroller and Zigbee	BBZBWSN100	
13	WSN Trainer using Lora Wireless	LOWAWSN100	
14	WSN Trainer using Multi Wireless System	WSNMWL100	
15	GSM Gateway for Wireless Sensors Network	MOBILEWSN100	

(F)	IOT Hardware Trainers		
1	Basic IoT Trainer using Free Website Server	IOT100	
2	Arduino IOT Trainer with Real IOT Server	ARDUINIOT100	
3	Raspberry IOT Trainer with Real IOT Server	RASBRIOT100	
4	Beaglebone IOT Trainer with Real IOT Server	BBONEIOT100	
5	Advanced IOT Trainer using Raspberry PI Micro Controller	IOT100S	
6	IOT Trainer using Satellite Network	SATIOT100	
7	IOT Trainer using Fiber Optic Network	FOTIOT100	
8	IOT Trainer using Mobile Network	MOBIOT100	
9	Multi Wireless Multi Cross Platform Raspberry-Arduino-BeagleBone Trainers	ARDRASPBB100	
(G)	IOT Data Processing, Software and Technologies		
1	Virtual Reality - VR	VR100	
2	Augmented Reality - AR	AR100	
3	Mixed Reality - MR	MR100	
4	3D Printers IOT	3DPRT100	
5	Smart Haptic Technology	HAPTIK100	
6	360 Video IOT	360VD100	
7	APIs	API100	
8	Artificial Intelligence Trainer - AI	AIN100	
9	Block Chain	BLOCKCHAIN100	
10	Cloud - Servers - Content Delivery Network – CDN	CLOUD100	
11	Fog computing and Edge computing	FOG100	
12	Neural Network and Cryptonets	NN100	
13	Cyber Security - Cyber Crime	CYBERSYC100	
14	Data Analytics	DATAANA100	
15	Big Data Analysis Software Trainer	BIGDATA100	
16	HADOOP Software Trainer	HADOOP100	
17	Data Center	DATACNT100	
18	Data Encryption and Description Trainer	DCE100	
19	Data Science and Data Governance	DATASC100	
20	Decision Science	DCSCIN100	
21	Machine Learning - ML	ML100	
22	Deep Learning - DL	DL100	
23	Design Thinking	DESIGNTH100	
24	Digital Solution Architecture	DIGISOL100	
25	Digital Transformation	DIGITARNS100	
26	Digital Twin Technology	DIGITWIN100	
27	Industry 4.0	UNS4-100	
28	IoT Platforms	IOTPLT100	
29	Natural Language Processing	NATLANG100	
30	IOT Software	IOTSW100	
31	Speech Processing and Synthesis	SPEECH101	
32	User Interface & User Experience - Desh Board	UIUX100	
33	Website and Mobile Application Development	MOBAPP100	

(H)	IoT Applications Trainers		
1	Smart Home IOT		
1	Smart Home IOT Trainer	SHOME100	
2	Smart Home IOT Trainer with Real IOT Server	S-HOME-IOT100	
3	Voice Controlled Smart Home IOT Trainer - AES Cloud based	VIOT100	
4	Smart Home IOT Trainer using Mobile	SHOME2200	
5	Smart Home IOT Trainer using Matlab	SHOMEMAT100	
6	Smart Home IOT Trainer using Machine Vision	SHOME100MC	
7	Smart Home - Android App Controlled - IOT Trainer	SANDROID100	
8	Smart Home Asset Tracking IOT Trainer	SASSET100	
9	Smart Television IOT Trainer	STV100	
10	Smart AC IOT Trainer	SAC100	
11	Smart Refrigerator IOT Trainer	SREFRIG100	
12	Smart Washing Machine IOT Trainer	SWMC100	
13	Smart Fan and Light Control IOT Trainer	SFANLT100	
14	Smart Gardens IOT Trainer	SGARDEN100	
15	Smart Clock IOT Trainer	SCLOCK100	
16	Smart Alarm and Routine	SALARM100	
17	Smart Coffee Machine IOT Trainer	SCOFFMC100	
18	Smart Gadgets IOT Trainer	SGADZETS100	
19	Smart Doorbell IOT Trainer	SDOORBELL100	
20	Smart Camera IOT Trainer	SCAMERA100	
21	Smart Internet TV IOT	SITV100	
22	Smart Microwave Oven IOT Trainer	SOVENITO100	
23	Smart Metering IOT Trainer	SMET100	
24	Smart Indoor Navigation IoT Trainer	SINDOOR100	
25	Smart Ubiquitous Home Network Trainer	SUHN100	
26	Smart Indoor Navigation IoT Trainer	SINDOOR100	
27	Smart Water Parab	SWPAB100	
28	Smart Urinary and Toilet	STOILLET100	
29	Smart Bathroom	SBATH100	
30	Smart Kitchen	SKITCHEN100	
31	Smart Lock	SLOCK100	
32	Smart Mirror	SMIRROR100	
33	Smart Dressing	SDRESS100	
34	Smart Socks IOT	SSOCK100	
35	Smart Bra	SBRA100	
36	Smart Intercom	SINTCOM100	
37	Smart EPBX	SEPBX100	
38	Smart Games IOT - GOT	GOT100	
39	Smart Remote Control IOT	SREMOTE100	
40	Smart Projector IOT	SPROJ100	
41	Smart Consumer IOT - CIOT	CIOT100	

2	Smart Office IOT		
1	Smart Office IOT Trainer	SOFFICE100	
3	Smart City IOT		
1	Smart Cities IOT Trainer	SCITI100	
2	Smart Environment IOT Trainer	SENV100	
3	Smart Air Quality IOT Trainer	SAIR100	
4	Smart Radiation Control IOT Trainer	SRAD100	
5	Smart Malls IOT Trainer	SMALLS100	
6	Smart Building IOT Trainer	SBUILDING100	
7	Smart Garbase IOT Trainer	SGARBASE100	
8	Smart Multiplex IOT	SMPLEX100	
9	Smart Temperature Control	STEMP100	
10	Smart Weather Control	SWAEATHER100	
11	Smart Water IOT Trainer	SWATER100	
12	Smart Museum IOT		
4	Smart Hotels IOT		
1	Smart Hotels IOT Trainer	SHOTEL100	
2	Smart Restaurant IOT Trainer		
5	Smart Banks IOT		
1	Smart Banks IOT Trainer	SBANK100	
2	Smart Payments IOT Trainer	SPAY100	
3	Smart Accounting IOT Trainer	SACC100	
6	Smart Transport and Travels IOT		
1	Smart Car IOT Trainer	SCAR100	
2	Smart Vehicles Tracking IOT Trainer	SVEHICLE100	
3	Smart Vehicle Licence Plate using Machine Vision	SVEHICLEPLT100	
4	Smart Parking IOT Trainer	SPARK100	
5	Smart Transport IOT Trainer	STRANSPORT100	
6	Smart Ticketing IOT Trainer	STKT100	
7	Smart Traffic IOT Trainer	STRAFFIC100	
8	Smart Airport IOT Trainer	SAIRPORT100	
9	Smart Railway Station IOT Trainer	SRAILWAY100	
10	Smart Train IOT Trainer	STRAIN100	
11	Smart Bus Station IOT Trainer	SBUST100	
12	Smart Bus IOT Trainer	SBUS100	
13	Smart Location Mapping IOT Trainer	SLOC100	
14	Smart Cognitive Automation IOT	SCOGAUTO100	
15	Smart Car Booking - Hotel Booking - Flight Booking	SCARBOOK100	

7	Smart Services IOT		
1	Smart Post Offices IOT Trainer	SPO100	
2	Smart Courier Services	SCOURIER100	
3	Smart Logistics Control IOT Trainer - IOL	SLOGI100	
4	Smart Service IOT Trainer	SSERVICE100	
5	Smart E-Commerce IOT	SECOM100	
6	Smart Insurance IOT	SINS100	
7	Smart Online Shopping IOT	SSHOP100	
8	Smart News Channel Station Selection	SNEWS100	
8	Smart Medical - Doctors, Operation IOT		
1	Smart Body Sensor Network Trainer	SBASN100	
2	Smart Health IOT Trainer	SHEALTH100	
3	Smart Hospital IOT Trainer	SHOSPITAL100	
4	Smart Dispensary IOT Trainer	SDISP100	
5	Smart Wearable IoT Trainer	W100	
6	Smart Face Reading IOT Trainer	SFACE100	
7	Smart Fitness and Jim IOT	SJIM100	
9	Smart Wearable IOT		
1	Arduino Wearable Lilypad Micro Controller Trainer	LILYPAD100	
2	Adafruit Wearable Gemma Micro Contraoller Trainer	GEMMA100	
3	Adafruit Wearable Trinket Micro Contraoller Trainer	TRINKET100	
4	Arduino Wearable Basic IOT Trainer	ARDWRIOT100	
4	Arduino Wearable Advanced IOT Trainer	ARDWRIOT200	
4	Smart Wearable Health IOT Trainer	SHEALTH100	
4	Smart Wearable Watch Health IOT Trainer	SWERWATCH100	
10	Smart Factories - Factory, Plants, M2M, Business, Job, Industries IOT		
1	Smart Factories IOT Trainer	SFACT100	
2	Smart Robot IOT Trainer	SROBOT100	
3	Smart Drons IOT Trainer	SDRON100	
4	Smart Inventory - IOT Trainer	SINVT100	
5	Smart M2M IOT Trainer	SM2M100	
6	Smart M3M IOT Trainer	SM3100	
7	Smart SCADA IOT Trainer	SSCADA100	
8	Snart Automation IOT Trainer	SAUTO100	
9	Smart Jobs IOT Trainer	SJOBS100	
10	Smart Radiation Control	SRAD100	
11	Smart Mines Control	SMINES100	
12	Smart IIOT - Industrial IOT	SIOT100	
13	Smart Fire Safety	SFIRESAF100	
14	Smart Enterprise IOT - EIOT	SEIOT100	
15	Go-to-Market (GTM) Strategy: IoT = IT + OT	SGTM100	
16	Mindtree Digital Marketing IOT	SMINDTREE100	
17	Mission-Critical Internet of Things ("MC-IoT")	MCIOT100	

