

instruction page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
UNALLOCATED					0	0																												
Branch,exception generation and system Instruction					1	0	1																											
Compare & Branch (immediate)		sf	0	1	1	0	1	0	op	imm19												Rt												
CBZ	32-bit	0	0	1	1	0	1	0	0	imm19												Rt												
CBNZ	32-bit	0	0	1	1	0	1	0	1	imm19												Rt												
CBZ	64-bit	1	0	1	1	0	1	0	0	imm19												Rt												
CBNZ	64-bit	1	0	1	1	0	1	0	1	imm19												Rt												
Test & branch (immediate)		b5	0	1	1	0	1	1	op	b40					imm14										Rt									
TBZ	-	b5	0	1	1	0	1	1	0	b40					imm14										Rt									
TBNZ	-	b5	0	1	1	0	1	1	1	b40					imm14										Rt									
Conditional branch (immediate)		0	1	0	1	0	1	0	o1	imm19												o0		cond										
B.cond	-	0	1	0	1	0	1	0	0	imm19												0		cond										
Exception generation		1	1	0	1	0	1	0	0	opc			imm16												op2				LL					
SVC	-	1	1	0	1	0	1	0	0	0	0	0	imm16												0				0	0	0	1		
HVC	-	1	1	0	1	0	1	0	0	0	0	0	imm16												0				0	0	1	0		
SMC	-	1	1	0	1	0	1	0	0	0	0	0	imm16												0				0	0	1	1		
BRK	-	1	1	0	1	0	1	0	0	0	0	1	imm16												0				0	0	0	0		
HLT	-	1	1	0	1	0	1	0	0	0	1	0	imm16												0				0	0	0	0		
DCPS1	-	1	1	0	1	0	1	0	0	1	0	1	imm16												0				0	0	0	1		
DCPS2	-	1	1	0	1	0	1	0	0	1	0	1	imm16												0				0	0	1	0		
DCPS3	-	1	1	0	1	0	1	0	0	1	0	1	imm16												0				0	0	1	1		
System		1	1	0	1	0	1	0	1	0	0	L	op0	op1			CRn				CRm			op2			Rt							
MSR(immediate)	-	1	1	0	1	0	1	0	1	0	0	0	0	0	op1	0	1	0	0	CR_m			op2			1		1	1	1	1	1		
HINT	-	1	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	0	CR_m			op2			1		1	1	1	1	
CLREX	-	1	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	1	CR_m			0		1	1	1	1	1	1		
DSB	-	1	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	1	CR_m			1		0	0	1	1	1	1	1	
DMB	-	1	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	1	CR_m			1		0	1	1	1	1	1	1	
ISB	-	1	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	0	0	1	1	CR_m			1		1	0	1	1	1	1	1	
SYS	-	1	1	0	1	0	1	0	1	0	0	0	0	1	op1	CR_n			CR_m			op2			Rt									
MSR(register)	-	1	1	0	1	0	1	0	1	0	0	0	1		op1	CR_n			CR_m			op2			Rt									
SYSL	-	1	1	0	1	0	1	0	1	0	0	1	0	1	op1	CR_n			CR_m			op2			Rt									
MRS	-	1	1	0	1	0	1	0	1	0	0	1	1		op1	CR_n			CR_m			op2			Rt									
Unconditional branch (register)		1	1	0	1	0	1	1	opc			op2				op3					Rn				op4									
BR	-	1	1	0	1	0	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	Rn			0		0	0	0	0		
BLR	-	1	1	0	1	0	1	1	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	Rn			0		0	0	0	0		
RET	-	1	1	0	1	0	1	1	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	Rn			0		0	0	0	0		
ERET	-	1	1	0	1	0	1	1	0	1	0	0	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	
DRPS	-	1	1	0	1	0	1	1	0	1	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	
Unconditional branch (immediate)		op	0	0	1	0	1	imm26												imm26														
B	-	0	0	0	1	0	1	imm26												imm26														
BL	-	1	0	0	1	0	1	imm26												imm26														
Loads and stores					1		0																											
Load/store exclusive		size	0	0	1	0	0	0	o2	L	o1	Rs				o0	Rt2				Rn				Rt									

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
STXRB		-	0	0	0	0	1	0	0	0	0	0	0			Rs			0			Rt2						Rn						Rt
STLXRB		-	0	0	0	0	1	0	0	0	0	0	0			Rs			1			Rt2						Rn						Rt
LDXRB		-	0	0	0	0	1	0	0	0	0	1	0			Rs			0			Rt2						Rn						Rt
LDAXRB		-	0	0	0	0	1	0	0	0	0	1	0			Rs			1			Rt2						Rn						Rt
STLRB		-	0	0	0	0	1	0	0	0	1	0	0			Rs			1			Rt2						Rn						Rt
LDARB		-	0	0	0	0	1	0	0	0	1	1	0			Rs			1			Rt2						Rn						Rt
STXRH		-	0	1	0	0	1	0	0	0	0	0	0			Rs			0			Rt2						Rn						Rt
STLXRH		-	0	1	0	0	1	0	0	0	0	0	0			Rs			1			Rt2						Rn						Rt
LDXRH		-	0	1	0	0	1	0	0	0	0	1	0			Rs			0			Rt2						Rn						Rt
LDAXRH		-	0	1	0	0	1	0	0	0	0	1	0			Rs			1			Rt2						Rn						Rt
STLRH		-	0	1	0	0	1	0	0	0	1	0	0			Rs			1			Rt2						Rn						Rt
LDARH		-	0	1	0	0	1	0	0	0	1	1	0			Rs			1			Rt2						Rn						Rt
STXR		32-bit	1	0	0	0	1	0	0	0	0	0	0			Rs			0			Rt2						Rn						Rt
STLXR		32-bit	1	0	0	0	1	0	0	0	0	0	0			Rs			1			Rt2						Rn						Rt
STXP		32-bit	1	0	0	0	1	0	0	0	0	0	1			Rs			0			Rt2						Rn						Rt
STLXP		32-bit	1	0	0	0	1	0	0	0	0	0	1			Rs			1			Rt2						Rn						Rt
LDXR		32-bit	1	0	0	0	1	0	0	0	0	1	0			Rs			0			Rt2						Rn						Rt
LDAXR		32-bit	1	0	0	0	1	0	0	0	0	1	0			Rs			1			Rt2						Rn						Rt
LDXP		32-bit	1	0	0	0	1	0	0	0	0	1	1			Rs			0			Rt2						Rn						Rt
LDAXP		32-bit	1	0	0	0	1	0	0	0	0	1	1			Rs			1			Rt2						Rn						Rt
STLR		32-bit	1	0	0	0	1	0	0	0	1	0	0			Rs			1			Rt2						Rn						Rt
LDAR		32-bit	1	0	0	0	1	0	0	0	1	1	0			Rs			1			Rt2						Rn						Rt
STXR		64-bit	1	1	0	0	1	0	0	0	0	0	0			Rs			0			Rt2						Rn						Rt
STLXR		64-bit	1	1	0	0	1	0	0	0	0	0	0			Rs			1			Rt2						Rn						Rt
STXP		64-bit	1	1	0	0	1	0	0	0	0	0	1			Rs			0			Rt2						Rn						Rt
STLXP		64-bit	1	1	0	0	1	0	0	0	0	0	1			Rs			1			Rt2						Rn						Rt
LDXR		64-bit	1	1	0	0	1	0	0	0	0	1	0			Rs			0			Rt2						Rn						Rt
LDAXR		64-bit	1	1	0	0	1	0	0	0	0	1	0			Rs			1			Rt2						Rn						Rt
LDXP		64-bit	1	1	0	0	1	0	0	0	0	1	1			Rs			0			Rt2						Rn						Rt
LDAXP		64-bit	1	1	0	0	1	0	0	0	0	1	1			Rs			1			Rt2						Rn						Rt
STLR		64-bit	1	1	0	0	1	0	0	0	1	0	0			Rs			1			Rt2						Rn						Rt
LDAR		64-bit	1	1	0	0	1	0	0	0	1	1	0			Rs			1			Rt2						Rn						Rt
Load register (literal)			opc		0	1	1	V	0	0	imm19															Rt								
LDR(literal)		32-bit	0	0	0	1	1	0	0	0	imm19															Rt								
LDR(literal,SIMD&FP)		32-bit	0	0	0	1	1	1	0	0	imm19															Rt								
LDR(literal)		64-bit	0	1	0	1	1	0	0	0	imm19															Rt								
LDR(literal,SIMD&FP)		64-bit	0	1	0	1	1	1	0	0	imm19															Rt								
LDRSW(literal)		-	1	0	0	1	1	0	0	0	imm19															Rt								
LDR(literal,SIMD&FP)		128-bit	1	0	0	1	1	1	0	0	imm19															Rt								
PRFM(literal)		-	1	1	0	1	1	0	0	0	imm19															Rt								
Load/store no-allocate pair (offset)			opc		1	0	1	V	0	0	0	L	imm7						Rt2				Rn				Rt							
STNP		32-bit	0	0	1	0	1	0	0	0	0	0	imm7						Rt2				Rn				Rt							

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
LDNP		32-bit	0	0	1	0	1	0	0	0	0	1										Rt2					Rn						Rt	
STNP(SIMD&FP)		32-bit	0	0	1	0	1	1	0	0	0	0										Rt2					Rn						Rt	
LDNP(SIMD&FP)		32-bit	0	0	1	0	1	1	0	0	0	1										Rt2					Rn						Rt	
STNP(SIMD&FP)		64-bit	0	1	1	0	1	1	0	0	0	0										Rt2					Rn						Rt	
LDNP(SIMD&FP)		64-bit	0	1	1	0	1	1	0	0	0	1										Rt2					Rn						Rt	
STNP64-bit		64-bit	1	0	1	0	1	0	0	0	0	0										Rt2					Rn						Rt	
LDNP64-bit		64-bit	1	0	1	0	1	0	0	0	0	1										Rt2					Rn						Rt	
STNP(SIMD&FP)		128-bit	1	0	1	0	1	1	0	0	0	0										Rt2					Rn						Rt	
LDNP(SIMD&FP)		128-bit	1	0	1	0	1	1	0	0	0	1										Rt2					Rn						Rt	
Load/store register pair (post-indexed)			opc		1	0	1	V	0	0	1	L										imm7					Rt2						Rn	Rt
STP		32-bit	0	0	1	0	1	0	0	0	1	0										Rt2					Rn						Rt	
LDP		32-bit	0	0	1	0	1	0	0	0	1	1										Rt2					Rn						Rt	
STP(SIMD&FP)		32-bit	0	0	1	0	1	1	0	0	1	0										Rt2					Rn						Rt	
LDP(SIMD&FP)		32-bit	0	0	1	0	1	1	0	0	1	1										Rt2					Rn						Rt	
LDPSW		Post-index	0	1	1	0	1	0	0	0	1	1										Rt2					Rn						Rt	
STP(SIMD&FP)		64-bit	0	1	1	0	1	1	0	0	1	0										Rt2					Rn						Rt	
LDP(SIMD&FP)		64-bit	0	1	1	0	1	1	0	0	1	1										Rt2					Rn						Rt	
STP		64-bit	1	0	1	0	1	0	0	0	1	0										Rt2					Rn						Rt	
LDP		64-bit	1	0	1	0	1	0	0	0	1	1										Rt2					Rn						Rt	
STP(SIMD&FP)		128-bit	1	0	1	0	1	1	0	0	1	0										Rt2					Rn						Rt	
LDP(SIMD&FP)		128-bit	1	0	1	0	1	1	0	0	1	1										Rt2					Rn						Rt	
Load/store register pair (offset)			opc		1	0	1	V	0	1	0	L										imm7					Rt2						Rn	Rt
STP		32-bit	0	0	1	0	1	0	0	1	0	0										Rt2					Rn						Rt	
LDP		32-bit	0	0	1	0	1	0	0	1	0	1										Rt2					Rn						Rt	
STP(SIMD&FP)		32-bit	0	0	1	0	1	1	0	1	0	0										Rt2					Rn						Rt	
LDP(SIMD&FP)		32-bit	0	0	1	0	1	1	0	1	0	1										Rt2					Rn						Rt	
LDPSWSigned		offset	0	1	1	0	1	0	0	1	0	1										Rt2					Rn						Rt	
STP(SIMD&FP)		64-bit	0	1	1	0	1	1	0	1	0	0										Rt2					Rn						Rt	
LDP(SIMD&FP)		64-bit	0	1	1	0	1	1	0	1	0	1										Rt2					Rn						Rt	
STP		64-bit	1	0	1	0	1	0	0	1	0	0										Rt2					Rn						Rt	
LDP		64-bit	1	0	1	0	1	0	0	1	0	1										Rt2					Rn						Rt	
STP(SIMD&FP)		128-bit	1	0	1	0	1	1	0	1	0	0										Rt2					Rn						Rt	
LDP(SIMD&FP)		128-bit	1	0	1	0	1	1	0	1	0	1										Rt2					Rn						Rt	
Load/store register pair (pre-indexed)			opc		1	0	1	V	0	1	1	L										imm7					Rt2						Rn	Rt
STP		32-bit	0	0	1	0	1	0	0	1	1	0										Rt2					Rn						Rt	
LDP		32-bit	0	0	1	0	1	0	0	1	1	1										Rt2					Rn						Rt	
STP(SIMD&FP)		32-bit	0	0	1	0	1	1	0	1	1	0										Rt2					Rn						Rt	
LDP(SIMD&FP)		32-bit	0	0	1	0	1	1	0	1	1	1										Rt2					Rn						Rt	
