Arithmetic Control table

Instruction	Function (0-3 bits)	Opcode (0-4 bits)	Operation	Arithmetic Control
ADD	0100	00000	Adder	000
SUB	0101	00000	Subtractor	001
SLT	0110	00000	SLT	010
SLTU	0111	00000	SLTU	011
SEQ	1000	00000	SEQ	100
MUL	1101	00000	Multiplier	101
ADDI	-	00101	Adder	000
SLTI	-	00110	SLT	010
SLTIU	-	00111	SLTU	011
SEQI	-	01000	SEQ	100
JALR	-	01111	Adder	000
LW	-	10000	Adder	000
SW	-	10001	Adder	000

Logic Control table

Instruction	Function (0-3 bits)	Opcode (0-4 bits)	Operation	Logic Control
XOR	1001	00000	XOR	00
OR	1010	00000	OR	01
AND	1011	00000	AND	10
NOR	1100	00000	NOR	11
XORI	-	01001	XOR	00
ORI	-	01010	OR	01
ANDI	-	01011	AND	10
NORI	-	01100	NOR	11

Shift Control table

Instruction	Function (0-3 bits)	Opcode (0-4 bits)	Operation	Shift Control
SLL	0000	00000	SLL	00
SRL	0001	00000	SRL	01
SRA	0010	00000	SRA	10
ROR	0011	00000	ROR	11
SLLI	-	00001	SLL	00
SRLI	-	00010	SRL	01
SRAI	-	00011	SRA	10
RORI	-	00100	ROR	11

SET Control table

Instruction	Opcode (0-4 bits)	Operation	SET Control
SET	01101	SET	0
SSET	01110	SSET	1

ALU Control table

Instruction	Function (0-3 bits)	Opcode (0-4 bits)	ALU unit	ALU Control
ADD	0100	00000	Artithmetic	00
SUB	0101	00000	Artithmetic	00
SLT	0110	00000	Artithmetic	00
SLTU	0111	00000	Artithmetic	00
SEQ	1000	00000	Arithmetic	00
MUL	1101	00000	Arithmetic	00
ADDI	-	00101	Artithmetic	00
SLTI	-	00110	Artithmetic	00
SLTIU	-	00111	Arithmetic	00
SEQI	-	01000	Arithmetic	00
JALR	-	01111	Arithmetic	00
LW	-	10000	Arithmetic	00
SW	-	10001	Arithmetic	00
XOR	1001	0000	Logic	01
OR	1010	0000	Logic	01
AND	1011	0000	Logic	01
NOR	1100	0000	Logic	01
XORI	-	1001	Logic	01
ORI	-	1010	Logic	01
ANDI	-	1011	Logic	01
NORI	-	1100	Logic	01
SLL	00	000	Shift	10
SRL	01	000	Shift	10
SRA	10	000	Shift	10
ROR	11	000	Shift	10
SLLI	-	001	Shift	10
SRLI	-	010	Shift	10
SRAI	-	011	Shift	10
RORI	-	100	Shift	10
SET	-	01101	SET	11
SSET	-	01110	SET	11

Instruction	Opcode (0-4 bits)	Operation	Branch Control									
BEQ	10010	BEQ	001									
BNE	10011	BNE	010									
BLT	10100	BLT	011									
BGE	10101	BGE	100									
BLTU	10110	BLTU	101									
BGEU	10111	BGEU	110									