11	Smart Education - Colleges, Schools, Classes, Books IOT		
1	Smart Education IOT Trainer	SEDU100	
2	Smart Library IOT Trainer	SLIBRARY100	
3	Smart Toys IOT Trainer	STOYS100	
4	Smart Hotspot IOT Trainer	SHOTSPOT100	
5	Smart Sports IOT Trainer	SSPORTS100	
13	Smart Energy Generation IOT		
1	Smart Electricity IOT Trainer	SELE100	
2	Smart Power IOT Trainer	SPOWER100	
3	Smart Electricity Plants IOT Trainer	SELE100	
4	Smart Wind Power Generation	SWIND100	
5	Smart Solar Energy Power Genaration	SOLARPWR100	
6	Smart Water Plant - Dams IOT	WATERPLT100	
14	Smart Governement Sectors IOT		
1	Smart Governance Control	SGOVRN100	
2	Smart Navy IOT Trainer	SNAVY100	
3	Smart Army IOT Trainer	SARMY100	
4	Smart Military IOT Trainer	SMILITARY100	
5	Smart Nuculiar Science Control	SNUC100	
6	Smart Radar IOT	SRADAR100	
15	Smart Computers IOT		
1	Smart Computers Applications	SCOMAPP100	
2	Smart IOT Evaluation Trainer	SEVA100	
3	Smart Cloud Computing IOT Trainer	SCLOUD100	
4	Smart Database Search Engine	SDATABASE100	
5	Smart Data Center IOT	SDATACENT100	
16	Smart Agriculture and Earth IOT		
1	Smart Agriculture IOT Trainer	SAGR100	
2	Smart Solar Irrigation IOT Trainer	SSOLARIRG100	
17	Smart Communication IOT		
1	Smart Telehone Communication	STELECOM100	
2	Smart Power Line Communication IOT Trainer	SPOWERCOM100	
3	Smart Light Communication IOT Trainer	SLIGHTCOM100	
4	Smart Mobile IOT Trainer	SMOBILE100	
5	Smart Radio IOT Trainer	SRADIO100	
6	5G and IOT	5GIOT100	
7	5G Holography	5GHOLO100	
8	SDR, MIMO and IOT	SMIMIIOT100	
9	Smart Chatboat IOT	SCHATBOT100	
10	Mobile Banking, Digital Payments and Security	SMOBPAY100	
11	Smart Social Integration IOT Trainer	SSOCIALINTG100	
12	Smart Whatsapp Messaging and Audio Video Calling	SWHATAPP100	

18	Smart Security IOT		
1	Smart Security IOT Trainer	SSECU100	
2	Smart Surveillance-IOT Trainer	SSURV100	
3	Smart Radar IOT	SRADAR100	
4	Smart Security Camera IOT	SCAMERA100	
5	Smart Notification and Message IOT	SNOTI100	
19	Smart Animals IOT		
1	Smart Pets IOT Trainer	SPETS100	
2	Smart Forest IOT	SFOREST100	
3	Smart Birds IOT	SBIRD100	
20	Smart Refineries IOT		
1	Smart Refineries	SREFINERY100	
2	Smart Petrol Pump IOT	SPETROL100	
3	Smart Oil Factory	SOIL100	
21	Voice Controlled IOT		
1	Voice Controlled IOT	VIOT100	
2	Voice Controlled Smart Home IOT	VSHOME100	
3	Voice Controlled Smart Office IOT	VSOFF100	
4	Thought Controlled IOT	THIOT100	
22	Spirituality and IOT		
1	Spiritual - Depression - Sleeping Counseling using IOT	DEPIOT100	
2	Smart Sleep IOT	SSLEEP100	
3	Internet of Thanksgiving - IoT	THANKIOT100	
4	Smart Happiness IOT	SHAPPY100	
5	Smart Thought Control IOT	THIOT100	
6	Smart Mind Control IOT	SMOND100	
(I)	IOT Material		
1	Sensors		
2	Micro Controllers		
3	Electronics Parts and Accessories		
4	Projects and Kits		
5	Books and E Books		
6	MP4 Lecture Videos		
7	Instruments		
8	Charts		
9	IOT Seminar and Exhibition at Your place		
10	IOT Short Term Training Workshops at our factory		
11	IOT Training		

	13. Analog Communication Lab		
1	Amplitude Modulation/Demodulation Trainer	COM101M	
2	DSB-SC AM Modulation/Demodulation Trainer	COM102M	
3	SSB-SC Amplitude Modulation/Demodulation Trainer	COM103M	
4	Frequency Modulation/Demodulation Trainer	COM104M	
5	PLL FM Modulation/Demodulation Trainer	COM104A	
6	Varicap Diode FM modulation/Demodulation Trainer	COM104B	
7	Ratio detector FM modulation/Demodulation Trainer	COM104C	
8	Foster-Seeley FM modulation/Demodulation Trainer	COM104D	
9	Resonant Phase Detector FM Modulation/Demodulation Trainer	COM104E	
10	Balanced Slope Detector FM Modulation/Demodulation	COM104F	
11	Reactance FM Modulation/Demodulation Trainer	COM104H	
12	Quadrature Detector FM Modulation/Demodulation Trainer	COM104J	
13	Armstrong FM modulation/Demodulation Trainer	COM104K	
14	Sampling Theorem Trainer	COM105M	
15	Pulse Amplitude Modulation/Demodulation Trainer	COM106M	
16	Pulse Width Modulation/Demodulation Trainer	COM107M	
17	Pulse Position Modulation/Demodulation Trainer	COM108M	
18	PAM-PPM-PWM Modulation & Demodulation Trainer	COM208M	
19	Time Division Multiplexing/Demultiplexing Trainer	COM109M	
20	Frequency Division Multiplexing/Demultiplexing Trainer	COM128	
21	AM Transmitter & Receiver Trainer	COM123	
22	FM Transmitter & Receiver Trainer	COM124	
23	DSB/SSB AM Transmitter Trainer	COM411S	
24	DSB/SSB AM Receiver Trainer	COM412S	
25	FM Transmitter Receiver Trainer	COM413S	
26	Phase Modulation/Demodulation Trainer	COM129L	
27	AM Communication Trainer	AMCOM100	
28	FM Communication Trainer	FMCOM100	
29	Synchronous Detector	COM101SD	
30	Matlab Simulation of Analog Communication systems	ACOM100M	
	Basic Modules for Communication		
1	Automatic gain control (A.G.C.) Trainer	AGC100	
2	Automatic frequency control (A.F.C.) Trainer	AFC100	
3	Phase Lock Loop (PLL.) Trainer	PLL100	
4	Pre-emphasis & De-emphasis Trainer	PREAM100	
5	Gaussian noise generator Trainer	GNG100	
6	Pink noise generator Trainer	PNG100	
7	Class C Single Tuned amplifier	AMP29C	
8	Noise Audio-Amplifier Trainer	NOAMP100	
9	Noise limiter Circuit	COM120LM	
10	PRBS Code (Noise) generators Trainer	PRBS100	