LDPSW		Pre-index	0	1	1	0	1	0	0	1	1	1										Rt2					Rn						Rt	
STP(SIMD&FP)		64-bit	0	1	1	0	1	1	0	1	1	0										Rt2					Rn						Rt	
LDP(SIMD&FP)		64-bit	0	1	1	0	1	1	0	1	1	1										Rt2					Rn						Rt	
STP		64-bit	1	0	1	0	1	0	0	1	1	0										Rt2					Rn						Rt	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
LDP		64-bit	1	0	1	0	1	0	0	1	1	1																						
STP(SIMD&FP)		128-bit	1	0	1	0	1	1	0	1	1	0																						
LDP(SIMD&FP)		128-bit	1	0	1	0	1	1	0	1	1	1																						
Load/store register (unscaled immediate)			size		1	1	1	V	0	0	opc		0											0	0					Rn			Rt	
STURB		-	0	0	1	1	1	0	0	0	0	0	0											0	0					Rn			Rt	
LDURB		-	0	0	1	1	1	0	0	0	0	1	0											0	0					Rn			Rt	
LDURSB		64-bit	0	0	1	1	1	0	0	0	1	0	0											0	0					Rn			Rt	
LDURSB		32-bit	0	0	1	1	1	0	0	0	1	1	0											0	0					Rn			Rt	
STUR(SIMD&FP)		8-bit	0	0	1	1	1	1	0	0	0	0	0											0	0					Rn			Rt	
LDUR(SIMD&FP)		8-bit	0	0	1	1	1	1	0	0	0	1	0											0	0					Rn			Rt	
STUR(SIMD&FP)		128-bit	0	0	1	1	1	1	0	0	1	0	0											0	0					Rn			Rt	
LDUR(SIMD&FP)		128-bit	0	0	1	1	1	1	0	0	1	1	0											0	0					Rn			Rt	
STURH		-	0	1	1	1	1	0	0	0	0	0	0											0	0					Rn			Rt	
LDURH		-	0	1	1	1	1	0	0	0	0	1	0											0	0					Rn			Rt	
LDURSH		64-bit	0	1	1	1	1	0	0	0	1	0	0											0	0					Rn			Rt	
LDURSH		32-bit	0	1	1	1	1	0	0	0	1	1	0											0	0					Rn			Rt	
STUR(SIMD&FP)		16-bit	0	1	1	1	1	1	0	0	0	0	0											0	0					Rn			Rt	
LDUR(SIMD&FP)		16-bit	0	1	1	1	1	1	0	0	0	1	0											0	0					Rn			Rt	
STUR		32-bit	1	0	1	1	1	0	0	0	0	0	0											0	0					Rn			Rt	
LDUR		32-bit	1	0	1	1	1	0	0	0	0	1	0											0	0					Rn			Rt	
LDURSW		-	1	0	1	1	1	0	0	0	1	0	0											0	0					Rn			Rt	
STUR(SIMD&FP)		32-bit	1	0	1	1	1	1	0	0	0	0	0											0	0					Rn			Rt	
LDUR(SIMD&FP)		32-bit	1	0	1	1	1	1	0	0	0	1	0											0	0					Rn			Rt	
STUR		64-bit	1	1	1	1	1	0	0	0	0	0	0											0	0					Rn			Rt	
LDUR		64-bit	1	1	1	1	1	0	0	0	0	1	0											0	0					Rn			Rt	
PRFUM		-	1	1	1	1	1	0	0	0	1	0	0											0	0					Rn			Rt	
STUR(SIMD&FP)		64-bit	1	1	1	1	1	1	0	0	0	0	0											0	0					Rn			Rt	
LDUR(SIMD&FP)		64-bit	1	1	1	1	1	1	0	0	0	1	0											0	0					Rn			Rt	
Load/store register (immediate post-indexed)			size		1	1	1	V	0	0	opc		0											0	1					Rn			Rt	
STRB(immediate)		Post-index	0	0	1	1	1	0	0	0	0	0	0											0	1					Rn			Rt	
LDRB(immediate)		Post-index	0	0	1	1	1	0	0	0	0	1	0											0	1					Rn			Rt	
LDRSB(immediate)		64-bit	0	0	1	1	1	0	0	0	1	0	0											0	1					Rn			Rt	
LDRSB(immediate)		32-bit	0	0	1	1	1	0	0	0	1	1	0											0	1					Rn			Rt	
STR(immediate,SIMD&		8-bit	0	0	1	1	1	1	0	0	0	0	0											0	1					Rn			Rt	
LDR(immediate,SIMD&		8-bit	0	0	1	1	1	1	0	0	0	1	0											0	1					Rn			Rt	
STR(immediate,SIMD&		128-bit	0	0	1	1	1	1	0	0	1	0	0											0	1					Rn			Rt	
LDR(immediate,SIMD&		128-bit	0	0	1	1	1	1	0	0	1	1	0											0	1					Rn			Rt	
STRH(immediate)		Post-index	0	1	1	1	1	0	0	0	0	0	0											0	1					Rn			Rt	
LDRH(immediate)		Post-index	0	1	1	1	1	0	0	0	0	1	0											0	1					Rn			Rt	
LDRSH(immediate)		64-bit	0	1	1	1	1	0	0	0	1	0	0											0	1					Rn			Rt	
LDRSH(immediate)		32-bit	0	1	1	1	1	0	0	0	1	1	0											0	1					Rn			Rt	
STR(immediate,SIMD&		16-bit	0	1	1	1	1	1	0	0	0	0	0											0	1					Rn			Rt	
LDR(immediate,SIMD&		16-bit	0	1	1	1	1	1	0	0	0	1	0											0	1					Rn			Rt	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
STR(immediate)		32-bit	1	0	1	1	1	0	0	0	0	0	0					imm9					0	1			Rn						Rt	
LDR(immediate)		32-bit	1	0	1	1	1	0	0	0	0	1	0					imm9					0	1			Rn						Rt	
LDRSW(immediate)		Post-index	1	0	1	1	1	0	0	0	1	0	0					imm9					0	1			Rn						Rt	
STR(immediate,SIMD&		32-bit	1	0	1	1	1	1	0	0	0	0	0					imm9					0	1			Rn						Rt	
LDR(immediate,SIMD&		32-bit	1	0	1	1	1	1	0	0	0	1	0					imm9					0	1			Rn						Rt	
STR(immediate)		64-bit	1	1	1	1	1	0	0	0	0	0	0					imm9					0	1			Rn						Rt	
LDR(immediate)		64-bit	1	1	1	1	1	0	0	0	0	1	0					imm9					0	1			Rn						Rt	
STR(immediate,SIMD&		64-bit	1	1	1	1	1	1	0	0	0	0	0					imm9					0	1			Rn						Rt	
LDR(immediate,SIMD&		64-bit	1	1	1	1	1	1	0	0	0	1	0					imm9					0	1			Rn						Rt	
Load/store register (unprivileged)			size		1	1	1	V	0	0	opc		0					imm9					1	0			Rn						Rt	
STTRB		-	0	0	1	1	1	0	0	0	0	0	0					imm9					1	0			Rn						Rt	
LDTRB		-	0	0	1	1	1	0	0	0	0	1	0					imm9					1	0			Rn						Rt	
LDTRSB		64-bit	0	0	1	1	1	0	0	0	1	0	0					imm9					1	0			Rn						Rt	
LDTRSB		32-bit	0	0	1	1	1	0	0	0	1	1	0					imm9					1	0			Rn						Rt	
STTRH		-	0	1	1	1	1	0	0	0	0	0	0					imm9					1	0			Rn						Rt	
LDTRH		-	0	1	1	1	1	0	0	0	0	1	0					imm9					1	0			Rn						Rt	
LDTRSH		64-bit	0	1	1	1	1	0	0	0	1	0	0					imm9					1	0			Rn						Rt	
LDTRSH		32-bit	0	1	1	1	1	0	0	0	1	1	0					imm9					1	0			Rn						Rt	
STTR		32-bit	1	0	1	1	1	0	0	0	0	0	0					imm9					1	0			Rn						Rt	
LDTR		32-bit	1	0	1	1	1	0	0	0	0	1	0					imm9					1	0			Rn						Rt	
LDTRSW		-	1	0	1	1	1	0	0	0	1	0	0					imm9					1	0			Rn						Rt	
STTR		64-bit	1	1	1	1	1	0	0	0	0	0	0					imm9					1	0			Rn						Rt	
LDTR		64-bit	1	1	1	1	1	0	0	0	0	1	0					imm9					1	0			Rn						Rt	
Load/store register (immediate pre-indexed)			size		1	1	1	V	0	0	opc		0					imm9					1	1			Rn						Rt	
STRB(immediate)		Pre-index	0	0	1	1	1	0	0	0	0	0	0					imm9					1	1			Rn						Rt	
LDRB(immediate)		Pre-index	0	0	1	1	1	0	0	0	0	1	0					imm9					1	1			Rn						Rt	
LDRSB(immediate)		64-bit	0	0	1	1	1	0	0	0	1	0	0					imm9					1	1			Rn						Rt	
LDRSB(immediate)		32-bit	0	0	1	1	1	0	0	0	1	1	0					imm9					1	1			Rn						Rt	
STR(immediate,SIMD&		8-bit	0	0	1	1	1	1	0	0	0	0	0					imm9					1	1			Rn						Rt	
LDR(immediate,SIMD&		8-bit	0	0	1	1	1	1	0	0	0	1	0					imm9					1	1			Rn						Rt	
STR(immediate,SIMD&		128-bit	0	0	1	1	1	1	0	0	1	0	0					imm9					1	1			Rn						Rt	
LDR(immediate,SIMD&		128-bit	0	0	1	1	1	1	0	0	1	1	0					imm9					1	1			Rn						Rt	
STRH(immediate)		Pre-index	0	1	1	1	1	0	0	0	0	0	0					imm9					1	1			Rn						Rt	
LDRH(immediate)		Pre-index	0	1	1	1	1	0	0	0	0	1	0					imm9					1	1			Rn						Rt	
LDRSH(immediate)		64-bit	0	1	1	1	1	0	0	0	1	0	0					imm9					1	1			Rn						Rt	
LDRSH(immediate)		32-bit	0	1	1	1	1	0	0	0	1	1	0					imm9					1	1			Rn						Rt	
STR(immediate,SIMD&		16-bit	0	1	1	1	1	1	0	0	0	0	0					imm9					1	1			Rn						Rt	
LDR(immediate,SIMD&		16-bit	0	1	1	1	1	1	0	0	0	1	0					imm9					1	1			Rn						Rt	
STR(immediate)		32-bit	1	0	1	1	1	0	0	0	0	0	0					imm9					1	1			Rn						Rt	
LDR(immediate)		32-bit	1	0	1	1	1	0	0	0	0	1	0					imm9					1	1			Rn						Rt	
LDRSW(immediate)		Pre-index	1	0	1	1	1	0	0	0	1	0	0					imm9					1	1			Rn						Rt	
STR(immediate,SIMD&		32-bit	1	0	1	1	1	1	0	0	0	0	0					imm9					1	1			Rn						Rt	
LDR(immediate,SIMD&		32-bit	1	0	1	1	1	1	0	0	0	1	0					imm9					1	1			Rn						Rt	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0				
STR(immediate)		64-bit	1	1	1	1	1	0	0	0	0	0	0					imm9						1	1										Rt			
LDR(immediate)		64-bit	1	1	1	1	1	0	0	0	0	1	0					imm9						1	1										Rt			
STR(immediate,SIMD&FP)		64-bit	1	1	1	1	1	1	0	0	0	0	0					imm9						1	1										Rt			
LDR(immediate,SIMD&FP)		64-bit	1	1	1	1	1	1	0	0	0	1	0					imm9						1	1										Rt			
Load/store register (register offset)			size		1	1	1	v	0	0	opc		1				Rm			option			S	1	0										Rn	Rt		
STRB(register)		-	0	0	1	1	1	0	0	0	0	0	1				Rm		-	-	-	S	1	0										Rt				
LDRB(register)		-	0	0	1	1	1	0	0	0	0	1	1				Rm		-	-	-	S	1	0										Rt				
LDRSB(register)		64-bit	0	0	1	1	1	0	0	0	1	0	1				Rm		-	-	-	S	1	0										Rt				
LDRSB(register)		32-bit	0	0	1	1	1	0	0	0	1	1	1				Rm		-	-	-	S	1	0										Rt				
STR(register,SIMD&FP)		8-bit	0	0	1	1	1	1	0	0	0	0	1				Rm		-	-	-	S	1	0										Rt				
LDR(register,SIMD&FP)		8-bit	0	0	1	1	1	1	0	0	0	1	1				Rm		-	-	-	S	1	0										Rt				
STR(register,SIMD&FP)		128-bit	0	0	1	1	1	1	0	0	1	0	1				Rm		-	-	-	S	1	0										Rt				
LDR(register,SIMD&FP)		128-bit	0	0	1	1	1	1	0	0	1	1	1				Rm		-	-	-	S	1	0										Rt				
STRH(register)		-	0	1	1	1	1	0	0	0	0	0	1				Rm		-	-	-	S	1	0										Rt				
LDRH(register)		-	0	1	1	1	1	0	0	0	0	1	1				Rm		-	-	-	S	1	0										Rt				
LDRSH(register)		64-bit	0	1	1	1	1	0	0	0	1	0	1				Rm		-	-	-	S	1	0										Rt				
LDRSH(register)		32-bit	0	1	1	1	1	0	0	0	1	1	1				Rm		-	-	-	S	1	0										Rt				
STR(register,SIMD&FP)		16-bit	0	1	1	1	1	1	0	0	0	0	1				Rm		-	-	-	S	1	0										Rt				
LDR(register,SIMD&FP)		16-bit	0	1	1	1	1	1	0	0	0	1	1				Rm		-	-	-	S	1	0										Rt				
STR(register)		32-bit	1	0	1	1	1	0	0	0	0	0	1				Rm		-	-	-	S	1	0										Rt				
LDR(register)		32-bit	1	0	1	1	1	0	0	0	0	1	1				Rm		-	-	-	S	1	0										Rt				
LDRSW(register)		-	1	0	1	1	1	0	0	0	1	0	1				Rm		-	-	-	S	1	0										Rt				
STR(register,SIMD&FP)		32-bit	1	0	1	1	1	1	0	0	0	0	1				Rm		-	-	-	S	1	0										Rt				
LDR(register,SIMD&FP)		32-bit	1	0	1	1	1	1	0	0	0	1	1				Rm		-	-	-	S	1	0										Rt				
