

Example Program Code: Load two numbers from memory and add them

Assume Z8 program code is stored in program memory, starting at address 3200H.

Example Operations and OP Codes from actual Z8 assembly language:

1. Load the value 34H from program memory into R1: 1C 34
2. Load the value 15H from program memory into R2: 2C 15
3. Add the contents of R2+R1 and place the result in R1: 04 02 01

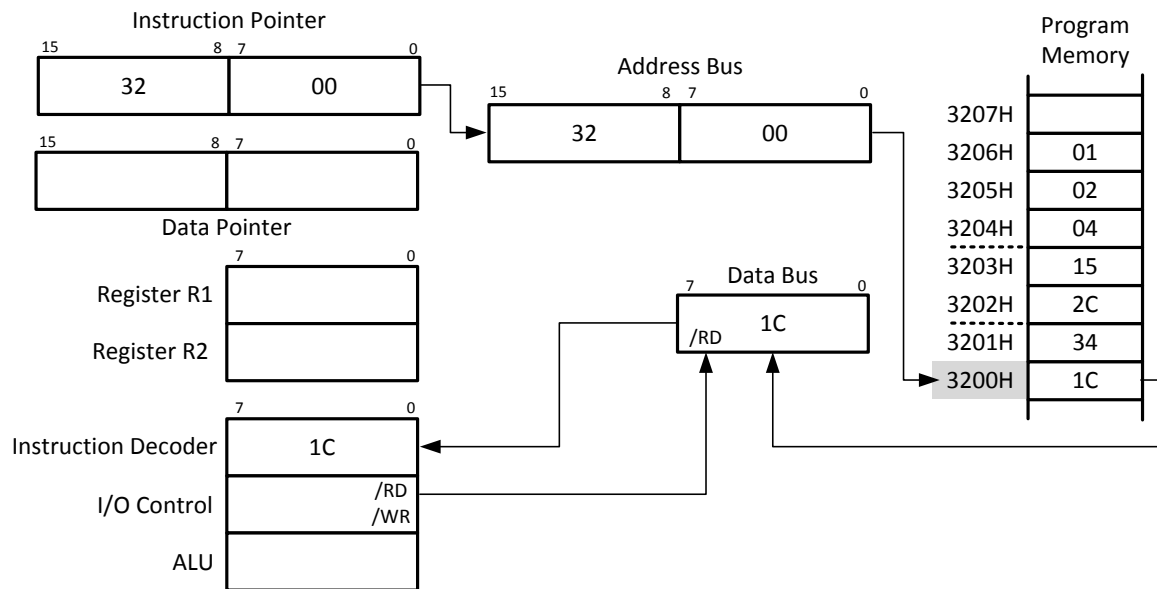


Figure 1 Fetch Instruction from Address 3200H

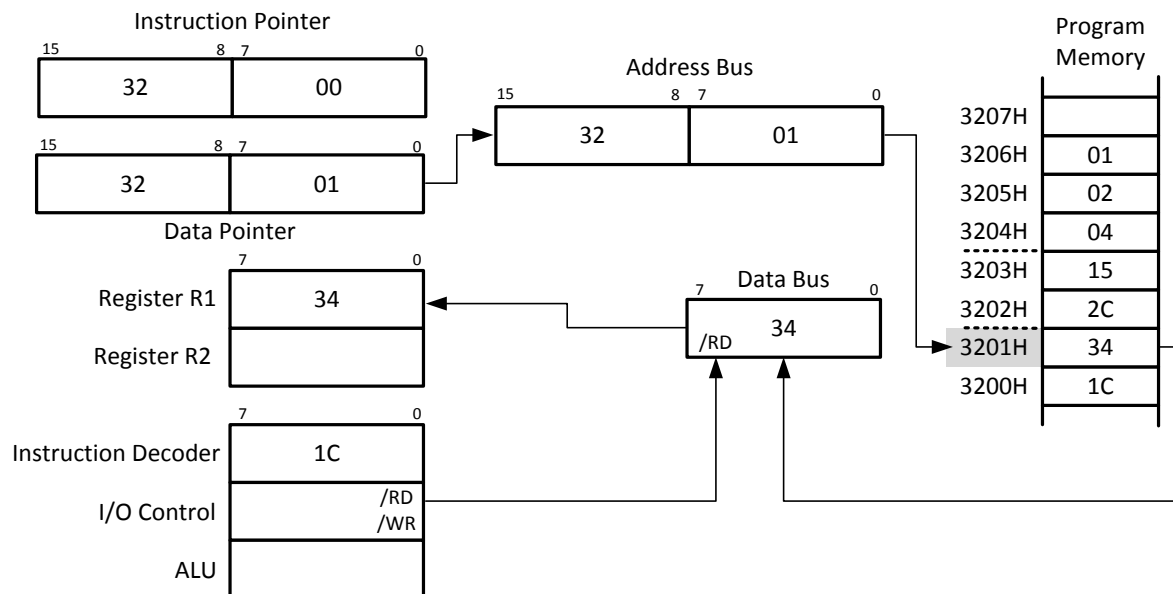


Figure 2 Instruction 1C says to get contents of 3201H and store it in R1