	15. Advanced Digital and Data Communication Lab		
1	Differential PCM system Trainer (DPCM)	DPCM100	
2	Adaptive Differential PCM Trainer (ADPCM)	ADPCM100	
3	CVSD Trainer	CVSD100	
4	Differential PSK Trainer (DPSK)	DPSK100	
5	Differential Encoded PSK Trainer (DEPSK)	DEPSK100	
6	Minimum Shift Keying Trainer (MSK)	MSK100	
7	Continuous Phase PSK Trainer	CPPSK100	
8	GMSK Modulation and Demodulation Trainer	GMSK100	
9	Quadrature Amplitude Modulation /Demodulation (QAM) Trainer	QAM100	
10	Quadrature Amplitude Shift Keying	QASK100	
11	Noise Generation and Matched Filter Trainer	COM120	
12	Noise Generation and Measurement of Noise Figure Trainer	COM120GM	
13	Error detection and correction Trainer using Hamming Code	COM121	
14	Error Detection and Correction-Cyclic Code Trainer	COM121S	
15	Digital Line Coding-Decoding Trainer	COM122	
16	CRC Coding Decoding Trainer	CRC100	
17	Reed Solomon Encoder/Decoder Trainer	RSOLO100	
18	Convolution Encoder/Decoder Trainer	CONVO100	
19	Block Code Coding Decoding Trainer	BLOCK100	
20	Source Encoder & Decoder Trainer	SOURCE100	
21	Spectrum Analyzer Trainer	SA100	
22	Harmonic Analyzer & Fourier Demonstration Trainer	COM118	
23	Fourier Synthesis Trainer	COM118S	
24	Error Probability Trainer	ERRPRB100	
25	Bit Error Rate Measurement Trainer	BITERR100	
26	Study of Eye Diagram	EYE100	
27	Direct Sequence Spread Spectrum Mod /Demod Trainer (DSSS)	DSSS100	
28	Frequency Hoping Spread Spectrum (FHSS) Modulation/Demodulation Trainer	FHSS100	
29	CDMA Trainer	CDMA100L	
30	CDMA Trainer with Bit Error Measurement	CDMA100B	
31	FDMA Trainer	FDMA100	
32	TDMA (Time Division Multiple access) Trainer	TDMA100	
33	SDMA (Space Division Multiple access) Trainer	SDMA100	
34	OFDM Trainer - QPSK Based	OFDM100	
35	OFDM Trainer - SDR Based	OFDMSDR100	
36	Simulation of Speech Coding and Decoding	SPEECH100	
37	Advance Digital Communication Matlab Simulation	ADCOMSIM100	
	16. Antenna Lab		
1	Antenna Trainer - VHF - 2 Antenna	ANT101N	
2	Antenna Trainer - VHF - 20 Antenna	ANT100	
3	Determination of Radiation Pattern of Antenna	ANT101N	
4	Transmission line Trainer	TRL100	

	17. Fiber Optic Communication		
1	Basic Fiber Optics Trainer	FOT100	
2	Determination of Numerical Aperture of Optical Fiber	FOT100A	
3	Measurement of Bending Loss in Optical Fiber	FOT100B	
4	Measurement of Propagation Loss of Optical Fiber	FOT100C	
5	Measurement of Light Attenuation of Optical Fiber	FOT100D	
6	Propagation Loss & Bending Loss in Optical Fiber	FOT100E	
7	Bandwidth of Given Fiber	FOT100J	
8	Advanced Fiber Optics Trainer	FOT200M	
9	Advanced Fiber Optic Trainer-Dual Channel & PC-PC Communication Facility	FOT200S	
10	Fiber Optic Analog Transmitter/Receiver Trainer	FOT101	
11	Fiber Optic Voice Transmitter/Receiver Trainer	FOT101V	
12	Fiber Optic AM Modulation/Demodulation Trainer	FOT101AM	
13	Fiber Optic Digital Transmitter/Receiver Trainer	FOT102	
14	Fiber Optic Analog Link	FOT101A	
15	Fiber optic Digital Link	FOT102A	
16	Analog & Digital Fiber Optic Link	FOT103A	
17	Fiber Optic Analog and Digital Transmitter/Receiver Trainer	FOT103	
18	Fiber Optic FM Modulation/Demodulation Trainer	FOT104FM	
19	Fiber Optic Voice FM Modulation/Demodulation Trainer	FOT104FMV	
20	PC To PC Communication using Optical Link	FOT105	
21	Fiber Optic Pulse Amplitude Modulation/demodulation Trainer	FOT106	
22	Fiber Optic Pulse Width Modulation/demodulation Trainer	FOT107	
23	Fiber Optic Pulse Position Modulation/demodulation Trainer	FOT108	
24	TDM Fiber Optic Trainer	FOT109	
25	Fiber Optic Data multiplexer Transmitter/Receiver Trainer	FOT109L	
26	FDM Fiber Optic Trainer	FOT128	
27	Fiber Optic Pulse Code Modulation/demodulation Trainer	FOT110	
28	Optical Communications Trainer	OPTCOM100	
29	Laser Fiber Optics Trainer	LASER100	
30	Characteristics of Laser Diode Trainer	LASERCH100	
31	Fiber Optics Power Meter	FOPM100	
32	Fiber Optic Connectorization Kit	FOC100S	
33	Characteristics of Laser Diode	OPT16	
34	Characteristics of Photo Diode	OPT04	
35	Characteristics of PIN Photo Diode	OPT04B	
36	Characteristics of APD Photo Diode	OPT04C	
37	V-I Characteristics of LED as a light source	OPT22	
38	LED Radiation Pattern Trainer	LEDPG100	
39	Frequency Response of Detector Trainer	OPT22A	
40	Mode Characteristics in Fiber Optics	FOTMODE100	
41	Characteristic of Various Sources & Detectors	FOTCH100	

	18. Audio Engineering lab		
1	3 Band AM Radio Receiver Trainer	RDM100	
2	Superhetrodyne AM Radio Trainer	RDM100S	
3	Superhetrodyne AM Radio Receiver Trainer - Sensitivity, Selectivity, Fidelity	RDM100N	
4	Signal Generator for Sensitivity, Selectivity, Fidelity	IE309A	
5	FM Radio Trainer	RDM103	
6	Superhetrodyne FM Radio Trainer	RDM103M	
7	Superhetrodyne FM Radio Trainer - Sensitivity, Selectivity, Fidelity Test	RDM103S	
8	Stereo FM Radio Trainer	RDM200	
9	AM/FM Radio Receiver Trainer	RDM102AMFM	
10	3 Band MW/SW/FM Radio Receiver Trainer	RDM102	
11	Tape Recorder Trainer	TDM100	
12	Two-in-one (Radio Cassette Recorder) Trainer	RTDM100	
13	Stereo Cassette Player Trainer	STRDM100	
14	Stereo Cassette Player Trainer with graphic equalizer	STRDM101	
15	Car Stereo Player (Auto Reverse) Trainer	STRDM102	
16	Hi-Fi Audio Amplifier Trainer	HIFIAMP100	
17	Audio CD player Trainer	ACD100	
18	PA System Trainer	PADM100	
19	PA System Trainer - 5 Mike System	PADM102	
20	Cordless Mike PA system Trainer	PADM101	
21	Intercom Trainer	ICOM100	
22	FM Intercom Trainer	FICOM100	
23	Microphones Trainer	MC100	
24	Loudspeaker Trainer	LS100	
25	Microphones and Loudspeaker Trainer	MCLS100	
26	Audio and Video Coding Software	AVCODESW100	
	Modules		
1	Radio Mixer Section	AD101	
2	BJT Mixer Trainer	AD101A	
3	Radio IF Amplifier Section	AD102	
4	Effect of -ve Feedback on Mixer & IF section	AD103	
5	Frequency Selective Network	AD104	
6	Audio Analyzer	AD105	
7	Sound Level Indicator	AD106	
8	Automatic Gain Control (A.G.C.)	AD107	
9	Pre-emphasis & De-emphasis Circuit	AD108	
10	Tone Control (Bass and Treble)	AD109	
11	Cross-over Frequency Network for Loudspeaker	AD110	
12	Audio Mixer	AD111	
13	Graphic Equalizer Trainer	AD112	
14	FET 4 Input Mixer	AD113	
15	R.F Amplifier For A.M Receiver	AD114	

	19. Video and TV Lab		
1	Black and white T.V Trainer - 14 Inch	BDM102	
2	Black and white T.V Trainer - 20 Inch	BDM101	
3	Remote Controlled Colour T.V. Trainer - 14"	CDM102	
4	Remote Controlled Colour T.V. Trainer - 21" - With Descrete Ics	CDM101S	
5	Remote controlled Colour T.V. Trainer - 21" - With Single IC	CDM101D	
6	Digital TV Trainer - 17 Inch	DTV100	
7	LCD TV Trainer - 17 Inch	LCDTV100	
8	LED TV Trainer - 17 Inch	LEDTV100	
9	Plasama TV Trainer - 40 Inch	PLASMA100	
10	3D TV Trainer	3D100	
11	Smart TV Trainer	SMARTTV100	
12	HDTV Trainer - 17 Inch	HDTV100	
13	UHDTV Trainer - 42 Inch	UHDTV100	
14	4K TV Trainer	4KTV100	
15	IP TV Trainer	IPTV100	
16	Wifi TV Trainer	WIFITXRX100	
17	Mobile TV Trainer	MOBILETV100	
18	CCTV Trainer	CCTV100	
19	Wireless CCTV Trainer	WCCTV100	
20	VCR Trainer	VCRDM101	
21	VCD player Trainer	VCD100	
22	DVD Player Trainer	DVD100	
23	BLU-RAY DVD Player Trainer	BLDVD100	
24	MP3 Audio Player Trainer	MP3-100	
25	DTH and Set Top Box Trainer	DTH100	
26	DTH and Digital TV System Trainer	DTHDTV100	
27	Home Theater System Trainer	HTS100	
28	Wifi Audio/video Transmitter Receiver Trainer	VIDEOTXRX100	
29	Video Intercom Trainer	VDICOM100	
30	Separate sections of Black and White TV	BLB100	
31	Separate sections of Colour TV	CLB100	
32	Pattern Generator – CCIR Standard	IE1044	
33	HDTV Pattern Generator	HDPG100	
34	HDTV Pattern Generator - Software Based	HDPG100S	
35	Video Compressing Techniques Software Trainer	VIDECOMP100	
	20. Consumer Electronics and Home Appliances Lab		
1	Washing Machine Trainer - Semi automatic	WMCDM100	
2	Washing Machine Trainer - Automatic	WMCDM200	
3	Microwave Oven Trainer	MICRO100	
4	Emergency Light Trainer	IMGLT100	
5	Automatic Voltage stabilizer Trainer	SSDM100	
6	Servo Voltage Stabilizer Trainer	SSDM200	
7	Inverter Trainer	INV100	
8	UPS Trainer	UPS100	

