

| Instruction coding |    |    |    |    |      |     |      |          |       |               |
|--------------------|----|----|----|----|------|-----|------|----------|-------|---------------|
| c4                 | c3 | c2 | c1 | c0 | COD  | CD  | CODE | mnemonic | CLASS |               |
| 0                  | 0  | 0  | 0  | 0  | COD0 | CD0 | 0    | JMP      | 0     | TRANSFER      |
| 0                  | 0  | 0  | 0  | 1  | COD0 | CD1 | 1    | RET      |       |               |
| 0                  | 0  | 0  | 1  | 0  | COD0 | CD2 | 2    | JZ       |       |               |
| 0                  | 0  | 0  | 1  | 1  | COD0 | CD3 | 3    | JNC      |       |               |
| 0                  | 0  | 1  | 0  | 0  | COD1 | CD0 | 4    | CALL     |       |               |
| 0                  | 1  | 0  | 0  | 1  | COD2 | CD1 | 9    | LDP      | 1     | MEMORY ACCESS |
| 0                  | 1  | 0  | 1  | 0  | COD2 | CD2 | 10   | LIT      |       |               |
| 0                  | 1  | 0  | 1  | 1  | COD2 | CD3 | 11   | LD       |       |               |
| 0                  | 1  | 1  | 0  | 1  | COD3 | CD1 | 13   | STP      |       |               |
| 0                  | 1  | 1  | 1  | 1  | COD3 | CD3 | 15   | ST       |       |               |
| 1                  | 0  | 0  | 0  | 0  | COD4 | CD0 | 16   | COM      | 2     | ALU           |
| 1                  | 0  | 0  | 0  | 1  | COD4 | CD1 | 17   | SHL      |       |               |
| 1                  | 0  | 0  | 1  | 0  | COD4 | CD2 | 18   | SHR      |       |               |
| 1                  | 0  | 0  | 1  | 1  | COD4 | CD3 | 19   | ADDC     |       |               |
| 1                  | 0  | 1  | 0  | 0  | COD5 | CD0 | 20   | XOR      |       |               |
| 1                  | 0  | 1  | 0  | 1  | COD5 | CD1 | 21   | AND      |       |               |
| 1                  | 0  | 1  | 1  | 1  | COD5 | CD3 | 23   | ADD      |       |               |
| 1                  | 1  | 0  | 0  | 0  | COD6 | CD0 | 24   | POP      | 3     | REGISTER      |
| 1                  | 1  | 0  | 0  | 1  | COD6 | CD1 | 25   | LDA      |       |               |
| 1                  | 1  | 0  | 1  | 0  | COD6 | CD2 | 26   | DUP      |       |               |
| 1                  | 1  | 1  | 0  | 0  | COD7 | CD0 | 28   | PUSH     |       |               |
| 1                  | 1  | 1  | 0  | 1  | COD7 | CD1 | 29   | STA      |       |               |
| 1                  | 1  | 1  | 1  | 0  | COD7 | CD2 | 30   | NOP      |       |               |
| 1                  | 1  | 1  | 1  | 1  | COD7 | CD3 | 31   | DROP     |       |               |