STR(register)		64-bit	1	1	1	1	1	0	0	0	0	0	1				Rm		-	-	-	S	1	0										Rt				
LDR(register)		64-bit	1	1	1	1	1	0	0	0	0	1	1				Rm		-	-	-	S	1	0										Rt				
PRFM(register)		-	1	1	1	1	1	0	0	0	1	0	1				Rm		-	-	-	S	1	0										Rt				
STR(register,SIMD&FP)		64-bit	1	1	1	1	1	1	0	0	0	0	1				Rm		-	-	-	S	1	0										Rt				
LDR(register,SIMD&FP)		64-bit	1	1	1	1	1	1	0	0	0	1	1				Rm		-	-	-	S	1	0										Rt				
Load/store register (unsigned immediate)			size		1	1	1	v	0	1	opc						imm12																				Rn	Rt
STRB (immediate)		Unsigned offset	0	0	1	1	1	0	0	1	0	0					imm12																				Rn	Rt
LDRB (immediate)		Unsigned offset	0	0	1	1	1	0	0	1	0	1					imm12																				Rn	Rt
LDRSB (immediate)		64-bit	0	0	1	1	1	0	0	1	1	0					imm12																				Rn	Rt
LDRSB (immediate)		32-bit	0	0	1	1	1	0	0	1	1	1					imm12																				Rn	Rt
STR (immediate, SIMD&FP)		8-bit	0	0	1	1	1	1	0	1	0	0					imm12																				Rn	Rt
LDR (immediate, SIMD&FP)		8-bit	0	0	1	1	1	1	0	1	0	1					imm12																				Rn	Rt
STR (immediate, SIMD&FP)		128-bit	0	0	1	1	1	1	0	1	1	0					imm12																				Rn	Rt
LDR (immediate, SIMD&FP)		128-bit	0	0	1	1	1	1	0	1	1	1					imm12																				Rn	Rt
STRH (immediate)		Unsigned offset	0	1	1	1	1	0	0	1	0	0					imm12																				Rn	Rt
LDRH (immediate)		Unsigned offset	0	1	1	1	1	0	0	1	0	1					imm12																				Rn	Rt
LDRSH (immediate)		64-bit	0	1	1	1	1	0	0	1	1	0					imm12																				Rn	Rt
LDRSH (immediate)		32-bit	0	1	1	1	1	0	0	1	1	1					imm12																				Rn	Rt
STR (immediate, SIMD&FP)		16-bit	0	1	1	1	1	1	0	1	0	0					imm12																				Rn	Rt

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
LDR (immediate, SIMD# 16-bit			0	1	1	1	1	1	0	1	0	1																Rn						Rt
STR (immediate) 32-bit			1	0	1	1	1	0	0	1	0	0															Rn						Rt	
LDR (immediate) 32-bit			1	0	1	1	1	0	0	1	0	1															Rn						Rt	
LDRSW (immediate) Unsigned offset			1	0	1	1	1	0	0	1	1	0															Rn						Rt	
STR (immediate, SIMD# 32-bit			1	0	1	1	1	1	0	1	0	0															Rn						Rt	
LDR (immediate, SIMD# 32-bit			1	0	1	1	1	1	0	1	0	1															Rn						Rt	
STR (immediate) 64-bit			1	1	1	1	1	1	0	0	1	0	0														Rn						Rt	
LDR (immediate) 64-bit			1	1	1	1	1	1	0	0	1	0	1														Rn						Rt	
PRFM (immediate) -			1	1	1	1	1	1	0	0	1	1	0														Rn						Rt	
STR (immediate, SIMD# 64-bit			1	1	1	1	1	1	1	0	1	0	0														Rn						Rt	
LDR (immediate, SIMD# 64-bit			1	1	1	1	1	1	1	0	1	0	1														Rn						Rt	
AdvSIMD load/store multiple structures			0	Q	0	0	1	1	0	0	0	L	0	0	0	0	0	0	opcode				size				Rn						Rt	
ST4(multiple structures) No offset			0	Q	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	size			Rn						Rt	
ST1(multiple structures) Four registers			0	Q	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	size			Rn						Rt	
ST3(multiple structures) No offset			0	Q	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	size			Rn						Rt	
ST1(multiple structures) Three registers			0	Q	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	size			Rn						Rt	
ST1(multiple structures) One register			0	Q	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	size			Rn						Rt	
ST2(multiple structures) No offset			0	Q	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	size			Rn							Rt	
ST1(multiple structures) Two registers			0	Q	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	size			Rn							Rt	
LD4(multiple structures) No offset			0	Q	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	size			Rn							Rt	
LD1(multiple structures) Four registers			0	Q	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	size			Rn							Rt	
LD3(multiple structures) No offset			0	Q	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	size			Rn							Rt	
LD1(multiple structures) Three registers			0	Q	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	size			Rn							Rt	
LD1(multiple structures) One register			0	Q	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	size			Rn							Rt	
LD2(multiple structures) No offset			0	Q	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	size			Rn							Rt	
LD1(multiple structures) Two registers			0	Q	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	size			Rn							Rt	
AdvSIMD load/store multiple structures (post-indexed)			0	Q	0	0	1	1	0	0	1	L	0	Rm				opcode				size				Rn						Rt		
ST4 (multiple structures) Register offset			0	Q	0	0	1	1	0	0	1	0	0	!= 11111				0 0 0 0				size				Rn						Rt		
ST1 (multiple structures) Four registers, register offset			0	Q	0	0	1	1	0	0	1	0	0	!= 11111				0 0 1 0				size				Rn						Rt		
ST3 (multiple structures) Register offset			0	Q	0	0	1	1	0	0	1	0	0	!= 11111				0 1 0 0				size				Rn						Rt		
ST1 (multiple structures) Three registers, register offset			0	Q	0	0	1	1	0	0	1	0	0	!= 11111				0 1 1 0				size				Rn						Rt		
ST1 (multiple structures) One register, register offset			0	Q	0	0	1	1	0	0	1	0	0	!= 11111				0 1 1 1				size				Rn						Rt		
ST2 (multiple structures) Register offset			0	Q	0	0	1	1	0	0	1	0	0	!= 11111				1 0 0 0				size				Rn						Rt		
ST1 (multiple structures) Two registers, register offset			0	Q	0	0	1	1	0	0	1	0	0	!= 11111				1 0 1 0				size				Rn						Rt		
ST4 (multiple structures) Immediate offset			0	Q	0	0	1	1	0	0	1	0	0	1	1	1	1	1	0	0	0	0	size			Rn							Rt	
ST1 (multiple structures) Four registers, immediate offset			0	Q	0	0	1	1	0	0	1	0	0	1	1	1	1	1	0	0	1	0	size			Rn							Rt	
ST3 (multiple structures) Immediate offset			0	Q	0	0	1	1	0	0	1	0	0	1	1	1	1	1	0	1	0	0	size			Rn							Rt	
ST1 (multiple structures) Three registers, immediate offset			0	Q	0	0	1	1	0	0	1	0	0	1	1	1	1	1	0	1	1	0	size			Rn							Rt	
ST1 (multiple structures) One register, immediate offset			0	Q	0	0	1	1	0	0	1	0	0	1	1	1	1	1	0	1	1	1	size			Rn							Rt	
ST2 (multiple structures) Immediate offset			0	Q	0	0	1	1	0	0	1	0	0	1	1	1	1	1	1	0	0	0	size			Rn							Rt	
ST1 (multiple structures) Two registers, immediate offset			0	Q	0	0	1	1	0	0	1	0	0	1	1	1	1	1	1	0	1	0	size			Rn							Rt	
LD4 (multiple structures) Register offset			0	Q	0	0	1	1	0	0	1	1	0	!= 11111				0 0 0 0				size				Rn						Rt		
LD1 (multiple structures) Four registers, register offset			0	Q	0	0	1	1	0	0	1	1	0	!= 11111				0 0 1 0				size				Rn							Rt	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
LD3 (multiple structures	Register offset		0	Q	0	0	1	1	0	0	1	1	0		!= 11111				0	1	0	0	size				Rn							Rt	
LD1 (multiple structures	Three registers, register offset		0	Q	0	0	1	1	0	0	1	1	0		!= 11111				0	1	1	0	size				Rn							Rt	
LD1 (multiple structures	One register, register offset		0	Q	0	0	1	1	0	0	1	1	0		!= 11111				0	1	1	1	size				Rn							Rt	
LD2 (multiple structures	Register offset		0	Q	0	0	1	1	0	0	1	1	0		!= 11111				1	0	0	0	size				Rn							Rt	
LD1 (multiple structures	Two registers, register offset		0	Q	0	0	1	1	0	0	1	1	0		!= 11111				1	0	1	0	size				Rn							Rt	
LD4 (multiple structures	Immediate offset		0	Q	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	0	0	0	size				Rn							Rt	
LD1 (multiple structures	Four registers, immediate offset		0	Q	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	0	1	0	size				Rn							Rt	
LD3 (multiple structures	Immediate offset		0	Q	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	0	0	size				Rn							Rt	
LD1 (multiple structures	Three registers, immediate offset		0	Q	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	0	size				Rn							Rt	
LD1 (multiple structures	One register, immediate offset		0	Q	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	1	size				Rn							Rt	
LD2 (multiple structures	Immediate offset		0	Q	0	0	1	1	0	0	1	1	0	1	1	1	1	1	1	0	0	0	size				Rn							Rt	
LD1 (multiple structures	Two registers, immediate offset		0	Q	0	0	1	1	0	0	1	1	0	1	1	1	1	1	1	0	1	0	size				Rn							Rt	
AdvSIMD load/store single structure			0	Q	0	0	1	1	0	1	0	L	R	0	0	0	0	0	opcode	S	size					Rn							Rt		
ST1 (single structure)	8-bit		0	Q	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	-	-	-		Rn							Rt		
ST3 (single structure)	8-bit		0	Q	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	-	-	-		Rn							Rt		
ST1 (single structure)	16-bit		0	Q	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	-	x	0		Rn							Rt		
ST3 (single structure)	16-bit		0	Q	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	-	x	0		Rn							Rt		
ST1 (single structure)	32-bit		0	Q	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	-	0	0		Rn							Rt		
ST1 (single structure)	64-bit		0	Q	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1		Rn							Rt		
ST3 (single structure)	32-bit		0	Q	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	0	1	-	0	0		Rn							Rt		