	21. Power and Industrial Electronics Lab		
1	Power Electronics Trainer	PEDM100	
2	SCR Applications Trainer	SCR100	
3	Industrial Electronics Trainer	IEDM100	
	Characteristics Trainers		
1	Characteristics of DIAC	THY01	
2	Characteristics of TRIAC	THY02	
3	Characteristics of DIAC & TRIAC	THY03	
4	Characteristics of SCR	THY04	
5	Characteristics of Uni Junction Transistor (UJT)	THY06	
6	Characteristics of MOSFET	THY09	
	Thyristor Triggering/Firing Trainers		
1	SCR triggering using R Circuit	SCR00	
2	SCR triggering using R-C Circuit	SCR01	
3	SCR triggering using LDR	SCR02	
4	SCR triggering using IC TCA 785	SCR03	
5	SCR triggering using UJT relaxation oscillator	SCR04	
6	UJT & Pulse transformer trigger circuit for SCR	SCR05	
7	PUT trigger circuit for SCR	SCR06	
8	SCR Turn On methods	SCR07	
9	SCR Triggering Circuits	SCR08	
10	SCR Triggering Circuits - R, RC, UJT	SCR08L	
11	Forced Commutation of SCR	SCR09	
12	DV/DT limitation of SCR	SCR10	
13	SCR firing circuit using LDR	SCR15	
14	SCR triggering using IC 555	SCR17	
15	SCR triggering using 74121 IC	SCR18	
16	Triggering of Triac using Diac	SCR23	
17	Triac Triggering using R-C Circuit	SCR24	
18	UJT Trigger Circuit using DIAC	SCR25	
	Rectifiers Trainers		
1	Single Phase Half Wave Rectifier Trainer	RECT01	
2	Single Phase Full Wave Rectifier Trainer	RECT02	
3	Single Phase Full Wave Bridge Rectifier Trainer	RECT03	
4	Three Phase Half Wave Rectifier Trainer	RECT04	
5	Three Phase Full Wave Bridge Rectifier Trainer (Polyphase Rectifier)	RECT05	
6	Three Phase Half and Full wave Rectifier Trainer	RECT04-05	
7	Single Phase Half Wave Controlled Rectifier using RC Triggering	RECT06	
8	Single Phase Half Wave Controlled Rectifier Trainer	RECT11	
9	Single Phase Full Wave Controlled Rectifier Trainer	RECT12	
10	Single Phase Half Control Bridge (Semi Converter) Rectifier Trainer	RECT13	
11	Single Phase Full Controlled Bridge Rectifier Trainer	RECT14	

	Power Control Trainers		
1	Over voltage Crowbar protection using SCR	PWR01	
2	AC Phase Control using SCR	PWR03	
3	AC Phase control using Diac and Triac	PWR04	
4	Battery charger using SCR	PWR07	
5	Lead Acid Battery Charger using IC555	PWR07A	
6	Car Mobile Charger Using IC 555	PWR07B	
7	Battery Monitor using IC LM324	BMT101	
8	Fan regulator using Diac and Triac	PWR08	
9	Lamp control (Dimmer) using Diac and Triac	PWR09	
10	Triac as Light Dimmer	PWR09A	
11	Triac AC Line switching	PWR10	
12	Illumination Control Using SCR	PWR11	
13	AC Phase control using Diac and Triac and UJT	PWR12	
14	Phase Shift Control RC Base Using SCR & Triac	PWR14	
15	Study of TRIAC and AC Phase Control	PWR21	
16	Single Phase AC Regulator using IC 785	PWR23	
17	Single Phase AC Voltage controller	ACREG100	
18	SMPS Trainer	SMPS100	
19	Buck converter Trainer	BUCK100	
20	Boost converter Trainer	BST100	
21	Buck- Boost converter Trainer	BUCKBST100	
	Inverters Trainers		
1	Inverter using transistors	INV01	
2	Inverter using Power MOSFET	INV02	
3	Series Inverter using SCR	INV05	
4	Parallel Inverter using SCR	INV06	
5	Single phase half bridge inverter	INV07	
6	Mc-Murray Half Bridge Inverter	INV08	
	Choppers and Cycloconverters Trainers		
1	Chopper using SCR	CHOP01	
2	Step down Chopper using MOSFET	CHOP01N	
3	Morgan Chopper	CHOP02	
4	Step down Chopper using IGBT	CHOP02N	
5	Jones Chopper	CHOP03	
6	Step-Up Chopper Trainer	CHOP04	
7	Step- down Chopper Trainer	CHOP05	
8	Step down & Step up transistor chopper	CHOP04-05	
9	Power MOSFET Chopper	CHOP06	
10	IGBT Chopper	CHOP07	
11	Single Phase to Single Phase Cycloconverter Trainer	CYCLO100	

	22. Instrumentation & Measurements Lab		
1	Instrumentation Trainer	INS100	
2	Transducer Trainer	TRANSDM100	
3	Programmable Logic Controller (PLC) Trainer	PLC100	
4	Temperature Transducer Trainer	TEMP100	
5	Measurement & Control of Temperature using RTD	TR01	
6	Measurement of Temperature using RTD	TR01A	
7	Measurement & Control of Temperature using Thermocouple	TR02	
8	Measurement of Temperature using Thermocouple	TR02A	
9	Measurement & Control of Temperature using Thermistor	TR03	
10	Measurement of Temperature using Thermistor	TR03A	
11	Measurement & Control of Temperature using Semiconductor Sensor	TR04	
12	Measurement of Temperature using AD590 IC Sensor	TR04A	
13	Characteristics of IC Temperature sensor (LM35)	TR04B	
14	Measurement & Control of Temperature using SCR	TR05	
15	Measurement of Displacement using LVDT	TR06	
16	Measurement of Displacement using Inductive Transducer	TR07	
17	Measurement of Displacement using Resistive Transducer	TR08	
18	Measurement of Angular Displacement using Capacitive Transducer	TR09	
19	Measurement of Angular Displacement using Potentiometric Transducer	TR10	
20	Measurement of Load using Strain gauge transducer	TR11	
21	Measurement of Pressure using Pressure transducer	TR12	
22	Measurement of Load using Strain gauge with Load Cell transducer	TR13	
23	Measurement of Force using Force transducer	TR14	
24	Measurement of Speed using Opto transducer	TR15	
25	Measurement of Speed using Inductive pick-up transducer	TR16	
26	Measurement of Speed using Magnetic pick-up transducer	TR17	
27	Measurement of Speed using Photo Reflective transducer	TR18	
28	Measurement of Speed using Capacitive Proximity sensor	TR19	
29	Water level controller using Metallic sensor	TR22	
30	Measurement of Intensity of Light using LDR	TR24	
31	Optical Transducer Trainer	TR25	
32	Measurement of Distance using Ultrasonic transducer	TR26	
33	Measurement of Flow using Rotometer Flow transducer	TR29	
34	Measurement of Humidity using Humidity Sensor	TR30	
35	Vibration Measurement using Piezo Electric Transducer	TR33	
36	Solar Cell application Trainer	TR36	
37	Measurement of RMS voltage	TR46	
38	Measurement of Average voltage	TR47	
39	Measurement of Peak voltage	TR48	

	23. Control Lab		
1	Open Loop Control System	CNT01	
2	Closed Lop Control system	CNT02	
3	Closed Loop P.I.D. Control System	CNT04	
4	Basic feedback control system	CNT05	
5	Type '0' Control system	CNT06	
6	Type '1' Control system	CNT07	
7	Type '2' Control system	CNT08	
8	Test signal generator for Type 0,1,2 systems	CNT09	
9	Type 0,1,2 systems with Test signal generator	CNT09F	
10	Feed Forward Control system	CNT13	
11	P Control system	CNT14	
12	P. Temperature Control system	CNT14T	
13	P-I Control system	CNT15	
14	P-I Temperature Control system	CNT15T	
15	P-D Control system	CNT16	
16	P-D Temperature Control system	CNT16T	
17	PID Control System	CNT17	
18	PID Temperature Control System	CNT17T	
19	Lead-Lag Networks (Passive and Active)	CNT18	
20	Potentiometric as Error Detector Trainer	CNT19S	
21	Bode Plot Trainer	CNT21	
22	Linear System Simulator	CNT22	
23	Control System Lab	CNT100	
24	First and Second Order Control System	CNTFS100	
	24. Instruments Lab		
1	Seven Segment DPM Trainer	DPMDM100	
2	Digital Multimeter Trainer - LED version	DMMDM100	
3	Loading Effect of Multimeter	DMMDM100A	
4	Digital multimeter Trainer - LCD version	DMMDM101	
5	Digital Voltmeter Trainer	DVMDM100	
6	Digital Frequency counter Trainer	DFCDM100	
7	Function generator Trainer	FGDM100	

