Opcode	Meaning	Bytes	Fmt	L A = C V P X	Details	Example
A S,D	Add	A000	1	* * * * * - -		A @>100,R2
AB S,D	Add Bytes	B000	1	* * * * * * -		
C	Compare	8000	1	* * * - - - -		
CB	Compare Bytes	9000	1	* * * - - * -		CB R1,R2
S	Subtract	6000	1	* * * * * - -		
SB	Subtract Bytes	7000	1	* * * * * * -		
SOC	Set ones Corresponding (OR)	E000	1	* * * - - - -		
SOCB	Set ones Corresponding Bytes (OR)	F000	1	* * * - - * -		
SZC	Set Zeros Corresponding (Reverse AND)	4000	1	* * * - - - -		
SZCB	Set Zeros Corresponding Bytes (Reverse AND)	5000	1	* * * - - * -		
MOV S,D	Move	C000	1	* * * - - - -		
MOVB S,D	Move Bytes	D000	1	* * * - - * -		
COC S,D	Compare Ones Corresponding	2000	3	- - * - - - -	ones in S also in D?	COC R1O,RII
CZC	Compare Zeros Corresponding	2400	3	- - * - - - -		
XOR	Flip Bits	2800	3	* * * - - - -		
MPY Ss,D	Multiply s*d – result in d,d+1	3800	9	- - - - - - -		MPY R2,R3
DIV Ss,D	Divide d,d+1 by s, result in d,d+1	3C00	9	- - - - * - -		DIV @>FEOO,R5
XOP A,n	Extend Operation	2800	9	2 2 2 2 2 2 2	Load new settings from address at vector A	XOP @>FFOO,4
B R	Branch to register R / @addr	0440	6	- - - - - - -	R->PC	B *R2
BL A	Branch and Link address A	0680	6	- - - - - - -	PC→WR11, SA→PC	
BLWP	Branch and Load Workspace Pointer	0400	6	- - - - - - -	(A)→WP (A+2)→PC ST→R15, PC→R14, WP→R13 (addr is a pair of pointers)	
CLR	Clear Operand	04C0	6	- - - - - - -		
SETO	Set To Ones	0700	6	- - - - - - -		
INV	Invert	0540	6	* * * - - - -		
NEG	Negative	0500	6	* * * * * - -		
ABS	Absolute Value	0740	6	* * * * * - -		
SWPB	Swap Bytes	06C0	6	- - - - - - -		
INC	Increment	0580	6	* * * * * - -		
INCT	Increment by 2	05C0	6	* * * * * - -		
DEC	Decrement	0600	6	* * * * * - -		
DECT	Decrement by 2	0640	6	* * * * * - -		
X	Execute	0480	6	2 2 2 2 2 2 2	.	
LDCR S,B	Load Communication Register…	3000	4	* * * - - 1 -	B bits from S	
STCR	Store Communication Register	3400	4	* * * - - 1 -		
SBO	Set CRU Bit to 1	1D00	x	- - - - - - -		SBO 4
SBZ	Set CRU Bit to 0	1E00	x	- - - - - - -		
TB	Test CRU Bit	1F00	x	- - * - - - -		
JEQ n	Jump Equal	1300	2	- - - - - - -	Jump to offset n	JEQ $+4
JGT	Jump Greater Than (Signed)	1500	2	- - - - - - -		
JH	Jump High	1B00	2	- - - - - - -		
JHE	Jump Higher or Equal	1400	2	- - - - - - -		
JL	Jump Lower	1A00	2	- - - - - - -		
JLE	Jump Lower or Equal	1200	2	- - - - - - -		
JLT	Jump Less Than (Signed)	1100	2	- - - - - - -		
JMP	Jump	1000	2	- - - - - - -		JMP $
JNC	Jump No Carry	1800	2	- - - - - - -		
JNE	Jump Not Equals	1600	2	- - - - - - -		
JNO	Jump No Overflow	1900	2	- - - - - - -		
JOC	Jump On Carry	1800	2	- - - - - - -		
JOP	Jump Odd Parity	1C00	2	- - - - - - -		
SLA D,B	Shift Left Arithmatic	0A00	5	* * * * * - -	Shift D by B bits (0=use R0)	SLA RI,O
SRA D,B	Shift Right Arithmatic	0800	5	* * * * - - -	Shift D by B bits (0=use R0)	SRA RI,2
SRC D,B	Shift Right Circular	0B00	5	* * * * - - -	Circular shift D by B bits (0=use R0)	SRC R5,4
SRL D,B	Shift Right Logical	0900	5	* * * * - - -		
AI D,nn	Add Immediate	0220	8	* * * * * - -	Add n to reg D	
ANDI D,nn	And Immediate	0240	8	* * * - - - -		AI R2,>FF
CI D,nn	Compare Immediate	0280	8	* * * - - - -	Compare D to n	CI R2,>10E
LI D,nn	Load Immediate	0200	8	* * * - - - -		
ORI	Or Immediate	0260	8	* * * - - - -		
LWPI A	Load Workspace Pointer Immediate	02E0	x	- - - - - - -	A→WP	LWPI >FCOO
LIMI	Load Interrupt Mask	0300	x	- - - - - - -		
STST	Store Status Register	02C0	x	- - - - - - -		
STWP	Store Workspace Pointer	02A0	x	- - - - - - -		STWP R2
RTWP	Return from Context Switch	0380	x	* * * * * * *	R13→WP, R14→PC, R15→ST	
IDLE	Idle	0340	7	- - - - - - -		
RSET	Reset	0360	7	- - - - - - -		
CKOF	User Defined	03C0	7	- - - - - - -		
CKON	User Defined	03A0	7	- - - - - - -		
LREX	User Defined	03E0	7	- - - - - - -		
B *R11	RETurn					