ST3 (single structure)	64-bit		0	Q	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	1		Rn							Rt		
ST2 (single structure)	8-bit		0	Q	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	-	-	-		Rn							Rt		
ST4 (single structure)	8-bit		0	Q	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0	1	-	-	-		Rn							Rt		
ST2 (single structure)	16-bit		0	Q	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	0	-	x	0		Rn							Rt		
ST4 (single structure)	16-bit		0	Q	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0	1	1	-	x	0		Rn							Rt		
ST2 (single structure)	32-bit		0	Q	0	0	1	1	0	1	0	0	1	0	0	0	0	0	1	0	0	-	0	0		Rn							Rt		
ST2 (single structure)	64-bit		0	Q	0	0	1	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	1		Rn							Rt		
ST4 (single structure)	32-bit		0	Q	0	0	1	1	0	1	0	0	1	0	0	0	0	0	1	0	1	-	0	0		Rn							Rt		
ST4 (single structure)	64-bit		0	Q	0	0	1	1	0	1	0	0	1	0	0	0	0	0	1	0	1	0	0	1		Rn							Rt		
LD1 (single structure)	8-bit		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	-	-	-		Rn							Rt		
LD3 (single structure)	8-bit		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	1	-	-	-		Rn							Rt		
LD1 (single structure)	16-bit		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	1	0	-	x	0		Rn							Rt		
LD3 (single structure)	16-bit		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	1	1	-	x	0		Rn							Rt		
LD1 (single structure)	32-bit		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	1	0	0	-	0	0		Rn							Rt		
LD1 (single structure)	64-bit		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1		Rn							Rt		
LD3 (single structure)	32-bit		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	1	0	1	-	0	0		Rn							Rt		
LD3 (single structure)	64-bit		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	1		Rn							Rt		
LD1R	No offset		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	1	1	0	0	-	-		Rn							Rt		
LD3R	No offset		0	Q	0	0	1	1	0	1	0	1	0	0	0	0	0	0	1	1	1	0	-	-		Rn							Rt		
LD2 (single structure)	8-bit		0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	-	-	-		Rn							Rt		
LD4 (single structure)	8-bit		0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	1	-	-	-		Rn							Rt		
LD2 (single structure)	16-bit		0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	0	1	0	-	x	0		Rn							Rt		
LD4 (single structure)	16-bit		0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	0	1	1	-	x	0		Rn							Rt		

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
LD2 (single structure)		32-bit	0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	1	0	0	-	0	0			Rn								Rt
LD2 (single structure)		64-bit	0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	1	0	0	0	0	1			Rn								Rt
LD4 (single structure)		32-bit	0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	1	0	1	-	0	0			Rn								Rt
LD4 (single structure)		64-bit	0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	1	0	1	0	0	1			Rn								Rt
LD2R		No offset	0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	1	1	0	0	-	-			Rn								Rt
LD4R		No offset	0	Q	0	0	1	1	0	1	0	1	1	0	0	0	0	0	1	1	1	0	-	-			Rn								Rt
AdvSIMD load/store single structure (post-indexed)			0	Q	0	0	1	1	0	1	1	L	R	Rm				opcode		S	size		Rn		Rt										
ST1 (single structure)		8-bit, register offset	0	Q	0	0	1	1	0	1	1	0	0	!=11111				0	0	0	-	-	-			Rn								Rt	
ST3 (single structure)		8-bit, register offset	0	Q	0	0	1	1	0	1	1	0	0	!=11111				0	0	1	-	-	-			Rn								Rt	
ST1 (single structure)		16-bit, register offset	0	Q	0	0	1	1	0	1	1	0	0	!=11111				0	1	0	-	x	0			Rn								Rt	
ST3 (single structure)		16-bit, register offset	0	Q	0	0	1	1	0	1	1	0	0	!=11111				0	1	1	-	x	0			Rn								Rt	
ST1 (single structure)		32-bit, register offset	0	Q	0	0	1	1	0	1	1	0	0	!=11111				1	0	0	-	0	0			Rn								Rt	
ST1 (single structure)		64-bit, register offset	0	Q	0	0	1	1	0	1	1	0	0	!=11111				1	0	0	0	0	1			Rn								Rt	
ST3 (single structure)		32-bit, register offset	0	Q	0	0	1	1	0	1	1	0	0	!=11111				1	0	1	-	0	0			Rn								Rt	
ST3 (single structure)		64-bit, register offset	0	Q	0	0	1	1	0	1	1	0	0	!=11111				1	0	1	0	0	1			Rn								Rt	
ST1 (single structure)		8-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	0	1	1	1	1	1	0	0	0	-	-	-			Rn								Rt
ST3 (single structure)		8-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	0	1	1	1	1	1	0	0	1	-	-	-			Rn								Rt
ST1 (single structure)		16-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	0	1	1	1	1	1	0	1	0	-	x	0			Rn								Rt
ST3 (single structure)		16-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	0	1	1	1	1	1	0	1	1	-	x	0			Rn								Rt
ST1 (single structure)		32-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	0	1	1	1	1	1	1	0	0	-	0	0			Rn								Rt
ST1 (single structure)		64-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	0	1	1	1	1	1	1	0	0	0	0	1			Rn								Rt
ST3 (single structure)		32-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	0	1	1	1	1	1	1	0	1	-	0	0			Rn								Rt
ST3 (single structure)		64-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	0	1	1	1	1	1	1	0	1	0	0	1			Rn								Rt
ST2 (single structure)		8-bit, register offset	0	Q	0	0	1	1	0	1	1	0	1	!=11111				0	0	0	-	-	-			Rn								Rt	
ST4 (single structure)		8-bit, register offset	0	Q	0	0	1	1	0	1	1	0	1	!=11111				0	0	1	-	-	-			Rn								Rt	
ST2 (single structure)		16-bit, register offset	0	Q	0	0	1	1	0	1	1	0	1	!=11111				0	1	0	-	x	0			Rn								Rt	
ST4 (single structure)		16-bit, register offset	0	Q	0	0	1	1	0	1	1	0	1	!=11111				0	1	1	-	x	0			Rn								Rt	
ST2 (single structure)		32-bit, register offset	0	Q	0	0	1	1	0	1	1	0	1	!=11111				1	0	0	-	0	0			Rn								Rt	
ST2 (single structure)		64-bit, register offset	0	Q	0	0	1	1	0	1	1	0	1	!=11111				1	0	0	0	0	1			Rn								Rt	
ST4 (single structure)		32-bit, register offset	0	Q	0	0	1	1	0	1	1	0	1	!=11111				1	0	1	-	0	0			Rn								Rt	
ST4 (single structure)		64-bit, register offset	0	Q	0	0	1	1	0	1	1	0	1	!=11111				1	0	1	0	0	1			Rn								Rt	
ST2 (single structure)		8-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	1	1	1	1	1	1	0	0	0	-	-	-			Rn								Rt
ST4 (single structure)		8-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	1	1	1	1	1	1	0	0	1	-	-	-			Rn								Rt
ST2 (single structure)		16-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	1	1	1	1	1	1	0	1	0	-	x	0			Rn								Rt
ST4 (single structure)		16-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	1	1	1	1	1	1	0	1	1	-	x	0			Rn								Rt
ST2 (single structure)		32-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	0	-	0	0			Rn								Rt
ST2 (single structure)		64-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	0	0	0	1			Rn								Rt
ST4 (single structure)		32-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	1	-	0	0			Rn								Rt
ST4 (single structure)		64-bit, immediate offset	0	Q	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	1	0	0	1			Rn								Rt
LD1 (single structure)		8-bit, register offset	0	Q	0	0	1	1	0	1	1	1	0	!=11111				0	0	0	-	-	-			Rn								Rt	
LD3 (single structure)		8-bit, register offset	0	Q	0	0	1	1	0	1	1	1	0	!=11111				0	0	1	-	-	-			Rn								Rt	
LD1 (single structure)		16-bit, register offset	0	Q	0	0	1	1	0	1	1	1	0	!=11111				0	1	0	-	x	0			Rn								Rt	
LD3 (single structure)		16-bit, register offset	0	Q	0	0	1	1	0	1	1	1	0	!=11111				0	1	1	-	x	0			Rn								Rt	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0												
LD1 (single structure)		32-bit, register offset	0	Q	0	0	1	1	0	1	1	1	0		!=11111				1	0	0	-	0	0			Rn							Rt												
LD1 (single structure)		64-bit, register offset	0	Q	0	0	1	1	0	1	1	1	0		!=11111				1	0	0	0	0	1			Rn							Rt												
LD3 (single structure)		32-bit, register offset	0	Q	0	0	1	1	0	1	1	1	0		!=11111				1	0	1	-	0	0			Rn							Rt												
LD3 (single structure)		64-bit, register offset	0	Q	0	0	1	1	0	1	1	1	0		!=11111				1	0	1	0	0	1			Rn							Rt												
LD1R		Register offset	0	Q	0	0	1	1	0	1	1	1	0		!=11111				1	1	0	0	-	-			Rn							Rt												
LD3R		Register offset	0	Q	0	0	1	1	0	1	1	1	0		!=11111				1	1	1	0	-	-			Rn							Rt												
LD1 (single structure)		8-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	0	0	0	-	-	-			Rn							Rt												
LD3 (single structure)		8-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	0	0	1	-	-	-			Rn							Rt												
LD1 (single structure)		16-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	0	1	0	-	x	0			Rn							Rt												
LD3 (single structure)		16-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	0	1	1	-	x	0			Rn							Rt												
LD1 (single structure)		32-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	0	0	-	0	0			Rn								Rt												
LD1 (single structure)		64-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	0	0	0	0	1			Rn								Rt												