	25. Bio-Medical Instrumentation Lab		
1	Biomedical Instrumentation Trainer	BME100	
2	ECG (Electro Cardio Graph) Trainer	ECG100	
3	ECG Simulator	ECG100S	
4	ECG Electrodes	ECGETD100	
5	Electro-Encephalograph (EEG) Trainer	EEG100	
6	EEG Simulator	EEG100S	
7	EEG Electrodes	EEGETD100	
8	EEG Amplifier	EEGAMP100	
9	Electro-Myograph (EMG) Trainer	EMG100	
10	EMG Electrodes	EMGETD100	
11	Heart Rate Monitor cum ECG Trainer	HRATE100	
12	Heart Pulse Rate Measurement Trainer	PRATE100	
13	Pacemaker Trainer	PACE100	
14	Respiration-Rate Monitor	RESPI100	
15	Blood Pressure Measurement Trainer	BPR100	
16	Body Temperature Measurement Trainer	BTEMP100	
	26. Data Compression and Encryption Lab		
1	Intrusion Detection System - Hardware	DCE100	
2	Firewall Design - Hardware		
3	Antivirus Techniques - Software		
4	Digital Immune Systems - Software		
5	Biometric Authentication - Hardware		
6	Ethical Hacking - Software		
7	Message Authentication - Software		
8	Digital Signature Algorithm - Software		
9	Cryptography - Software		
10	Stenography Cryptographic Attacks - Software		
11	Intra Frame Coding - Software		
12	Motion Estimation And Compensation - Software		
13	Introduction To Mpeg2 H.264 Encoder And Decoder - Software		
14	PCM Trainer - Hardware		
15	DPCM Trainer - Hardware		
16	Lossy Sound Compression - Hardware and Software		
17	Loss Less Compression And Lossy Compression - Hardware and Software		
	27. Nano - MEMS Lab		
1	Nano Electronics Trainer	NANO100	
2	MEMS Lab Trainer	MEMS100	

	28. Microprocessors Lab		
1	8085 Microprocessor Trainer	MP8085	
2	8086 Microprocessor Trainer	MP8086	
3	8051 Micro Controller Trainer	MP8051A	
4	8212 study card		
5	8237 study card		
6	8251 study card - USART Trainer		
7	8253 study card		
8	8253 study card		
9	8255 study card		
10	8257 study card		
11	8259 study card		
12	8279 study card		
13	8155 study card		
14	ADC study card		
15	DAC study card		
16	Interfacing Matrix Keyboard		
17	Interfacing LED Display		
18	Interfacing LCD Display		
19	Interfacing Stepper Motor		
20	Controlling DC motor using PWM		
21	Interfacing to Sensor		
22	Interfacing Hex Keypad		
23	Interfacing of Relay		
24	Traffic Controller Study Card		
25	Thumbwheel interface Study card		
26	Elevator Simulator card		
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1	FPGA Trainer	FPGA100	
2	CPLD Trainer	CPLD100	
3	VLSI Trainer	VLSI100	
4	Spartan-3 Trainer	SPARTAN3AN-100	
5	Spartan-6 Trainer	SPARTAN6-100	
6	Spartan Universal Development Trainer	UNIDEV100	
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2	Digital Signal Processing Trainer	DSP6713	
3	Digital Signal Processing Trainer	DSP6745	
4	Digital Signal Processing Trainer	DSP2812	
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2	5-Axis Robotics Trainer	ROBOT101	

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2	Discrete Component Trainer	DCTDM100	
3	Discrete Component Trainer	DCTDM101	
4	Electronic Circuits Application Lab	ESDM100	
5	Basic Electronics Trainer	BASICEL100	
6	Transistor Circuit Designer/Trainer	TRCDM100	
7	Component Development System Trainer	CDS100	
8	Analog Training Kit	ANALOG100	
9	Analog Lab Trainer	ANALOG100S	
10	Advanced Analog Lab Trainer	ANALOG100AD	
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3	Characteristics of Zener Diode	D02	
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12	Characteristics of Power Diode	D13	
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16	Characteristics of Transistor - CE, CB, CC - NPN	T100N	
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18	Characteristics of Transistor - CE	T01A	
19	Characteristics of Transistor - CB	T01B	
20	Characteristics of Transistor - CC - Emitter follower	T01C	
21	Transistor characteristics (CE-NPN)	T01AN	
22	Transistor characteristics (CE PNP)	T01AP	
23	Transistor characteristics (CB-NPN)	T01BN	
24	Transistor characteristics (CB-PNP)	T01BP	
25	Transistor characteristics (CC-NPN)	T01CN	
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30	Characteristics of Field Effect Transistor (FET) - N and P Channel	T02NP	
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8	Characteristics of Photo-Transistor	THY08	
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	33. Linear Electronics Lab		
	Main Boards		
1	Linear IC Trainer - Big	LICDM100	
2	Linear IC Trainer	LICDM101	
3	Opamp Trainer - Big	OPAMP100	
4	Opamp Trainer	OPAMP101	
5	OP-Amp Characteristics Trainer	OPCH100	
6	Opamp Applications Trainer	OP100	
7	Analog Computer Trainer	ANACOMP100	
8	Analog Square & Square Root Circuit	ANSQ100	
9	IC 741 Trainer	DM741	
10	555 Timer IC Trainer	DM555	
11	555 Application Trainer	DM555AP	
	Amplifiers		
1	Opamp as Inverting & Non Inverting Amplifier	OPA01	
2	Opamp as Inverting Amplifier	OPA02	
3	Opamp as Inverting Summing Amplifier	OPA02A	
4	Opamp as Adder & Subtractor	OPA02B	
5	Opamp as Adder	OPA02C	
6	Opamp as Subtractor	OPA02D	
7	Opamp as Non Inverting Amplifier	OPA03	
8	Opamp as Non Inverting Summing Amplifier	OPA03A	
9	Opamp as Summing & Difference amplifier	OPA04	
10	Opamp as Summing amplifier	OPA05	
11	Opamp as Difference amplifier	OPA06	
12	Opamp as Differentiator & Integrator	OPA07	
13	Opamp as Differentiator	OPA08	
14	Opamp as Integrator	OPA09	
15	Opamp as Voltage Follower (Buffer)-unity gain	OPA10	
16	Opamp Current Follower	OPA11	
17	Opamp as Logarithm Amplifier	OPA12	
18	Opamp as Antilog Amplifier	OPA13	
19	Opamp as Selective Amplifier	OPA14	
20	Opamp as Scaling Amplifier	OPA15	
21	Opamp as AC Coupled Amplifier	OPA16	
22	Opamp as Inverting Amplifier with Single Supply	OPA17	
23	Opamp as Audio Amplifier	OPA18	
24	Opamp as Instrumentation Amplifier	OPA19	
25	Opamp as Inverting, Non Inverting and Voltage Follower Amplifier	OPA20	
26	Opamp as Scalar, Summer and voltage follower	OPA21	
27	IF amplifier using IC CA3028	OPA22	
28	IF amplifier using IC CA3068	OPA23	
29	Opamp as Differential I/P & Differential O/P	OPA24	
30	Opamp as AC Amplifier	OPA28	
31	Opamp as DC Amplifier	OPA29	
32	OP-AMP as Current Amplifier	OPA30	

	Oscillators		
1	Opamp as Wein Bridge Oscillator	OPO01	
2	Opamp as Voltage Controlled Oscillator	OPO02	
3	Opamp as Sine - Cosine Generator	OPO03	
4	Opamp as Square wave generator	OPO04	
5	Opamp as Pulse Generator	OPO05	
6	Opamp as Triangular Wave generator	OPO06	
7	Opamp as SAW-Tooth wave generator	OPO07	
8	Opamp as Ramp generator	OPO08	
9	Opamp as Sine/Square wave generator	OPO09	
10	Opamp as Function generator	OPO09	
11	Opamp as Staircase Generator	OPO10	
12	Opamp as R-Y-B signal Generator	OPO11	
13	Opamp as Constant Current Source	OPO12	
14	Opamp as constant voltage source	OPO12A	
15	Opamp as Square and Triangle wave generator	OPO13	
16	Voltage Controlled Oscillator Using 566	OPO14	
17	Opamp as RC Phase Shift Oscillator	OPO15	
18	Opamp as Hartley Oscillator	OPO21	
19	Opamp as Colpitts Oscillator	OPO22	
20	Opamp as quadrature Oscillator	OPO23	
	Converters		
1	Opamp as Voltage to frequency converter	CON01	
2	Opamp as Voltage to frequency Converter using IC-324	CON01A	
3	Opamp as Frequency to Voltage converter	CON02	
4	Opamp as Frequency to Voltage Converter using IC-555	CON02A	
5	Opamp as Voltage to current converter	CON03	
6	Opamp as Current to Voltage converter	CON04	
7	Opamp as Voltage to current and Current to voltage converter	CON03-04	
8	Opamp as Resistance to Current converter	CON05	
9	Opamp as Current to Resistance converter	CON06	
10	Opamp as Analog to Digital converter	CON09	
11	Opamp as Digital to Analog converter	CON10	
12	Opamp as Sinewave to Square wave converter	CON11	
13	Opamp as AC to DC converter	CON12	
14	Opamp as DC to AC converter	CON13	
15	Opamp as DC to DC converter	CON14	
	Active Filters		
1	Opamp as I order Low pass Filter	AF01	
2	Opamp as II Order Low Pass Filter	AF02	
3	Opamp as I order High Pass Filter	AF03	
4	Opamp as II order High Pass Filter	AF04	
5	Active Filter (HPF & LPF) Trainer	AF01-03	
6	Opamp as Low pass and High pass (1st & 2nd Order) Filters	AF01-04	

