GSAS Micro Systems Pvt Ltd is well known in the Educational Institution sphere as <u>reputed Manufacturer, Distributor of Embedded Hardware and Software Tools</u>. We offer Testing & Measuring Instruments, Microprocessor/ Microcontroller Trainers Kits, Interface Modules, ARM-based EVMs, Device Programmers, Logic Analyzers, Protocol Analyzers, PCB Fault Diagnosis Equipments, EDA Tools, FPGA Development Boards/EVMs,PC add-ons,Custom designed products and PCB design service etc.

GSAS offers LPC1768 Board to meet the requirement of Embedded Systems Lab syllabus of M.Tech 1st Semester, VITB University.

GSAS strives to deliver best in class of products with infallible support to its customers to ensure customer gratification. It is our endeavor to deliver "<u>Tomorrows Tools Today</u>" & the outcome of such an endeavor is GSAS-LPC1768 (ARM - CORTEX M3) .

GSAS offers the following boards, which suits the syllabus for Embedded Systems Lab for M.Tech 1 - 1 Sem, VITB University.
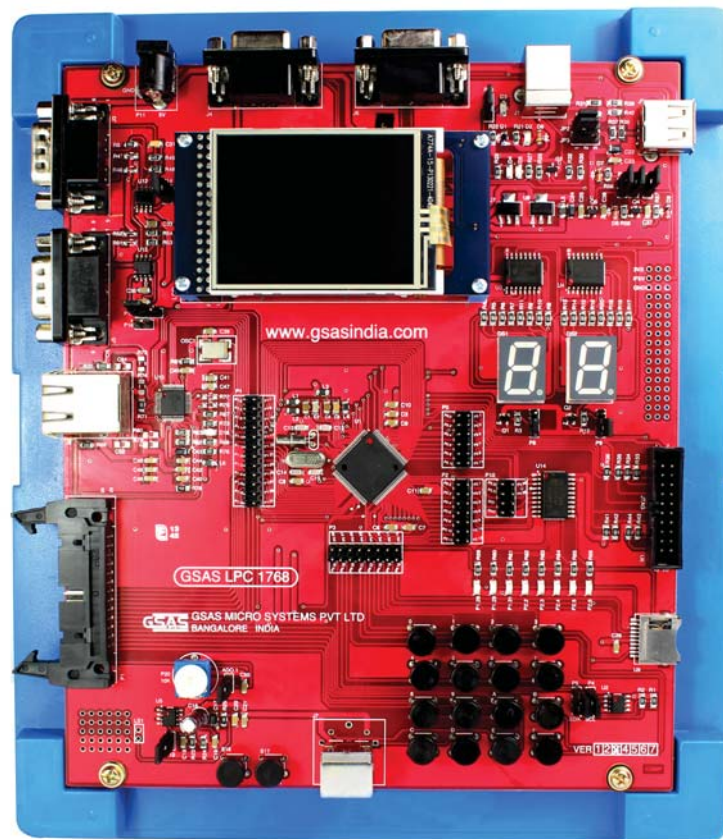
GSAS LPC1768 is an evaluation board for the NXP LPC 17XX microcontroller family. GSAS LPC 1768 allows the user to evaluate the capabilities of the NXP LPC 17XX and create real working environment with KEIL development tools.The LPC 1768 is supplied with the NXP LPC 1768, the superset of several other device variants of the NXP LPC17XX controller.

Main Features:

- GSAS LPC 1768 is powered by PCs USB port.
- GSAS LPC 1768 communicates with host PC through its on-board serial port USB/Rs-232C Port .
- On-chip 512K bytes Flash, 64k Bytes RAM are available to user.
- 100MHz NXP LPC 1768 ARM-Cortex M3 Processor.

Main Features

- Provision for USB Plug in device interface.
- Two Nos. of on chip UART ports are terminated on pin D type (Female) connectors 4 and 6.
- Provision for CAN interface. (CAN 0 and CAN 1 are terminated on two Pin D type (male) connectors 5 and 3)
- SB interface uses the standard USB connector for the full speed USB 2.0 peripheral of LPC 1768 device.
- SD memory card connector.
- The status of the port lines (P2.2 to P2.6 and P1.28,P1.2 ,P1.31)can be monitored through on board 8 LEDs
- Color VGA TFT LCD with touch screen Hardware is available for the future development by user.
- On board RESET switch(S17) and INT switch (S18).
- On-chip analog voltage regulator to feed analog input to ADC.
- Provision for onboard keyboard connector and speaker.
- Flexible configuration using jumpers.
- The prototyping area provides pads for connecting the ports P0, P1, P2 and P3.
- On-chip I2C and SPI interfaces are available to user.
- On Board Temperature sensor.
- Provision for on board Ethernet connector.
- GSAS LPC 1768 Provides 2nos. of 8 digit 7 segment displays and 4x4 matrix Hex keypad.
- On Board 20 pin TAG connector for debugging/programming various applications.

Embedded Systems Lab Experiments:

GSAS has developed the following lab experiments using Keil-vision 4 software for

GSAS - LPC1768 (ARM-CORTEX M3).

1. Write an Assembly language program to calculate 10+9+8+.........+1
2. Write a Assembly language program to link Multiple object files and link them together.
3. Write a Assembly language program to store data in RAM.
4. Write a C program to Output the "Hello World" message using UART.
5. Write a C program to Design a Stopwatch using interrupts.
6. Write an Assembly Language Program for locking a Mutex.
7. Write a SVC handler in C. Use the wrapper code to extract the correct stack frame starting location. The C handler can then use this to extract the stacked PC location and the stacked register values.

For more queries, please contact us at :- sales@gsasmspl.com

BANGALORE	HYDERABAD	Vishakapatnam	MUMBAI
sales@gsasmspl.com	hyderabad@gsasmspl.com	vizag@gsasmspl.com	mumbai@gsasmspl.com
Mob :- +91 98450 80685	Mob :- +91 90008 46051	Mob :- +91 98450 98535	Mob :- +91 98450 82950

GSAS MICRO SYSTEMS PVT LTD
106, 6th Main Rd, 2nd Phase, 2nd Stage,
Mahalakshmipuram, Bengaluru, Karnataka 560086
Ph: +91 80 23496051 Fax: +91 80 23499000
Email :- info@gsasindia.com www.gsasindia.com

Smartphone ?