LD3 (single structure)		32-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	0	1	-	0	0			Rn								Rt												
LD3 (single structure)		64-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	0	1	0	0	1			Rn								Rt												
LD1R		Immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	1	0	0	-	-			Rn								Rt												
LD3R		Immediate offset	0	Q	0	0	1	1	0	1	1	1	0	1	1	1	1	1	1	1	0	-	-			Rn								Rt												
LD2 (single structure)		8-bit, register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				0	0	0	-	-	-			Rn							Rt												
LD4 (single structure)		8-bit, register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				0	0	1	-	-	-			Rn							Rt												
LD2 (single structure)		16-bit, register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				0	1	0	-	x	0			Rn							Rt												
LD4 (single structure)		16-bit, register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				0	1	1	-	x	0			Rn							Rt												
LD2 (single structure)		32-bit, register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				1	0	0	-	0	0			Rn							Rt												
LD2 (single structure)		64-bit, register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				1	0	0	0	0	1			Rn							Rt												
LD4 (single structure)		32-bit, register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				1	0	1	-	0	0			Rn							Rt												
LD4 (single structure)		64-bit, register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				1	0	1	0	0	1			Rn							Rt												
LD2R		Register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				1	1	0	0	-	-			Rn							Rt												
LD4R		Register offset	0	Q	0	0	1	1	0	1	1	1	1		!=11111				1	1	1	0	-	-			Rn							Rt												
LD2 (single structure)		8-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	-	-	-			Rn							Rt												
LD4 (single structure)		8-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	-	-	-			Rn							Rt												
LD2 (single structure)		16-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	-	x	0			Rn							Rt												
LD4 (single structure)		16-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	-	x	0			Rn							Rt												
LD2 (single structure)		32-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	-	0	0			Rn								Rt												
LD2 (single structure)		64-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	0	0	0	1			Rn								Rt												
LD4 (single structure)		32-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	-	0	0			Rn								Rt												
LD4 (single structure)		64-bit, immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	0	1			Rn								Rt												
LD2R		Immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	-	-			Rn								Rt												
LD4R		Immediate offset	0	Q	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	-	-			Rn								Rt												
Data processing – Immediate						1	0	0																																						
PC-rel. addressing			op	immlo		1	0	0	0	0	immhi																																	Rd		
ADR	-		0	immlo		1	0	0	0	0	immhi																																	Rd		
ADRP	-		1	immlo		1	0	0	0	0	immhi																																		Rd	
Add/subtract (immediate)			sf	op	S	1	0	0	0	1	shift	imm12																															Rn		Rd	
ADD (immediate)	32-bit		0	0	0	1	0	0	0	1	-	-	imm12																															Rn		Rd
ADDs (immediate)	32-bit		0	0	1	1	0	0	0	1	-	-	imm12																															Rn		Rd

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SUB (immediate)		32-bit	0	1	0	1	0	0	0	1	-	-	imm12											Rn			Rd							
SUBS (immediate)		32-bit	0	1	1	1	0	0	0	1	-	-	imm12											Rn			Rd							
ADD (immediate)		64-bit	1	0	0	1	0	0	0	1	-	-	imm12											Rn			Rd							
ADDS (immediate)		64-bit	1	0	1	1	0	0	0	1	-	-	imm12											Rn			Rd							
SUB (immediate)		64-bit	1	1	0	1	0	0	0	1	-	-	imm12											Rn			Rd							
SUBS (immediate)		64-bit	1	1	1	1	0	0	0	1	-	-	imm12											Rn			Rd							
Logical (immediate)			sf	opc		1	0	0	1	0	0	N	immr					imms					Rn			Rd								
AND (immediate)		32-bit	0	0	0	1	0	0	1	0	0	0	immr					imms					Rn			Rd								
ORR (immediate)		32-bit	0	0	1	1	0	0	1	0	0	0	immr					imms					Rn			Rd								
EOR (immediate)		32-bit	0	1	0	1	0	0	1	0	0	0	immr					imms					Rn			Rd								
ANDS (immediate)		32-bit	0	1	1	1	0	0	1	0	0	0	immr					imms					Rn			Rd								
AND (immediate)		64-bit	1	0	0	1	0	0	1	0	0	-	immr					imms					Rn			Rd								
ORR (immediate)		64-bit	1	0	1	1	0	0	1	0	0	-	immr					imms					Rn			Rd								
EOR (immediate)		64-bit	1	1	0	1	0	0	1	0	0	-	immr					imms					Rn			Rd								
ANDS (immediate)		64-bit	1	1	1	1	0	0	1	0	0	-	immr					imms					Rn			Rd								
Move wide (immediate)			sf	opc		1	0	0	1	0	1	hw	imm16											Rd										
MOVN		32-bit	0	0	0	1	0	0	1	0	1	-	-	imm16											Rd									
MOVZ		32-bit	0	1	0	1	0	0	1	0	1	-	-	imm16											Rd									
MOVK		32-bit	0	1	1	1	0	0	1	0	1	-	-	imm16											Rd									
MOVN		64-bit	1	0	0	1	0	0	1	0	1	-	-	imm16											Rd									
MOVZ		64-bit	1	1	0	1	0	0	1	0	1	-	-	imm16											Rd									
MOVK		64-bit	1	1	1	1	0	0	1	0	1	-	-	imm16											Rd									
Bitfield			sf	opc		1	0	0	1	1	0	N	immr					imms					Rn			Rd								
SBFM		32-bit	0	0	0	1	0	0	1	1	0	0	immr					imms					Rn			Rd								
BFM		32-bit	0	0	1	1	0	0	1	1	0	0	immr					imms					Rn			Rd								
UBFM		32-bit	0	1	0	1	0	0	1	1	0	0	immr					imms					Rn			Rd								
SBFM		64-bit	1	0	0	1	0	0	1	1	0	1	immr					imms					Rn			Rd								
BFM		64-bit	1	0	1	1	0	0	1	1	0	1	immr					imms					Rn			Rd								
UBFM		64-bit	1	1	0	1	0	0	1	1	0	1	immr					imms					Rn			Rd								
Extract			sf	op	21	1	0	0	1	1	1	N	o0	Rm					imms					Rn			Rd							
EXTR		32-bit	0	0	0	1	0	0	1	1	1	0	0	Rm					0	x	x	x	x	x	Rn			Rd						
EXTR		64-bit	1	0	0	1	0	0	1	1	1	1	0	Rm					-	-	-	-	-	-	Rn			Rd						
Data Processing – register							1	0	1																									
Logical (shifted register)			sf	opc		0	1	0	1	0	shift	N	Rm					imm6					Rn			Rd								
AND (shifted register)		32-bit	0	0	0	0	1	0	1	0	shift	0	Rm					-	-	-	-	-	-	Rn			Rd							
BIC (shifted register)		32-bit	0	0	0	0	1	0	1	0	shift	1	Rm					-	-	-	-	-	-	Rn			Rd							
ORR (shifted register)		32-bit	0	0	1	0	1	0	1	0	shift	0	Rm					-	-	-	-	-	-	Rn			Rd							
ORN (shifted register)		32-bit	0	0	1	0	1	0	1	0	shift	1	Rm					-	-	-	-	-	-	Rn			Rd							
EOR (shifted register)		32-bit	0	1	0	0	1	0	1	0	shift	0	Rm					-	-	-	-	-	-	Rn			Rd							
EON (shifted register)		32-bit	0	1	0	0	1	0	1	0	shift	1	Rm					-	-	-	-	-	-	Rn			Rd							
ANDS (shifted register)		32-bit	0	1	1	0	1	0	1	0	shift	0	Rm					-	-	-	-	-	-	Rn			Rd							
BICS (shifted register)		32-bit	0	1	1	0	1	0	1	0	shift	1	Rm					-	-	-	-	-	-	Rn			Rd							
AND (shifted register)		64-bit	1	0	0	0	1	0	1	0	shift	0	Rm					-	-	-	-	-	-	Rn			Rd							

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
BIC (shifted register)	64-bit		1	0	0	0	1	0	1	0	shift		1			Rm			-	-	-	-	-	-			Rn						Rd	
ORR (shifted register)	64-bit		1	0	1	0	1	0	1	0	shift		0			Rm			-	-	-	-	-	-			Rn						Rd	
ORN (shifted register)	64-bit		1	0	1	0	1	0	1	0	shift		1			Rm			-	-	-	-	-	-			Rn						Rd	
EOR (shifted register)	64-bit		1	1	0	0	1	0	1	0	shift		0			Rm			-	-	-	-	-	-			Rn						Rd	
EON (shifted register)	64-bit		1	1	0	0	1	0	1	0	shift		1			Rm			-	-	-	-	-	-			Rn						Rd	
ANDS (shifted register)	64-bit		1	1	1	0	1	0	1	0	shift		0			Rm			-	-	-	-	-	-			Rn						Rd	
BICS (shifted register)	64-bit		1	1	1	0	1	0	1	0	shift		1			Rm			-	-	-	-	-	-			Rn						Rd	
Add/subtract (shifted register)			sf	op	S	0	1	0	1	1	shift		0			Rm			imm6								Rn				Rd			
ADD (shifted register)	32-bit		0	0	0	0	1	0	1	1	-	-	0			Rm			-	-	-	-	-	-			Rn						Rd	
ADDS (shifted register)	32-bit		0	0	1	0	1	0	1	1	-	-	0			Rm			-	-	-	-	-	-			Rn						Rd	
SUB (shifted register)	32-bit		0	1	0	0	1	0	1	1	-	-	0			Rm			-	-	-	-	-	-			Rn						Rd	
SUBS (shifted register)	32-bit		0	1	1	0	1	0	1	1	-	-	0			Rm			-	-	-	-	-	-			Rn						Rd	
ADD (shifted register)	64-bit		1	0	0	0	1	0	1	1	-	-	0			Rm			-	-	-	-	-	-			Rn						Rd	
ADDS (shifted register)	64-bit		1	0	1	0	1	0	1	1	-	-	0			Rm			-	-	-	-	-	-			Rn						Rd	
SUB (shifted register)	64-bit		1	1	0	0	1	0	1	1	-	-	0			Rm			-	-	-	-	-	-			Rn						Rd	
SUBS (shifted register)	64-bit		1	1	1	0	1	0	1	1	-	-	0			Rm			-	-	-	-	-	-			Rn						Rd	
Add/subtract (extended register)			sf	op	S	0	1	0	1	1	opt		1			Rm			option		imm3					Rn				Rd				
ADD (extended register)	32-bit		0	0	0	0	1	0	1	1	0	0	1			Rm			option		-	-	-			Rn						Rd		
ADDS (extended register)	32-bit		0	0	1	0	1	0	1	1	0	0	1			Rm			option		-	-	-			Rn						Rd		
SUB (extended register)	32-bit		0	1	0	0	1	0	1	1	0	0	1			Rm			option		-	-	-			Rn						Rd		
SUBS (extended register)	32-bit		0	1	1	0	1	0	1	1	0	0	1			Rm			option		-	-	-			Rn						Rd		
ADD (extended register)	64-bit		1	0	0	0	1	0	1	1	0	0	1			Rm			option		-	-	-			Rn						Rd		