7	Opamp as Band pass filter	AF05	
8	Opamp as Narrow Band pass filter	AF05A	
9	Opamp as Band Reject filter	AF06	
10	Opamp as narrow Band Reject filter	AF06A	
11	Opamp as Notch filter	AF07	
12	Opamp as Active State-Variable (Universal) Filter	AF08	
13	Opamp as Bi-quad filter	AF09	
14	Opamp as Cavity filter	AF10	
15	Butter Worth Low pass Filter - I, II, III order	AF11	
16	Opamp as 4th Order Low Pass Filter	AF11A	
17	Butter Worth High pass Filter - I, II, III order	AF12	
18	Chebyshev Low Pass Filter - I, II, III order	AF13	
19	Digital Comb filter	AF14	
20	Elliptic Filter	AF15	
21	Opamp as All Pass Filter	AF16	
22	Digital Comb filter	AF22	
23	Narrow Band Pass Filter using IGMF configuration	AF23	
24	Friend Deliyannis Bandpass filter	AF26	
25	Active Filters Trainer	AFDM100	
26	To measure characteristics of different filters using spectrum	AFDM100S	
27	Active and Passive Filter Trainer	PF-AF100	
	Voltage Regulators		
1	Opamp as Precision Half and Full-Wave Rectifier	OPR01	
2	Op - Amp as Precision Half - Wave Rectifier	OPR01A	
3	Op - Amp as Precision Full - Wave Rectifier	OPR01B	
4	78XX and 79XX Series Voltage regulator	OPR02	
5	Under voltage monitoring using Opamp	OPR03	
6	RPS using IC Opamp 741	OPR04	
	Comparators		
1	Opamp as Comparator	CMP01	
2	Opamp as Window Comparator (detector)	CMP02	
3	Opamp as Schmitt trigger	CMP03	
4	Opamp as Voltage limiter	CMP04	
5	Comparator using IC 710	CMP07	
	Detectors		
1	Opamp as Zero crossing detector	DET01	
2	Opamp as Peak detector	DET02	
3	Opamp as R.M.S. detector	DET03	
	Characteristics & Other Applications		
1	Opamp Characteristics and Testing Methods	OP01	
2	JFET Op-amp Characteristics	OP02	
3	Opamp as Gyrator (Synthetic Inductor)	OP07	
4	Clamping circuits using Opamp	OP09	

5	Clipping circuits using Opamp	OP10	
	Timers		
1	Timer using transistors	TIM01	
2	Counter using 555	TIM02	
3	Twilight Switch using 555 and LDR	TIM03	
4	Burglar Alarm using 555 and LDR	TIM04	
5	Touch Switch using 555	TIM05	
6	Electronic Timer using IC555	TIM06A	
7	Repetitive Electronic Timer	TIM06B	
8	Timer Circuit, Exciting a Time-delay Relay	TIM12	
9	Time Delay Relay	TIM13	
10	Opamp 741 Timer	TIM14	
11	Sequential Timer using 555	TIM15	
12	Timer Application IC 555 No. 1	TIM16	
13	Timer Application IC 555 No. 2	TIM17	
14	Siren using timer IC	TIM18	
15	AC Timer Using IC 555	TIM24	
16	DC Timer Using IC 555	TIM27	
	Multivibrators and 555		
1	Multivibrator using IC 555	TIM19	
2	555 Timer as Monostable Multivibrator	TIM06	
3	555 Timer as Bistable Multivibrator	TIM07	
4	555 Timer as Astable Multivibrator	TIM08	
5	Monostable Multivibrator using IC 74121	TIM25	
6	Monostable Multivibrator using IC 74122	TIM26	
7	Multivibrator using Opamp	TIM20	
8	Opamp as Astable Multivibrator	TIM21	
9	Opamp as Bistable Multivibrator	TIM22	
10	Opamp as Monostable Multivibrator	TIM23	
11	IC 555 as Frequency Divider	TIM28	
12	IC 555 as Schmitt's Trigger	TIM29	
13	Sawtooth Generator using 555	TIM35	
	Phase Lock Loop (PLL)		
1	Phase lock loop (PLL) using 565	PLL100	
2	PLL as Frequency Multiplier & Synthesizer (Frequency Translator)	PLL02	
3	PLL as Voltage Controlled Oscillator (VCO)	PLL03	
4	Phase Detection and Measurement using PLL	PLL04	
5	PLL as Phase Discriminator	PLL07	

	34. Digital Electronics Lab		
	Main Boards		
1	Digital IC Trainer	DICDM100	
2	Digital IC Trainer	DICDM100M	
3	Digital IC Trainer - OR, AND, NOT, NAND, NOR, EXOR	DICDM101	
4	Digital I.C. Trainer - CMOS	DICDM102	
5	Digital Gates Trainer	DG100	
6	Digital Logic Trainer - TTL	DLTDM100	
7	Digital Logic Trainer - CMOS	DLTDM101	
8	Digital Logic Trainer - TTL & CMOS	DLTDM100-101	
9	Digital IC Trainer (Universal Trainer) with ZIP Socket	DICDM100P	
10	Breadboard Trainer	BBDM100	
11	Linear & Digital Bread Board Trainer	BBDM102	
12	Powered Project Board	PPBRD100	
13	Digital Lab Trainer	BBDM100S	
14	Analog Digital Trainer	ANADIGI100	
	Logic Gates		
1	AND Gate	DLG01	
2	OR Gate	DLG02	
3	NOT Gate	DLG03	
4	NAND Gate	DLG04	
5	NOR Gate	DLG05	
6	EX-OR Gate	DLG06	
7	EX-OR Gate & EX-NOR Gate	DLG07	
8	OR/NOR Gate	DLG08	
9	AOI Gate - (AND-OR-INVERTER) (Expander)	DLG09	
10	Coincidence Gate	DLG10	
11	Schmitt Trigger	DLG11	
12	Buffer using IC 74245	DLG12	
13	Open Collector (OC) and wired gates	DLG13	
14	NAND gate as Universal Gate	DLG14	
15	NOR gate as Universal Gate	DLG15	
16	Basic Gates - AND-OR-INVERTER	DLG15A	
17	NAND/NOR gate as Universal Gate	DLG14-15	
18	Basic Logic Gates using Diode and Transistors	DLG16	
19	Basic Logic Gates Trainer - OR, AND, NOT	DLG16L	
20	De-Morgan's Theorems verification	DLG17	
21	Boolean Algebra Trainer	DLG18	
22	Universal Logic gates	DLG19	
23	NAND, NOR Inverter Gates	DLG20	
24	Navigation logic Products: $-A.B = A+B$	DLG30	
25	Propagation Delay of TTL Logic Gate	DLG32	

	Flip-Flops and Latches		
1	R-S Flip Flop	DFF01	
2	D Flip Flop	DFF02	
3	T Flip Flop	DFF03	
4	J-K Flip Flop	DFF04	
5	Negative and Positive Edge Triggered Flip Flops	DFF04A	
6	Master-Slave JK Flip Flop using IC 7476	DFF05	
7	Master-Slave JK Flip Flop using Gates	DFF05A	
8	Master-Slave JK Flip Flop using IC 4027	DFF05B	
9	Flip Flops Trainer - R-S, J-K, T & D	DFF100	
10	R-S, J-K, T & D Flip Flops using NAND & NOR Gates	DFF101	
	Counters		
1	4 Bit Binary Counter using IC 7493 - Synchronous	DCO01	
2	4 Bit Decade Counter using IC 7490 - Synchronous	DCO02	
3	Two Stage Decade Counter - Synchronous	DCO02A	
4	IC 7493 as Divide By 8 & Divide By 16	DCO02B	
5	4 Bit Modulo - N Counter (N= 2to 9) using IC 74176- Synchronous	DCO03	
6	4 Bit Modulo - N Counter (N= 2 to 16) using IC 74163 - Synchronous	DCO03A	
7	4 Bit Modulo 10 Counter IC 7490 - Synchronous	DCO03B	
8	4 Bit Programmable (Presettable) Counter - Synchronous	DCO04	
9	4 Bit Binary Up/down Counter - Synchronous	DCO05	
10	8 Bit Binary Up/down Counter - Synchronous	DCO05A	
11	4 Bit Binary and decade up/down Counter - Synchronous	DCO05B	
12	2-Bit Binary Up/down Counter - Synchronous	DCO05C	
13	4 Bit Binary Up/down Counter - Asynchronous	DCO05C	
14	Divide by 60 Counter using Ripple Counter	DCO05C	
15	Divide by 100 Counter using CMOS IC	DCO05D	
16	Synchronous Up/down Counter	DCO05E	
17	4 Bit BCD Counter - Synchronous	DCO06	
18	8 Bit BCD Counter - Synchronous	DCO07	
19	4 Bit Binary Counter - Asynchronous	DCO08	
20	4 Bit Up-Down counter using IC 7473 - Asynchronous	DCO08A	
21	4 Bit Up- Down counter - Synchronous	DCO09	
22	3 Bit Up/Down Ripple Counter - Asynchronous	DCO09A	
23	3 Bit Counter using IC 7476 - Synchronous	DCO09B	
24	4 Bit Binary Ripple Counter using IC 7476 - Asynchronous	DCO10	
25	4 Bit Ring counter using IC 7474 - Synchronous	DCO11	
26	Ring Counter using Shift Registers - Synchronous	DCO12	
27	Johnson Counter Trainer	DCO13	
28	Asynchronous Decade Counter	DCO16	
29	Divide by 12 - counter using IC-74177	DCO18	
30	Asynchronous Binary and Decade Counter	DCO35	
31	Divide by 60 Counter using Synchronous Counter	DCO35A	
32	Counters Trainer	DCO100	