Example Program Code: Load two numbers from memory and add them

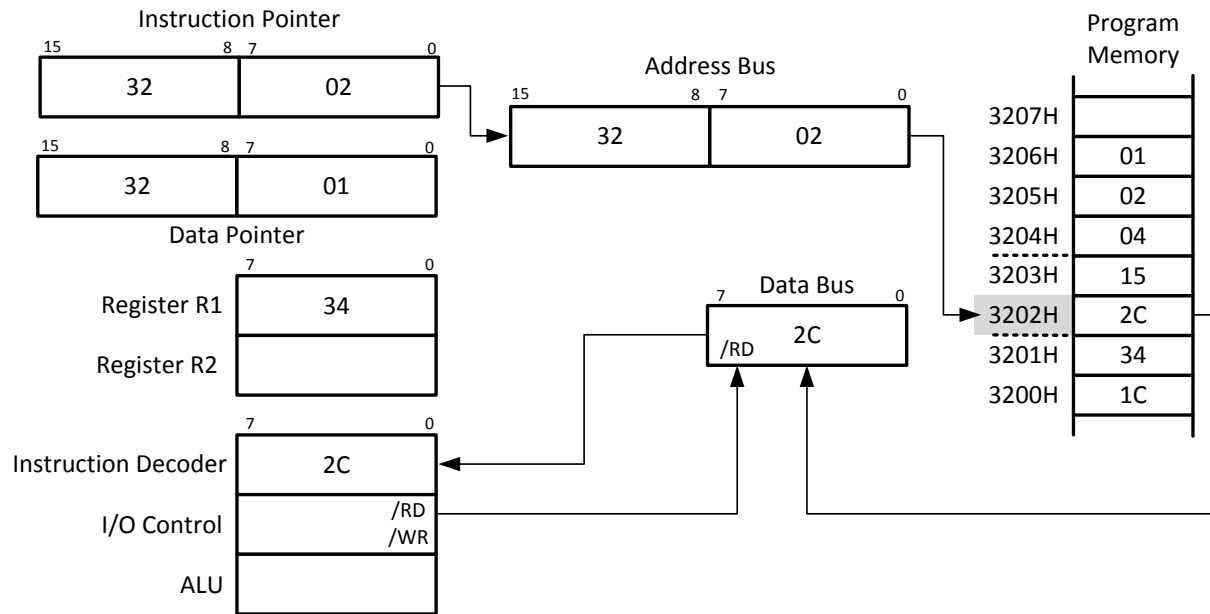


Figure 3 Fetch next instruction from address 3202H

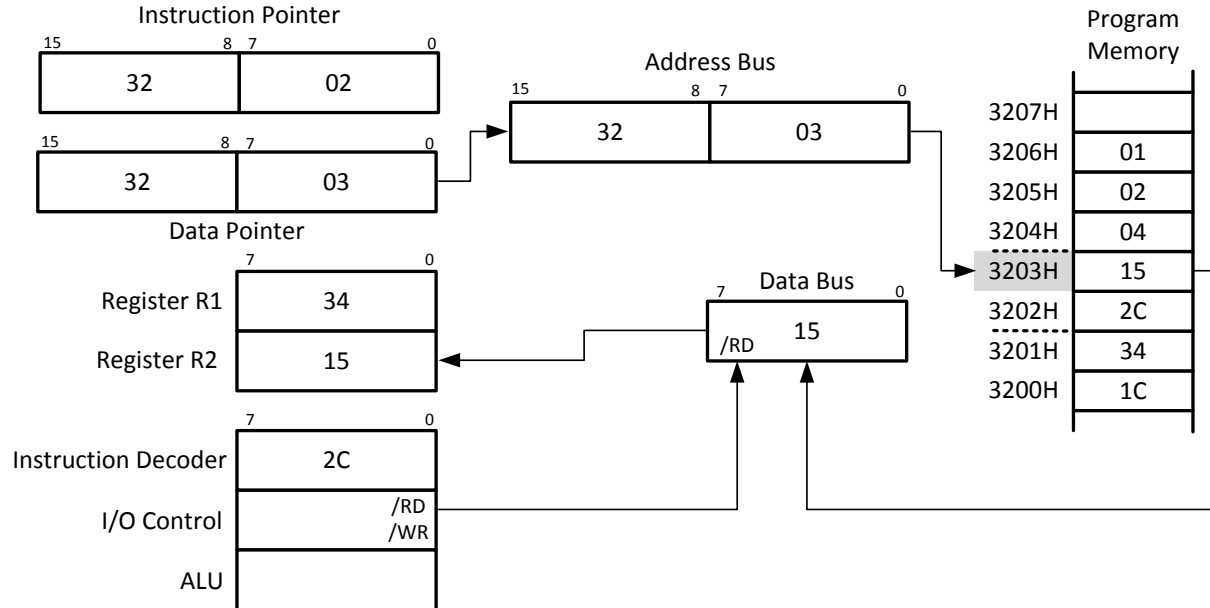


Figure 4 Instruction 2C says to get contents of 3203H and store it in R2