ADDS (extended register)	64-bit		1	0	1	0	1	0	1	1	0	0	1			Rm			option		-	-	-			Rn						Rd		
SUB (extended register)	64-bit		1	1	0	0	1	0	1	1	0	0	1			Rm			option		-	-	-			Rn						Rd		
SUBS (extended register)	64-bit		1	1	1	0	1	0	1	1	0	0	1			Rm			option		-	-	-			Rn						Rd		
Add/subtract (with carry)			sf	op	S	1	1	0	1	0	0	0	0						opcode2						Rn				Rd					
ADC	32-bit		0	0	0	1	1	0	1	0	0	0	0			Rm			0	0	0	0	0	0			Rn						Rd	
ADCS	32-bit		0	0	1	1	1	0	1	0	0	0	0			Rm			0	0	0	0	0	0			Rn						Rd	
SBC	32-bit		0	1	0	1	1	0	1	0	0	0	0			Rm			0	0	0	0	0	0			Rn						Rd	
SBCS	32-bit		0	1	1	1	1	0	1	0	0	0	0			Rm			0	0	0	0	0	0			Rn						Rd	
ADC	64-bit		1	0	0	1	1	0	1	0	0	0	0			Rm			0	0	0	0	0	0			Rn						Rd	
ADCS	64-bit		1	0	1	1	1	0	1	0	0	0	0			Rm			0	0	0	0	0	0			Rn						Rd	
SBC	64-bit		1	1	0	1	1	0	1	0	0	0	0			Rm			0	0	0	0	0	0			Rn						Rd	
SBCS	64-bit		1	1	1	1	1	0	1	0	0	0	0			Rm			0	0	0	0	0	0			Rn						Rd	
Conditional compare (register)			sf	op	S	1	1	0	1	0	0	1	0			imm5			cond		0 o2				Rn				o3	nzcv				
CCMN (register)	32-bit		0	0	1	1	1	0	1	0	0	1	0			imm5			cond		0	0			Rn			0	nzcv					
CCMP (register)	32-bit		0	1	1	1	1	0	1	0	0	1	0			imm5			cond		0	0			Rn			0	nzcv					
CCMN (register)	64-bit		1	0	1	1	1	0	1	0	0	1	0			imm5			cond		0	0			Rn			0	nzcv					
CCMP (register)	64-bit		1	1	1	1	1	0	1	0	0	1	0			imm5			cond		0	0			Rn			0	nzcv					
Conditional compare (immediate)			sf	op	S	1	1	0	1	0	0	1	0			imm5			cond		1 o2				Rn				o3	nzcv				
CCMN (immediate)	32-bit		0	0	1	1	1	0	1	0	0	1	0			imm5			cond		1	0			Rn			0	nzcv					
CCMP (immediate)	32-bit		0	1	1	1	1	0	1	0	0	1	0			imm5			cond		1	0			Rn			0	nzcv					
CCMN (immediate)	64-bit		1	0	1	1	1	0	1	0	0	1	0			imm5			cond		1	0			Rn			0	nzcv					

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
CCMP (immediate)		64-bit	1	1	1	1	1	0	1	0	0	1	0										1	0						0				nzcv
Conditional select			sf	op	S	1	1	0	1	0	1	0	0			Rm					cond		op2				Rn						Rd	
CSEL		32-bit	0	0	0	1	1	0	1	0	1	0	0			Rm					cond		0	0			Rn						Rd	
CSINC		32-bit	0	0	0	1	1	0	1	0	1	0	0			Rm					cond		0	1			Rn						Rd	
CSINV		32-bit	0	1	0	1	1	0	1	0	1	0	0			Rm					cond		0	0			Rn						Rd	
CSNEG		32-bit	0	1	0	1	1	0	1	0	1	0	0			Rm					cond		0	1			Rn						Rd	
CSEL		64-bit	1	0	0	1	1	0	1	0	1	0	0			Rm					cond		0	0			Rn						Rd	
CSINC		64-bit	1	0	0	1	1	0	1	0	1	0	0			Rm					cond		0	1			Rn						Rd	
CSINV		64-bit	1	1	0	1	1	0	1	0	1	0	0			Rm					cond		0	0			Rn						Rd	
CSNEG		64-bit	1	1	0	1	1	0	1	0	1	0	0			Rm					cond		0	1			Rn						Rd	
Data-processing (3 source)			sf	op54	1	1	0	1	1		op31					Rm			o0			Ra					Rn						Rd	
MADD		32-bit	0	0	0	1	1	0	1	1	0	0	0			Rm			0			Ra					Rn						Rd	
MSUB		32-bit	0	0	0	1	1	0	1	1	0	0	0			Rm			1			Ra					Rn						Rd	
MADD		64-bit	1	0	0	1	1	0	1	1	0	0	0			Rm			0			Ra					Rn						Rd	
MSUB		64-bit	1	0	0	1	1	0	1	1	0	0	0			Rm			1			Ra					Rn						Rd	
SMADDL		-	1	0	0	1	1	0	1	1	0	0	1			Rm			0			Ra					Rn						Rd	
SMSUBL		-	1	0	0	1	1	0	1	1	0	0	1			Rm			1			Ra					Rn						Rd	
SMULH		-	1	0	0	1	1	0	1	1	0	1	0			Rm			0			Ra					Rn						Rd	
UMADDL		-	1	0	0	1	1	0	1	1	1	0	1			Rm			0			Ra					Rn						Rd	
UMSUBL		-	1	0	0	1	1	0	1	1	1	0	1			Rm			1			Ra					Rn						Rd	
UMULH		-	1	0	0	1	1	0	1	1	1	1	0			Rm			0			Ra					Rn						Rd	
Data-processing (2 source)			sf	0	S	1	1	0	1	0	1	1	0			Rm					opcode						Rn						Rd	
UDIV		32-bit	0	0	0	1	1	0	1	0	1	1	0			Rm			0	0	0	0	1	0			Rn						Rd	
SDIV		32-bit	0	0	0	1	1	0	1	0	1	1	0			Rm			0	0	0	0	1	1			Rn						Rd	
LSLV		32-bit	0	0	0	1	1	0	1	0	1	1	0			Rm			0	0	1	0	0	0			Rn						Rd	
LSRV		32-bit	0	0	0	1	1	0	1	0	1	1	0			Rm			0	0	1	0	0	1			Rn						Rd	
ASRV		32-bit	0	0	0	1	1	0	1	0	1	1	0			Rm			0	0	1	0	1	0			Rn						Rd	
RORV		32-bit	0	0	0	1	1	0	1	0	1	1	0			Rm			0	0	1	0	1	1			Rn						Rd	
CRC32B, CRC32H, CR CRC32B			0	0	0	1	1	0	1	0	1	1	0			Rm			0	1	0	0	0	0			Rn						Rd	
CRC32B, CRC32H, CR CRC32H			0	0	0	1	1	0	1	0	1	1	0			Rm			0	1	0	0	0	1			Rn						Rd	
CRC32B, CRC32H, CR CRC32W			0	0	0	1	1	0	1	0	1	1	0			Rm			0	1	0	0	1	0			Rn						Rd	
CRC32CB, CRC32CH, CRC32CB			0	0	0	1	1	0	1	0	1	1	0			Rm			0	1	0	1	0	0			Rn						Rd	
CRC32CB, CRC32CH, CRC32CH			0	0	0	1	1	0	1	0	1	1	0			Rm			0	1	0	1	0	1			Rn						Rd	
CRC32CB, CRC32CH, CRC32CW			0	0	0	1	1	0	1	0	1	1	0			Rm			0	1	0	1	1	0			Rn						Rd	
UDIV		64-bit	1	0	0	1	1	0	1	0	1	1	0			Rm			0	0	0	0	1	0			Rn						Rd	
SDIV		64-bit	1	0	0	1	1	0	1	0	1	1	0			Rm			0	0	0	0	1	1			Rn						Rd	
LSLV		64-bit	1	0	0	1	1	0	1	0	1	1	0			Rm			0	0	1	0	0	0			Rn						Rd	
LSRV		64-bit	1	0	0	1	1	0	1	0	1	1	0			Rm			0	0	1	0	0	1			Rn						Rd	
ASRV		64-bit	1	0	0	1	1	0	1	0	1	1	0			Rm			0	0	1	0	1	0			Rn						Rd	
RORV		64-bit	1	0	0	1	1	0	1	0	1	1	0			Rm			0	0	1	0	1	1			Rn						Rd	
CRC32B, CRC32H, CR CRC32X			1	0	0	1	1	0	1	0	1	1	0			Rm			0	1	0	0	1	1			Rn						Rd	
CRC32CB, CRC32CH, CRC32CX			1	0	0	1	1	0	1	0	1	1	0			Rm			0	1	0	1	1	1			Rn						Rd	
Data-processing (1 source)			sf	1	S	1	1	0	1	0	1	1	0			opcode2					opcode						Rn						Rd	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
RBIT		32-bit	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0			Rn							Rd	
REV16		32-bit	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1			Rn							Rd	
REV		32-bit	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0			Rn							Rd	
CLZ		32-bit	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0			Rn							Rd	
CLS		32-bit	0	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1			Rn							Rd	
RBIT		64-bit	1	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0			Rn							Rd	
REV16		64-bit	1	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1			Rn							Rd	
REV32		-	1	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0			Rn							Rd	
REV		64-bit	1	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1			Rn							Rd	
CLZ		64-bit	1	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0			Rn							Rd	
CLS		64-bit	1	1	0	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1			Rn							Rd	
Data Processing – SIMD and floating point							1	1	1																										
Floating-point<->fixed-point conversions			sf	0	S	1	1	1	1	0	type	0	rmode	opcode	scale				Rn				Rd												
SCVTF (scalar, fixed-pc 32-bit to single-precision			0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	-	-	-	-	-	-			Rn							Rd	
UCVTF (scalar, fixed-pc 32-bit to single-precision			0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	-	-	-	-	-	-			Rn							Rd	
FCVTZS (scalar, fixed-ꝑ Single-precision to 32-bit			0	0	0	1	1	1	1	0	1	1	0	1	1	0	0	0	-	-	-	-	-	-			Rn							Rd	
FCVTZU (scalar, fixed-ꝑ Single-precision to 32-bit			0	0	0	1	1	1	1	0	1	1	0	1	1	0	0	1	-	-	-	-	-	-			Rn							Rd	
SCVTF (scalar, fixed-pc 32-bit to double-precision			0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	-	-	-	-	-	-			Rn							Rd	
UCVTF (scalar, fixed-pc 32-bit to double-precision			0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	-	-	-	-	-	-			Rn							Rd	
FCVTZS (scalar, fixed-ꝑ Double-precision to 32-bit			0	0	0	1	1	1	1	0	1	1	0	1	1	0	0	0	-	-	-	-	-	-			Rn							Rd	
FCVTZU (scalar, fixed-ꝑ Double-precision to 32-bit			0	0	0	1	1	1	1	0	1	1	0	1	1	0	0	1	-	-	-	-	-	-			Rn							Rd	
SCVTF (scalar, fixed-pc 64-bit to single-precision			1	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	-	-	-	-	-	-			Rn							Rd	
UCVTF (scalar, fixed-pc 64-bit to single-precision			1	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	-	-	-	-	-	-			Rn							Rd	
FCVTZS (scalar, fixed-ꝑ Single-precision to 64-bit			1	0	0	1	1	1	1	0	1	1	0	1	1	0	0	0	-	-	-	-	-	-			Rn							Rd	
FCVTZU (scalar, fixed-ꝑ Single-precision to 64-bit			1	0	0	1	1	1	1	0	1	1	0	1	1	0	0	1	-	-	-	-	-	-			Rn							Rd	
SCVTF (scalar, fixed-pc 64-bit to double-precision			1	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	-	-	-	-	-	-			Rn							Rd	
UCVTF (scalar, fixed-pc 64-bit to double-precision			1	0	0	1	1	1	1	0	0	0	0	0	0	0	1	1	-	-	-	-	-	-			Rn							Rd	
FCVTZS (scalar, fixed-ꝑ Double-precision to 64-bit			1	0	0	1	1	1	1	0	1	1	0	1	1	0	0	0	-	-	-	-	-	-			Rn							Rd	
FCVTZU (scalar, fixed-ꝑ Double-precision to 64-bit			1	0	0	1	1	1	1	0	1	1	0	1	1	0	0	1	-	-	-	-	-	-			Rn							Rd	
Floating-point conditional compare			M	0	S	1	1	1	1	0	type	1	Rm				cond				0	1	Rn				op	nzcw							
FCCMP		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				cond				0	1	Rn				0	nzcw						
FCCMPE		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				cond				0	1	Rn				1	nzcw						
FCCMP		Double-precision	0	0	0	1	1	1	1	0	0	1	1	Rm				cond				0	1	Rn				0	nzcw						
FCCMPE		Double-precision	0	0	0	1	1	1	1	0	0	1	1	Rm				cond				0	1	Rn				1	nzcw						
Floating-point data-processing (2 source)			M	0	S	1	1	1	1	0	type	1	Rm				opcode				1	0	Rn				Rd								
FMUL (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				0	0	0	0	1	0			Rn							Rd		
FDIV (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				0	0	0	1	1	0			Rn							Rd		