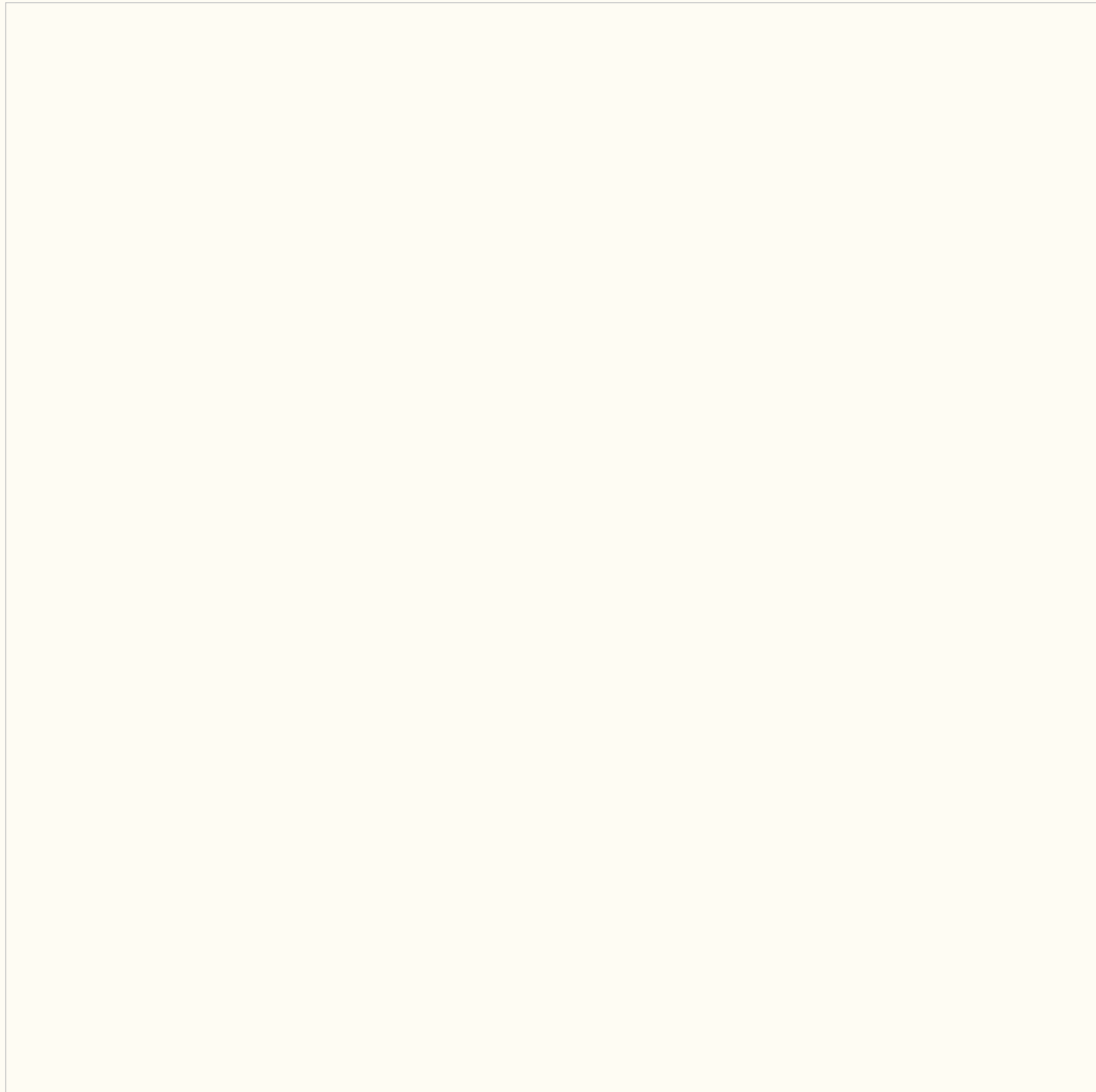
	Shift Registers		
1	Shift Registers Trainer - using IC 7495	DSR00	
2	Parallel to Serial Shift register - using IC 7495	DSR01	
3	Parallel to parallel Shift register - using IC 7495	DSR02	
4	Serial to Parallel Shift register - using IC 7495	DSR03	
5	Serial to Serial Shift register - using IC 7495	DSR04	
6	Left Shift - Shift register - using IC 74194	DSR05	
7	Right Shift - Shift register - using IC 74194	DSR06	
8	Universal Shift Register using IC 7495	DSR07	
9	Universal Shift Register using IC 74LS194	DSR08	
10	Shift Register using D Flip flops	DSR09	
11	Shift Register using Ring Counter	DSR11	
12	4 Bit Buffer Register using 4 Bit Register IC	DSR11A	
13	Various types of Counters & Shift register	DSRDCO100	
14	Logic Trainer For Sequential Logic	SYQLG100	
15	Combination Logic Trainer	COMBLG100	
	Multiplexers / Demultiplexer		
1	BCD to Seven Segment Display Decoder Driver	DENC01	
2	Multiplex Display LED	DENC01A	
3	Multiplexer Trainer - 8 to 1 - using IC 74151	DENC02	
4	Multiplexer Trainer - 4 to 1 - using IC 74153 - Dual	DENC02A	
5	Multiplexer Trainer - 16 to 1 - using IC 74150	DENC02B	
6	Multiplexer Trainer - 4 to 1 - using Logic gates	DENC02C	
7	Multiplexer Trainer - 8 to 1 and 16 to 1	DENC02D	
8	Demultiplexer Trainer - 1: 8 - using IC 74138	DENC03	
9	Demultiplexer Trainer - 4 to 1 - using IC 74155	DENC03A	
10	Demultiplexer Trainer - 16 to 1 - using IC 74154	DENC03B	
11	Demultiplexer Trainer - 1 to 8, 1 to 16	DENC03C	
12	3 to 8 Line Decoder/Demultiplexer using IC 74138	DENC04	
13	4 to 16 Line Decoder/Demultiplexer using IC 74154	DENC05	
14	Multiplexer / Demultiplexer - 8 lines using IC 74151 - 74138	DENC06	
	Encoders /Decoders		
1	Key Encoder (4x4 Matrix)	DENC07	
2	NAND Gate Encoder - Decimal to BCD	DENC08	
3	Various Decoders using IC	DENC09	
4	Display Devices Trainer	DENC10	
5	Multiplexer /Demultiplexer - Coder/Decoder Trainer	DENC11	
6	Encoder / Decoder Trainer (Encoder IC74138 & Decoder IC7447)	DENC12	
7	Encoder Trainer - 8 to 1 Line using IC 74138	DENC13	
8	Encoder using IC 74147	DENC13A	
9	Encoder - 8 to 1, 16 to 4	DENC13B	
10	Decoder Trainer - 1 to 8	DENC14	
11	Decoder using IC 7447	DENC14B	