Example Program Code: Load two numbers from memory and add them

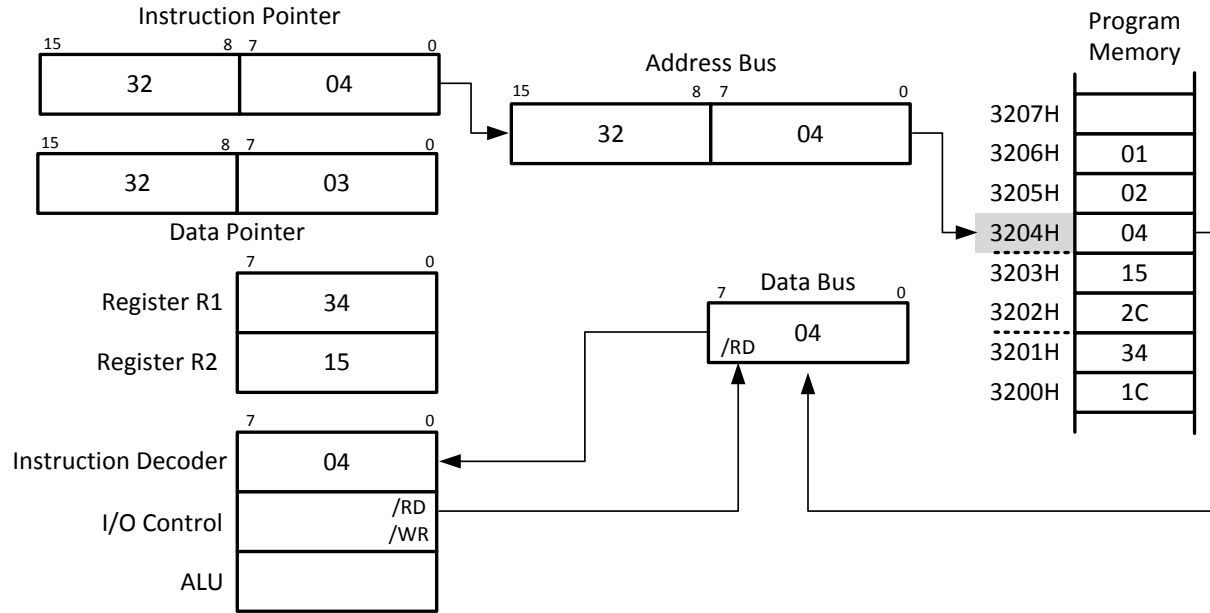


Figure 5 Fetch next instruction from address 3204H

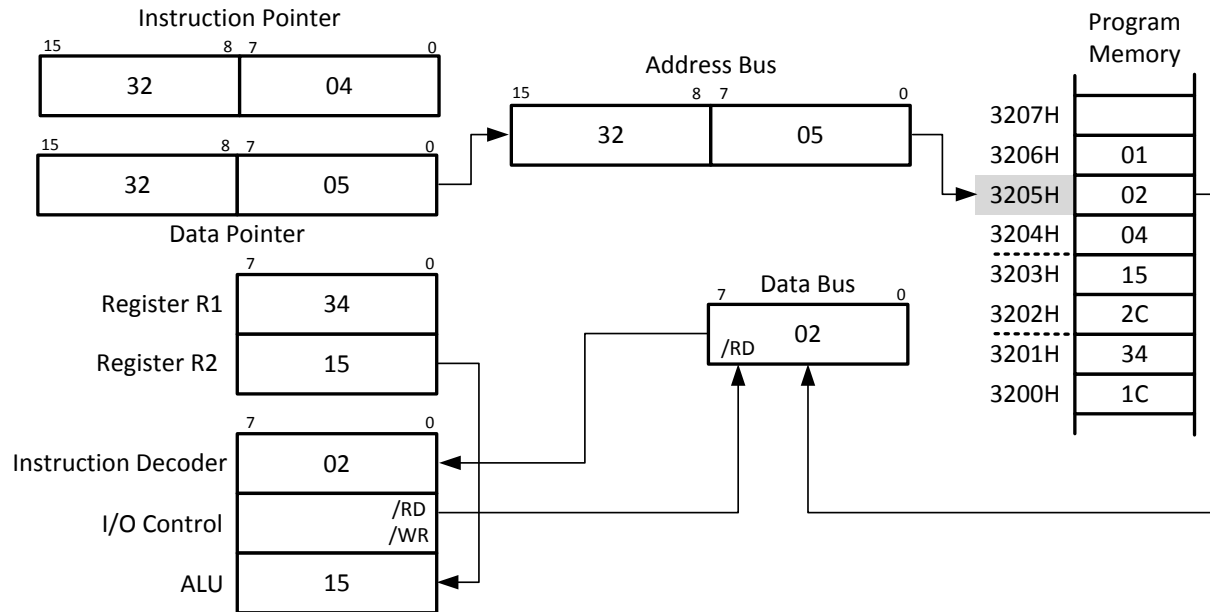


Figure 6 Instruction 04, part 1: Transfer contents of R2 to ALU

Example Program Code: Load two numbers from memory and add them

