Zolatron: Memory & Addressing

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| Last edited: | 14 Sep 2025 |

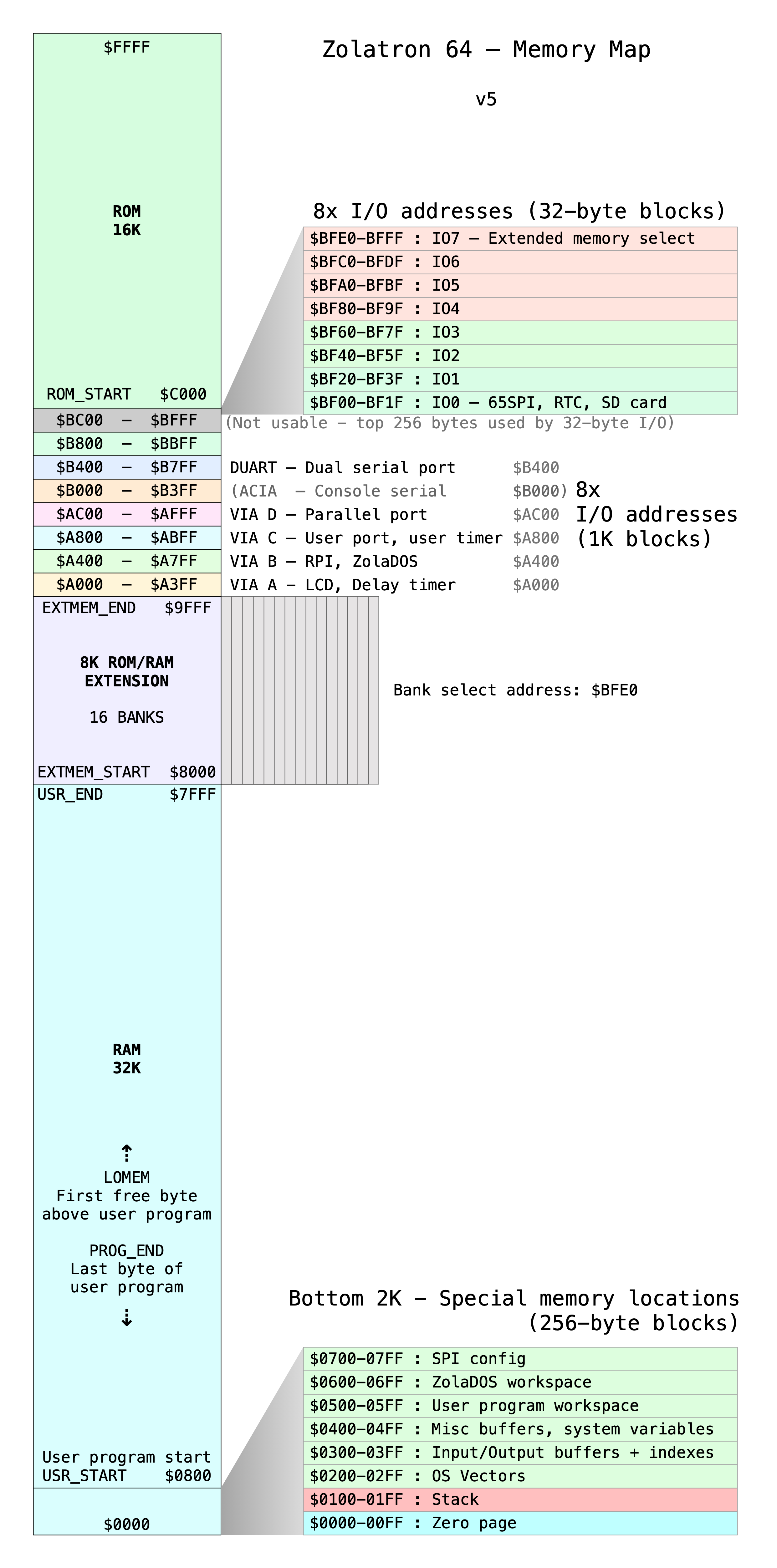
# Main sections

| Address Range | Used for |
| --- | --- |
| $0000 – $07FF | System variables, buffers etc. |
| $0800 – $7FFF | User RAM |
| $8000 – $9FFF | Extended ROM/RAM |
| $A000 – $BFFF | I/O |
| $C000 – $FFFF | System ROM |

# Lower 2K

Pages 0–7 ($0000–$07FF) are reserved for system use:

| Pg | Address Range | Used for | Defined in: |
| --- | --- | --- | --- |
| 0 | $0000–$00FF | Zero page variables | cfg\_page\_0.asm |
| 1 | $0100–$01FF | 6502 system stack | — |
| 2 | $0200–$02FF | OS indirection table | cfg\_page\_2.asm |
| 3 | $0300–$03FF | STDIN & STDOUT buffers and indices | cfg\_main.asm |
| 4 | $0400–$04FF | Buffers etc – includes STR\_BUF, variables for temporary values & maths operations | cfg\_page\_4.asm |
| 5 | $0500–$05FF | User program workspace | — |
| 6 | $0600–$06FF | ZolaDOS workspace | cfg\_ZolaDOS.asm |
| 7 | $0700–$07FF | SPI workspace | cfg\_page\_7.asm |



# ZERO PAGE

Defined in cfg\_page\_0.asm.

|  |  |  |
| --- | --- | --- |
| Address | Name | Description |
| $E0, $E1 | MSG\_VEC | Pointer to a message (to print) |
| $E2, $E3 | FUNC\_RES\_L, FUNC\_RES\_H | To hold a 16-bit return value for a subroutine |
| $E4 | FUNC\_RESULT | Holds a 1-byte return value for a subroutine |
| $E5 | FUNC\_ERR | Stores an error code returned from a subroutine |
| $E6, $E7 | TBL\_VEC\_L, TBL\_VEC\_H | LSB and MSB of a location within a lookup table |
| $E8, $E9 | TMP\_ADDR\_A\_L, TMP\_ADDR\_A\_H | Temporary 16-bit address (TMP\_ADDR\_A is an alias for TMP\_ADDR\_A\_L) |
| $EA, $EB | TMP\_ADDR\_B\_L, TMP\_ADDR\_B\_H | Temporary 16-bit address (TMP\_ADDR\_B is an alias for TMP\_ADDR\_B\_L) |
| $EC, $ED | TMP\_ADDR\_C\_L, TMP\_ADDR\_C\_H | Temporary 16-bit address (TMP\_ADDR\_C is an alias for TMP\_ADDR\_C\_L) |
| $EE, $EF | FILE\_ADDR |  |
| $F0, $F1 | PROG\_END | Address of last byte of user program |
| $F2, $F3 | LOMEM | First available byte after user prog |
| $F4 | STDIN\_STATUS\_REG | STDIN flags |
| $F5 | SYS\_REG | System flags |
| $F6 | IRQ\_REG | IRQ flags |
| $F7-$FB | – not used – | 5 bytes |
|  |  |  |
| $FC, $FD | USRINT\_VEC | Indirect jump vector pointing to userland ISR |
| $FE, $FF | USRINTTRN\_VEC | Indirect jump vector returning from userland ISR |

# PAGE 3 – $0300–$03FF

## I/O buffers, temp storage etc

Defined in cfg\_main.asm.

|  |  |  |
| --- | --- | --- |
| $0300 – $037E | STDIN\_BUF | 127 |
| $037F | STDIN\_IDX | 1 |
| $0380 – $03FE | STDOUT\_BUF | 127 |
| $03FF | STDOUT\_IDX | 1 |