FADD (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				0	0	1	0	1	0			Rn							Rd		
FSUB (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				0	0	1	1	1	0			Rn							Rd		
FMAX (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				0	1	0	0	1	0			Rn							Rd		
FMIN (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				0	1	0	1	1	0			Rn							Rd		
FMAXNM (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				0	1	1	0	1	0			Rn							Rd		
FMINNM (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	Rm				0	1	1	1	1	0			Rn							Rd		

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
FNMUL		Single-precision	0	0	0	1	1	1	1	0	0	0	1			Rm			1	0	0	0	1	0			Rn							Rd	
FMUL (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	0	0	0	1	0			Rn							Rd	
FDIV (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	0	0	1	1	0			Rn							Rd	
FADD (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	0	1	0	1	0			Rn							Rd	
FSUB (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	0	1	1	1	0			Rn							Rd	
FMAX (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	1	0	0	1	0			Rn							Rd	
FMIN (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	1	0	1	1	0			Rn							Rd	
FMAXNM (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	1	1	0	1	0			Rn							Rd	
FMINNM (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	1	1	1	1	0			Rn							Rd	
FNMUL		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			1	0	0	0	1	0			Rn							Rd	
Floating-point conditional select			M	0	S	1	1	1	1	0	type	1			Rm			cond				1	1			Rn							Rd		
FCSEL		Single-precision	0	0	0	1	1	1	1	0	0	0	1			Rm			cond			1	1			Rn								Rd	
FCSEL		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			cond			1	1			Rn								Rd	
Floating-point immediate			M	0	S	1	1	1	1	0	type	1			imm8						1	0	0		imm5					Rd					
FMOV (scalar, immedia		Single-precision	0	0	0	1	1	1	1	0	0	0	1			imm8						1	0	0		0	0	0	0	0					Rd
FMOV (scalar, immedia		Double-precision	0	0	0	1	1	1	1	0	0	1	1			imm8						1	0	0		0	0	0	0	0					Rd
Floating-point compare			M	0	S	1	1	1	1	0	type	1			Rm			op	1	0	0	0				Rn			opcode2						
FCMP		Single-precision	0	0	0	1	1	1	1	0	0	0	1			Rm			0	0	1	0	0	0			Rn			0	0	0	0	0	
FCMP		Single-precision, zero	0	0	0	1	1	1	1	0	0	0	1			Rm			0	0	1	0	0	0			Rn			0	1	0	0	0	
FCMPE		Single-precision	0	0	0	1	1	1	1	0	0	0	1			Rm			0	0	1	0	0	0			Rn			1	0	0	0	0	
FCMPE		Single-precision, zero	0	0	0	1	1	1	1	0	0	0	1			Rm			0	0	1	0	0	0			Rn			1	1	0	0	0	
FCMP		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	0	1	0	0	0			Rn			0	0	0	0	0	
FCMP		Double-precision, zero	0	0	0	1	1	1	1	0	0	1	1			Rm			0	0	1	0	0	0			Rn			0	1	0	0	0	
FCMPE		Double-precision	0	0	0	1	1	1	1	0	0	1	1			Rm			0	0	1	0	0	0			Rn			1	0	0	0	0	
FCMPE		Double-precision, zero	0	0	0	1	1	1	1	0	0	1	1			Rm			0	0	1	0	0	0			Rn			1	1	0	0	0	
Floating-point data-processing (1 source)			M	0	S	1	1	1	1	0	type	1			opcode						1	0	0	0	0		Rn						Rd		
FMOV (register)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0			Rn							Rd	
FABS (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0			Rn							Rd	
FNEG (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0			Rn							Rd	
FSQRT (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0			Rn							Rd	
FCVT		Single-precision to double-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	0	1	0	1	1	0	0	0	0			Rn							Rd	
FCVT		Single-precision to half-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0			Rn							Rd	
FRINTN (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0			Rn							Rd	
FRINTP (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0			Rn							Rd	
FRINTM (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0			Rn							Rd	
FRINTZ (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	1	0	1	1	1	0	0	0	0			Rn							Rd	
FRINTA (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0			Rn							Rd	
FRINTX (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	1	1	1	0	1	0	0	0	0			Rn							Rd	
FRINTI (scalar)		Single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	1	1	1	1	1	0	0	0	0			Rn							Rd	
FMOV (register)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0			Rn							Rd	
FABS (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0			Rn							Rd	
FNEG (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0			Rn							Rd	
FSQRT (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	1	1	1	0	0	0	0			Rn							Rd	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
FCVT		Double-precision to single-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	0	1	0	1	1	0	0	0	0			Rn							Rd
FCVT		Double-precision to half-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	0	1	1	1	1	0	0	0	0			Rn							Rd
FRINTN (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	1	0	0	0	1	0	0	0	0			Rn							Rd
FRINTP (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	1	0	0	1	1	0	0	0	0			Rn							Rd
FRINTM (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	1	0	1	0	1	0	0	0	0			Rn							Rd
FRINTZ (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	1	0	1	1	1	0	0	0	0			Rn							Rd
FRINTA (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	1	1	0	0	1	0	0	0	0			Rn							Rd
FRINTX (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	1	1	1	0	1	0	0	0	0			Rn							Rd
FRINTI (scalar)		Double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	1	1	1	1	1	0	0	0	0			Rn							Rd
FCVT		Half-precision to single-precision	0	0	0	1	1	1	1	0	1	1	1	0	0	0	1	0	0	1	0	0	0	0			Rn							Rd
FCVT		Half-precision to double-precision	0	0	0	1	1	1	1	0	1	1	1	0	0	0	1	0	1	1	0	0	0	0			Rn							Rd
Floating-point<->integer conversions			sf	0	S	1	1	1	1	0	type	1	rmode	opcode	0	0	0	0	0	0	0	0	0			Rn							Rd	
FCVTNS (scalar)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTNU (scalar)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0			Rn							Rd
SCVTF (scalar, integer)		32-bit to single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0			Rn							Rd
UCVTF (scalar, integer)		32-bit to single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0			Rn							Rd
FCVTAS (scalar)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0			Rn							Rd
FCVTAU (scalar)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0			Rn							Rd
FMOV (general)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0			Rn							Rd
FMOV (general)		32-bit to single-precision	0	0	0	1	1	1	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0			Rn							Rd
FCVTPS (scalar)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTPU (scalar)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTMS (scalar)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTMU (scalar)		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTZS (scalar, intege		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTZU (scalar, intege		Single-precision to 32-bit	0	0	0	1	1	1	1	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTNS (scalar)		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTNU (scalar)		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0			Rn							Rd
SCVTF (scalar, integer)		32-bit to double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0			Rn							Rd
UCVTF (scalar, integer)		32-bit to double-precision	0	0	0	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0			Rn							Rd
FCVTAS (scalar)		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0			Rn							Rd
FCVTAU (scalar)		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0			Rn							Rd
FCVTPS (scalar)		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTPU (scalar)		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTMS (scalar)		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTMU (scalar)		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTZS (scalar, intege		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTZU (scalar, intege		Double-precision to 32-bit	0	0	0	1	1	1	1	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTNS (scalar)		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTNU (scalar)		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0			Rn							Rd
SCVTF (scalar, integer)		64-bit to single-precision	1	0	0	1	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0			Rn							Rd
UCVTF (scalar, integer)		64-bit to single-precision	1	0	0	1	1	1	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0			Rn							Rd
FCVTAS (scalar)		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	0	0	1	0	0	0	14	0	0	0	0			Rn							Rd

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
FCVTAU (scalar)		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0			Rn							Rd
FCVTPS (scalar)		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTPU (scalar)		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTMS (scalar)		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTMU (scalar)		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0			Rn							Rd
