IAS Computer Application Binary Interface

Overall

Datatype : 16-bit 2's compliment integer

Opcode size : 5 bits

Address size : 11 bits

Memory size : 8kB (1B equals 8 bits)

Instruction Set Abstraction

Syntax : OPCODE Address (Let **M** equals value stored in Address)

OPCODE	Alias	Description
00000	HLT	Halt program (need restart)
00001	ADD	Add M to AC
00010	SUB	Subtract M from AC
00011	MUL	Multiply MQ by M Most significant bits in AC, least ones in MQ
00100	DIV	Divide Ac by M Quotient in AC, remainder in MQ
00101	NEGAC	Negate AC
00110	NEGMQ	Negate MQ
00111	XOR	Exclusive or AC by M
01000	AND	And AC by M
01001	OR	Or AC by M
01010	CMP	Compare AC to M Store result in RFLAGS
01011	MQTOAC	Store value in MQ to AC
01100	JMP	Jump PC to M
01101	JE	Jump PC to M if Equal flag is true
01110	JGE	Jump PC to M if Greater Than or Equal flag is true
01111	JZ	Jump PC if AC is zero
10001	LOADAC	Load M to AC
10010	LOADMQ	Load M to MQ
11001	STORAC	Store AC to M
11010	STORMQ	Store MQ to M

No callee-saved register

No redzone

SSE and AVX are not available