The first instruction of running u-boot is in arch/arm/cpu/armv7/start.S

execute flow as follow

_start in arch/arm/cpu/armv7/start.S

|

|

\|/

ENTRY(_main) in arch/arm/lib/crt0.S

|

|

\|/

board_init_f() in arch/arm/lib/board.c

|

|

\|/

relocate_code() in arch/arm/lib/relocate.c

|

|

\|/

board_init_r() in arch/arm/lib/board.c

==========

u-boot初始化时用的stack

in crt0.S

```
ENTRY(_main)

/*
 * Set up initial C runtime environment and call board_init_f(0).
 */

#if defined(CONFIG_SPL_BUILD) && defined(CONFIG_SPL_STACK)
	ldr	sp, =(CONFIG_SPL_STACK)
#else
	ldr	sp, =(CONFIG_SYS_INIT_SP_ADDR)
#endif
	bic	sp, sp, #7	/* 8-byte alignment for ABI compliance */
	sub	sp, sp, #GD_SIZE	/* allocate one GD above SP */
	bic	sp, sp, #7	/* 8-byte alignment for ABI compliance */
	mov r9, sp		/* GD is above SP */
	mov r0, #0
	bl	board_init_f
```

in pegmatite.h

```
#define CONFIG_SYS_INIT_SP_ADDR (CONFIG_SYS_BASE_ADDR +
CONFIG_SYS_INIT_SP_SIZE - GENERATED_GBL_DATA_SIZE)
```

CONFIG_SYS_INIT_SP_SIZE = 0x800 = 2K

CONFIG_SYS_INIT_SP_ADDR = (128M - 2K) + 2K - GENERATED_GBL_DATA_SIZE = 128M - 176

include/generated/generic-asm-offsets.h

10:#define GENERATED_GBL_DATA_SIZE (176) /* (sizeof(struct global_data) + 15) & ~15 */

==========