

NOTES: RTL corresponds to execution (after fetch!); JSRR not shown

ADD

0001	DR	SR1	0	00	SR2
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 ADD DR, SR1, SR2
 $DR \leftarrow SR1 + SR2, Setcc$

ADD

0001	DR	SR1	1	imm5	
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 ADD DR, SR1, imm5
 $DR \leftarrow SR1 + SEXT(imm5), Setcc$

AND

0101	DR	SR1	0	00	SR2
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 AND DR, SR1, SR2
 $DR \leftarrow SR1 \text{ AND } SR2, Setcc$

AND

0101	DR	SR1	1	imm5	
------	----	-----	---	------	--

 AND DR, SR1, imm5
 $DR \leftarrow SR1 \text{ AND } SEXT(imm5), Setcc$

BR

0000	n	z	p	PCOffset9	
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 BR{nzp} PCOffset9
 $((n \text{ AND } N) \text{ OR } (z \text{ AND } Z) \text{ OR } (p \text{ AND } P)):$
 $PC \leftarrow PC + SEXT(PCOffset9)$

JMP

1100	000	BaseR	000000		
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 JMP BaseR
 $PC \leftarrow BaseR$

JSR

0100	1	PCOffset11			
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 JSR PCOffset11
 $R7 \leftarrow PC, PC \leftarrow PC + SEXT(PCOffset11)$

TRAP

1111	0000	trapvect8			
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 TRAP trapvect8
 $R7 \leftarrow PC, PC \leftarrow M[ZEXT(trapvect8)]$

LD

0010	DR	PCOffset9			
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 LD DR, PCOffset9
 $DR \leftarrow M[PC + SEXT(PCOffset9)], Setcc$

LDI

1010	DR	PCOffset9			
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 LDI DR, PCOffset9
 $DR \leftarrow M[M[PC + SEXT(PCOffset9)]], Setcc$

LDR

0110	DR	BaseR	offset6		
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 LDR DR, BaseR, offset6
 $DR \leftarrow M[BaseR + SEXT(offset6)], Setcc$

LEA

1110	DR	PCOffset9			
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 LEA DR, PCOffset9
 $DR \leftarrow PC + SEXT(PCOffset9), Setcc$

NOT

1001	DR	SR	111111		
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 NOT DR, SR
 $DR \leftarrow NOT\ SR, Setcc$

ST

0011	SR	PCOffset9			
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 ST SR, PCOffset9
 $M[PC + SEXT(PCOffset9)] \leftarrow SR$

STI

1011	SR	PCOffset9			
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 STI SR, PCOffset9
 $M[M[PC + SEXT(PCOffset9)]] \leftarrow SR$

STR

0111	SR	BaseR	offset6		
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 STR SR, BaseR, offset6
 $M[BaseR + SEXT(offset6)] \leftarrow SR$