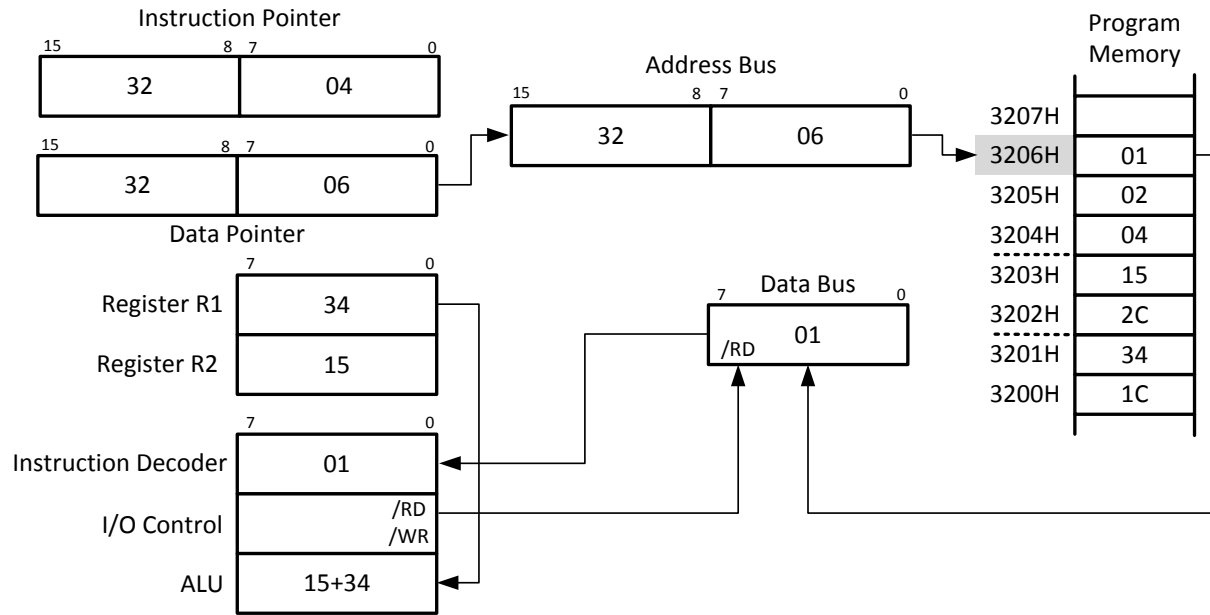


Figure 7 Instruction 04, part 2: Transfer contents of R1 to ALU

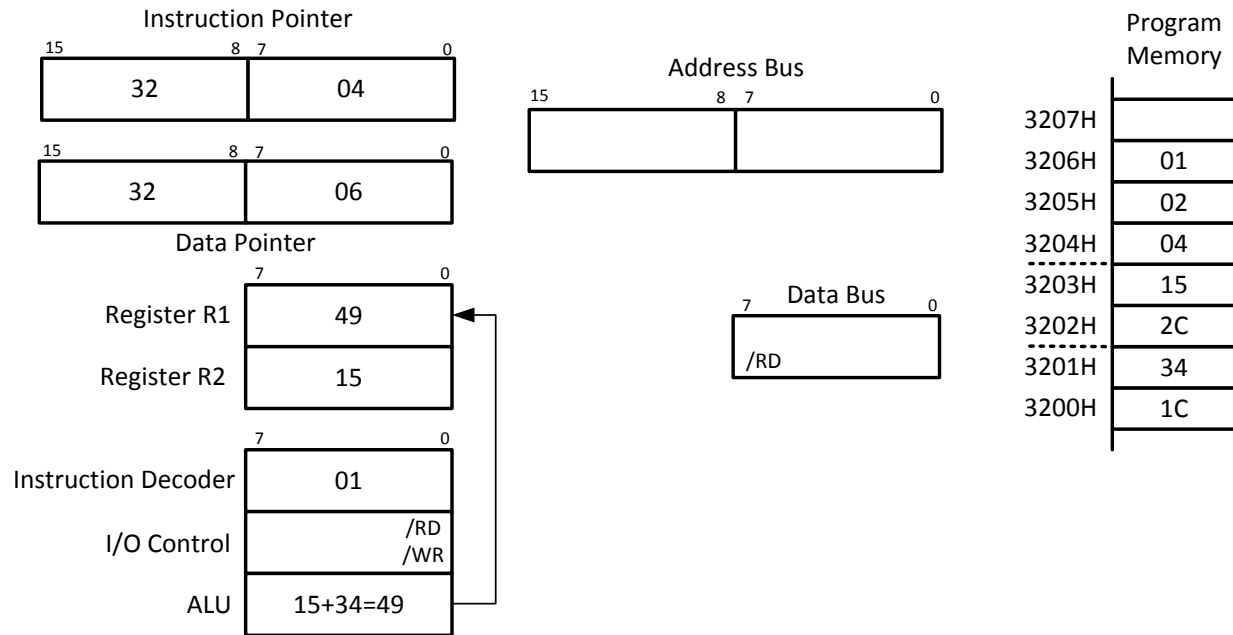


Figure 8 Instruction 04, part 3: Add the two numbers just transferred to the ALU and transfer the result to register R1