

Stack Pointer

Stack is used to store temporary data, local variables and subroutine return address and interrupt calls. Of particular note is not designed to stack grows from high addresses to low addresses. Stack pointer register (SP) Always points to the top of the stack. Stack pointers to data SRAM Where physical space, where he stored subroutine call or interrupt must stack space. PUSH Instruction will make the stack pointer is decremented.

Stack SRAM The location must perform or interrupt the correct setting is enabled by software before the subroutine. Generally the stack pointer is initialized to point SRAM The highest address. The stack pointer must be set to high SRAM Start address. SRAM Address map data storage system, refer to system data storage section.

Stack Pointer instructions

instruction	Stack Pointer	description
PUSH	increase 1	Data pushed onto the stack
CALL ICALL RCALL	increase 2	Interrupts or subroutine calls the return address onto the stack
POP	cut back 1	Data taken from the stack
RET RETI	cut back 2	Interrupt or subroutine call out the return address from the stack

Assigned by the stack pointer I / O Two spaces 8 Bit register configuration. The actual length of the implementation-dependent with system stack pointer. in LGT8XM Some chip architecture, the data space is so small that only SPL Addressing can meet the need, in this case, SPH Register will not occur.

SPH / SPL Stack Pointer Register Definition

SPH / SPL Stack pointer register		
SPH: 0x3E (0x5E)		Defaults: RAMEND
SPL: 0x3D (0x5D)		
SP	SP [15: 0]	
R / W	R / W	
Bit Definitions		
[7: 0]	SPL Low stack pointer 8 Place	
[15: 8]	SPH Stack Pointer High 8 Place	

Instruction Execution Timing

This section describes the general concept of sequence execution. LGT8XM Kernel by the kernel clock (CLKcpu) Drive, the clock is directly derived from the system clock source selection circuit.

The following figure shows the instructions on the Harvard architecture and the fast access register file concept basis pipelined execution timing. This is the