	Code converters		
1	Binary to Decimal Encoder	DCONV01	
2	Binary to BCD converter	DCONV02	
3	Binary to gray converter	DCONV03	
4	Decimal to Binary Encoder	DCONV04	
5	Hexadecimal to Binary Decoder	DCONV04A	
6	BCD to Binary converter	DCONV05	
7	BCD to Binary and Binary to BCD converter	DCONV02-05	
8	Gray to Binary converter	DCONV06	
9	Binary to Gray and Gray to Binary Converter	DCONV03-06	
10	Decimal to BCD decoder	DCONV07	
11	Decimal To Hex Decoder	DCONV07-12	
12	BCD to Decimal Decoder using IC 7442	DCONV08	
13	BCD to Decimal Decoder using IC 7445	DCONV08A	
14	BCD to Excess-3 converter	DCONV09	
15	Excess-3 to BCD converter	DCONV10	
16	Excess-3 to Decimal converter	DCONV11	
17	BCD to HEX converter	DCONV12	
18	BCD to Seven segment decoder	DCONV14	
19	Priority Encoder	DCONV20	
20	Binary To Excess-3 Code Converter	DCONV21	
21	OCTAL to BCD Encoder	DCONV22	
22	Octal to Binary Encoder	DCONV23	
23	Code converter	DCONV100	
	Analog to Digital / Digital to Analog Converters		
1	Analog to Digital converter - 8 Bit using ADC0800	ADC100	
2	A/D Converter Trainer- 4 Bit	ADC100L	
3	A/D Converter Trainer- 8 Bit	ADC100S	
4	Analog to Digital / Digital to Analog converter Trainer- 8 Bit	ADCDAC100	
5	Analog to Digital / Digital to Analog converter Trainer- 4 Bit	ADCDAC100L	
6	Simultaneous type Analog to Digital converter	ADC101	
7	Ramp Type Analog to Digital converter - 4 Bit	ADC102	
8	Ramp Type Analog to Digital converter - 8 Bit	ADC102-8	
9	Successive Approximation Analog to Digital converter	ADC103	
10	Successive approximation of DVM	ADC103A	
11	Dual Slope Analog to Digital converter Trainer	ADC104	
12	Digital to Analog converter - 8 Bit using DAC0800	DAC100	
13	D/A Converter Trainer - 4 Bit	DAC100L	
14	D/A Converter Trainer - 8 Bit	DAC100S	
15	Weighted Resistor Digital to Analog converter - 4 Bit	DAC101	
16	Weighted Resistor Digital to Analog converter - 8 Bit	DAC101-8	
17	Binary Ladder Digital to Analog converter - 4 Bit	DAC102	
18	Ladder type Digital to Analog converter - 8 Bit	DAC102-8	
19	Switched capacitor type DAC	DAC103	

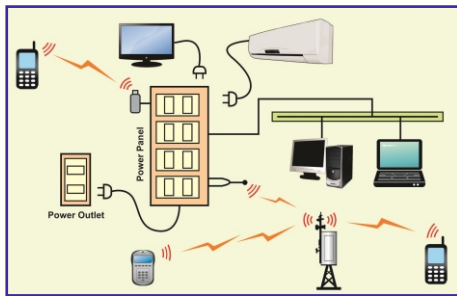
	Mathematic Operations		
1	4 Bit Half Adder and Full Adder	DMTH01	
2	4 Bit Half Adder	DMTH02	
3	4 Bit Full Adder	DMTH02C	
4	Adder using Logic Gates	DMTH02D	
5	4 Bit BCD Adder	DMTH02F	
6	2's Complement Adder	DMTH02H	
7	Carry Save Adder & Carry Ahead Adder Trainer	DMTH02I	
8	4 Bit Half Subtractor and Full Subtractor	DMTH03	
9	4 Bit Adder & 2's Complement Subtractor	DMTH03H	
10	4 Bit Half Subtractor	DMTH04	
11	4 Bit Full Subtractor	DMTH04C	
12	4 Bit BCD Subtractor	DMTH04F	
13	2's Compo. Subtractor	DMTH04G	
14	Subtractor using Logic Gates	DMTH04H	
15	4 Bit Binary Half Adder and Half Subtractor	DMTH05	
16	4 Bit Binary Full Adder and Full Subtractor	DMTH05A	
17	8 Bit Binary Adder and Subtractor	DMTH05B	
18	4 Bit BCD Adder and Subtractor	DMTH05C	
19	4 Bit Half & Full Adder and Subtractor	DMTH06	
20	4 Bit Magnitude Comparator	DMTH07B	
21	2 Bit Binary Multiplier	DMTH08	
22	Arithmetic Logic Unit (ALU) Trainer using IC 74181	DMTH09	
	Clocks		
1	Clock using NAND Gates	DCK01	
2	Pulse Stretcher	DCK02A	
3	Mono Shot	DCK02	
4	Clock circuit using Crystal	DCK03	
	Multivibrators		
1	Multivibrators using Digital IC	DMUL07	
2	Astable Multivibrator using Gates	DMUL07A	
3	Bistable Multivibrator using Gates	DMUL07B	
4	Monostable Multivibrators using Gates	DMUL07C	
5	Monostable Multivibrator using IC 4047	DMUL10	
	Memories		
1	Random Access Memory (RAM) static - 1K x 1 Bit	DM01	
2	Random Access Memory (RAM) static - 1K x 4 Bit - using IC 2114	DM02	
3	Random Access Memory (RAM) static - 16 x 4 Bit - using IC 7489	DM03	
4	EPROM Trainer - 2K x 8 Bit - using IC 2716	DM04	
5	Random Access Memory (RAM) static - 32 X 4 Bit	DM04A	

	Other Functions		
1	Parity Generator	DG01	
2	Even-Odd Parity Checker	DG02	
3	Tri-state Buffer & Bussing Technique	DG07	
4	8212 Single I/O Port	DG11	
5	Bi-directional Buffer Using IC 74245 Trainer	DG15	
6	Logic Input Generator Trainer	DG16	
7	Data Transfer 4 Bit Register	DG17	
8	Diode Matrix Trainer	DG18	
9	Determination of Noise margin in TTL Gates	DG19	
10	Switch debouncer using 7400	DG20	
11	Complement r's & (r-1)'s Complement	DG23	
12	PLL as Digital Phase Detector	DPH100	
	Characteristics		
1	TTL IC Characteristics	CHIC01	
2	ECL IC Characteristics	CHIC02	
3	CMOS IC Characteristics	CHIC03	
4	Bi-CMOS IC Characteristics	CHIC04	
5	Interfacing CMOS to TTL & TTL to CMOS ICs	CMOS01	
6	Defference Between CMOS and TTL Gates	CMOS02	
	35. Electrical Lab		
1	Electricity Lab Trainer	ELELAB100	
2	Conversion of Galvanometer into a Ammeter	EL101	
3	Conversion of Galvanometer into a Voltmeter	EL102	
4	Study of constructional features of Moving Coil Ammeter	EL104	
5	Study of constructional features of Moving Coil Voltmeter	EL106	
6	To extend the range of given Voltmeter and Ammeter	EL110	
7	Ammeter Range Extension using Shunt Trainer	EL110A	
	36. Accessories for Training		
1	All types of Softwares	All Types	
2	All types of Electronics Parts	All Types	
3	All types of Accessories	All Types	
4	All types of Projects for Students	All Types	
5	All types of Do-It-Yourself Kits for Students	All Types	
6	All types of Printed Books	All Types	
7	All types of Ebooks	All Types	
8	All types of MP4 Lecture Videos	All Types	
9	All types of Instruments	All Types	
10	All types of Charts	All Types	
11	Seminar and Exhibition at Your place	All Types	
12	Short Term Training Workshops at our factory	All Types	
13	Syllabus and Training Courses	All Types	

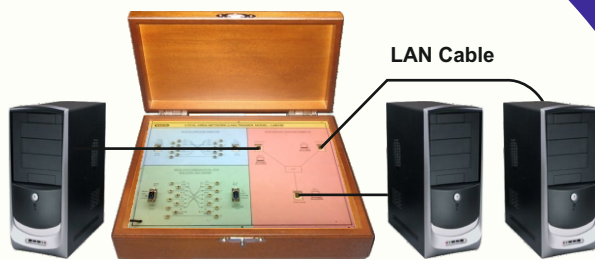
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	AHMEDABAD-380054. INDIA.		
	Phone : +91-79-26852427		
	Email : sales@sigmatrainers.com		
	Website : www.sigmatrainers.com		
	Contact : D. R. Luhar - Director		
	Mobile : +91 - 9824001168		
	Factory:-		
	SIGMA TRAINERS AND KITS		
	B-3, Hindola Complex, Below Nishan Medical Store,		
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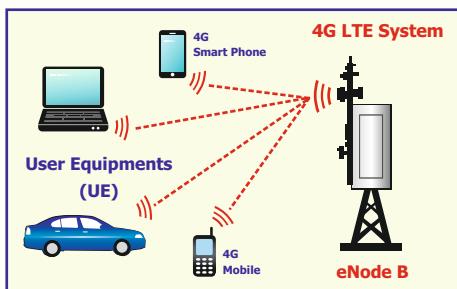
**Specification & Website
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IOT TRAINER



LAN TRAINER



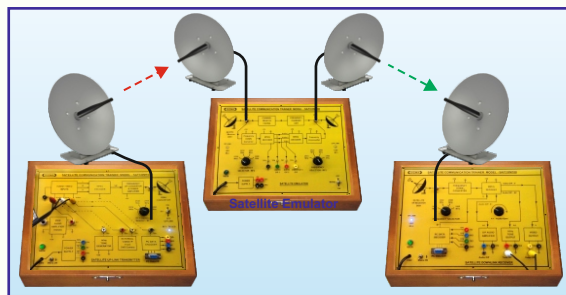
4G LTE TRAINER



WSN TRAINER



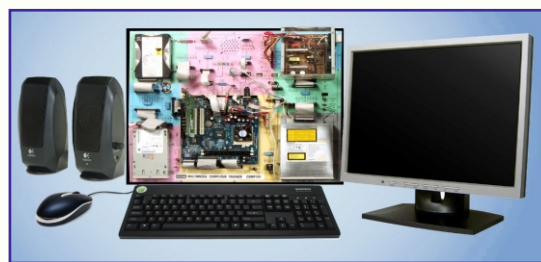
LED TV TRAINER



SATELLITE TRAINER



SDR TRAINER



COMPUTER TRAINER

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