FCVTZS (scalar, intege		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTZU (scalar, intege		Single-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTNS (scalar)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTNU (scalar)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0			Rn							Rd
SCVTF (scalar, integer)		64-bit to double-precision	1	0	0	1	1	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0			Rn							Rd
UCVTF (scalar, integer)		64-bit to double-precision	1	0	0	1	1	1	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0			Rn							Rd
FCVTAS (scalar)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0			Rn							Rd
FCVTAU (scalar)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0			Rn							Rd
FMOV (general)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0			Rn							Rd
FMOV (general)		64-bit to double-precision	1	0	0	1	1	1	1	0	0	1	1	0	0	1	1	1	0	0	0	0	0	0			Rn							Rd
FCVTPS (scalar)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTPU (scalar)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	0	1	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTMS (scalar)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTMU (scalar)		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0			Rn							Rd
FCVTZS (scalar, intege		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0			Rn							Rd
FCVTZU (scalar, intege		Double-precision to 64-bit	1	0	0	1	1	1	1	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0			Rn							Rd
FMOV (general)		Top half of 128-bit to 64-bit	1	0	0	1	1	1	1	0	1	0	1	0	1	1	1	1	0	0	0	0	0	0			Rn							Rd
FMOV (general)		64-bit to top half of 128-bit	1	0	0	1	1	1	1	0	1	0	1	0	1	1	1	1	0	0	0	0	0	0			Rn							Rd
Floating-point data-processing (3 source)			M	0	S	1	1	1	1	1	type	o	1			Rm		o	0			Ra					Rn							Rd
FMADD		Single-precision	0	0	0	1	1	1	1	1	0	0	0			Rm		0				Ra					Rn							Rd
FMSUB		Single-precision	0	0	0	1	1	1	1	1	0	0	0			Rm		1				Ra					Rn							Rd
FNMADD		Single-precision	0	0	0	1	1	1	1	1	0	0	1			Rm		0				Ra					Rn							Rd
FNMSUB		Single-precision	0	0	0	1	1	1	1	1	0	0	1			Rm		1				Ra					Rn							Rd
FMADD		Double-precision	0	0	0	1	1	1	1	1	0	1	0			Rm		0				Ra					Rn							Rd
FMSUB		Double-precision	0	0	0	1	1	1	1	1	0	1	0			Rm		1				Ra					Rn							Rd
FNMADD		Double-precision	0	0	0	1	1	1	1	1	0	1	1			Rm		0				Ra					Rn							Rd
FNMSUB		Double-precision	0	0	0	1	1	1	1	1	0	1	1			Rm		1				Ra					Rn							Rd
AdvSIMD scalar three same			0	1	U	1	1	1	1	0	size	1				Rm					opcode		1				Rn							Rd
SQADD		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		0	0	0	0	0	1	1			Rn							Rd
SQSUB		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		0	0	1	0	1	1				Rn							Rd
CMGT (register)		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		0	0	1	1	0	1				Rn							Rd
CMGE (register)		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		0	0	1	1	1	1				Rn							Rd
SSHL		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		0	1	0	0	0	1				Rn							Rd
SQSHL (register)		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		0	1	0	0	1	1				Rn							Rd
SRSHL		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		0	1	0	1	0	1				Rn							Rd
SQRSHL		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		0	1	0	1	1	1				Rn							Rd
ADD (vector)		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		1	0	0	0	0	1				Rn							Rd
CMTST		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm		1	0	0	0	1	1				Rn							Rd

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
SQDMULH (vector)		Scalar	0	1	0	1	1	1	1	0	-	-	1			Rm			1	0	1	1	0	1			Rn						Rd	
FMULX		Scalar	0	1	0	1	1	1	1	0	0	x	1			Rm			1	1	0	1	1	1			Rn						Rd	
FCMEQ (register)		Scalar	0	1	0	1	1	1	1	0	0	x	1			Rm			1	1	1	0	0	1			Rn						Rd	
FRECPS		Scalar	0	1	0	1	1	1	1	0	0	x	1			Rm			1	1	1	1	1	1			Rn						Rd	
FRSQRTS		Scalar	0	1	0	1	1	1	1	0	1	x	1			Rm			1	1	1	1	1	1			Rn						Rd	
UQADD		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			0	0	0	0	1	1			Rn						Rd	
UQSUB		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			0	0	1	0	1	1			Rn						Rd	
CMHI (register)		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			0	0	1	1	0	1			Rn						Rd	
CMHS (register)		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			0	0	1	1	1	1			Rn						Rd	
USHL		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			0	1	0	0	0	1			Rn						Rd	
UQSHL (register)		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			0	1	0	0	1	1			Rn						Rd	
URSHL		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			0	1	0	1	0	1			Rn						Rd	
UQRSHL		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			0	1	0	1	1	1			Rn						Rd	
SUB (vector)		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			1	0	0	0	0	1			Rn						Rd	
CMEQ (register)		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			1	0	0	0	1	1			Rn						Rd	
SQRDMULH (vector)		Scalar	0	1	1	1	1	1	1	0	-	-	1			Rm			1	0	1	1	0	1			Rn						Rd	
FCMGE (register)		Scalar	0	1	1	1	1	1	1	0	0	x	1			Rm			1	1	1	0	0	1			Rn						Rd	
FACGE		Scalar	0	1	1	1	1	1	1	0	0	x	1			Rm			1	1	1	0	1	1			Rn						Rd	
FABD		Scalar	0	1	1	1	1	1	1	0	1	x	1			Rm			1	1	0	1	0	1			Rn						Rd	
FCMGT (register)		Scalar	0	1	1	1	1	1	1	0	1	x	1			Rm			1	1	1	0	0	1			Rn						Rd	
FACGT		Scalar	0	1	1	1	1	1	1	0	1	x	1			Rm			1	1	1	0	1	1			Rn						Rd	
AdvSIMD scalar three different			0	1	U	1	1	1	1	0	size		1			Rm			opcode			0	0			Rn						Rd		
SQDMLAL, SQDMLAL2		Scalar	0	1	0	1	1	1	1	0	size		1			Rm			1	0	0	1	0	0			Rn						Rd	
SQDMLSL, SQDMLSL2		Scalar	0	1	0	1	1	1	1	0	size		1			Rm			1	0	1	1	0	0			Rn						Rd	
SQDMULL, SQDMULL2		Scalar	0	1	0	1	1	1	1	0	size		1			Rm			1	1	0	1	0	0			Rn						Rd	
AdvSIMD scalar two-reg misc			0	1	U	1	1	1	1	0	size		1	0	0	0	0	opcode			1	0			Rn							Rd		
SUQADD		Scalar	0	1	0	1	1	1	1	0	-	-	1	0	0	0	0	0	0	0	0	1	1	1	0		Rn						Rd	
SQABS		Scalar	0	1	0	1	1	1	1	0	-	-	1	0	0	0	0	0	0	0	1	1	1	1	0		Rn						Rd	
CMGT (zero)		Scalar	0	1	0	1	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	0	0	1	0		Rn						Rd	
CMEQ (zero)		Scalar	0	1	0	1	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	0	1	1	0		Rn						Rd	
CMLT (zero)		Scalar	0	1	0	1	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	1	0	1	0		Rn						Rd	
ABS		Scalar	0	1	0	1	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	1	1	1	0		Rn						Rd	
SQXTN, SQXTN2		Scalar	0	1	0	1	1	1	1	0	-	-	1	0	0	0	0	0	1	0	1	0	0	1	0		Rn						Rd	
FCVTNS (vector)		Scalar	0	1	0	1	1	1	1	0	0	x	1	0	0	0	0	1	1	0	1	0	1	0			Rn						Rd	
FCVTMS (vector)		Scalar	0	1	0	1	1	1	1	0	0	x	1	0	0	0	0	1	1	0	1	1	1	0			Rn						Rd	
FCVTAS (vector)		Scalar	0	1	0	1	1	1	1	0	0	x	1	0	0	0	0	1	1	1	0	0	1	0			Rn						Rd	
SCVTF (vector, integer)		Scalar	0	1	0	1	1	1	1	0	0	x	1	0	0	0	0	1	1	1	0	1	1	0			Rn						Rd	
FCMGT (zero)		Scalar	0	1	0	1	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	0	1	0			Rn						Rd	
FCMEQ (zero)		Scalar	0	1	0	1	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	1	1	0			Rn						Rd	
FCMLT (zero)		Scalar	0	1	0	1	1	1	1	0	1	x	1	0	0	0	0	0	1	1	1	0	1	0			Rn						Rd	
FCVTPS (vector)		Scalar	0	1	0	1	1	1	1	0	1	x	1	0	0	0	0	1	1	0	1	0	1	0			Rn						Rd	
FCVTZS (vector, intege		Scalar	0	1	0	1	1	1	1	0	1	x	1	0	0	0	0	1	1	0	1	1	1	0			Rn						Rd	
FRECPE		Scalar	0	1	0	1	1	1	1	0	1	x	1	0	0	0	0	1	1	1	0	1	1	0			Rn						Rd	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
FRECPX	-	-	0	1	0	1	1	1	1	0	1	x	1	0	0	0	0	1	1	1	1	1	1	0			Rn							Rd	
USQADD	Scalar		0	1	1	1	1	1	1	0	-	-	1	0	0	0	0	0	0	0	1	1	1	0			Rn							Rd	
SQNEG	Scalar		0	1	1	1	1	1	1	0	-	-	1	0	0	0	0	0	0	1	1	1	1	0			Rn							Rd	
CMGE (zero)	Scalar		0	1	1	1	1	1	1	0	-	-	1	0	0	0	0	0	1	0	0	0	1	0			Rn							Rd	
CMLE (zero)	Scalar		0	1	1	1	1	1	1	0	-	-	1	0	0	0	0	0	1	0	0	1	1	0			Rn							Rd	
NEG (vector)	Scalar		0	1	1	1	1	1	1	0	-	-	1	0	0	0	0	0	1	0	1	1	1	0			Rn							Rd	
SQXTUN, SQXTUN2	Scalar		0	1	1	1	1	1	1	0	-	-	1	0	0	0	0	1	0	0	1	0	1	0			Rn							Rd	
UQXTN, UQXTN2	Scalar		0	1	1	1	1	1	1	0	-	-	1	0	0	0	0	1	0	1	0	0	1	0			Rn							Rd	
FCVTXN, FCVTXN2	Scalar		0	1	1	1	1	1	1	0	0	x	1	0	0	0	0	1	0	1	1	0	1	0			Rn							Rd	
FCVTNU (vector)	Scalar		0	1	1	1	1	1	1	0	0	x	1	0	0	0	0	1	1	0	1	0	1	0			Rn							Rd	
FCVTMU (vector)	Scalar		0	1	1	1	1	1	1	0	0	x	1	0	0	0	0	1	1	0	1	1	1	0			Rn							Rd	
FCVTAU (vector)	Scalar		0	1	1	1	1	1	1	0	0	x	1	0	0	0	0	1	1	1	0	0	1	0			Rn							Rd	
UCVTF (vector, integer)	Scalar		0	1	1	1	1	1	1	0	0	x	1	0	0	0	0	1	1	1	0	1	1	0			Rn							Rd	
FCMGE (zero)	Scalar		0	1	1	1	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	0	1	0			Rn							Rd	
FCMLE (zero)	Scalar		0	1	1	1	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	1	1	0			Rn							Rd	
FCVTPU (vector)	Scalar		0	1	1	1	1	1	1	0	1	x	1	0	0	0	0	1	1	0	1	0	1	0			Rn							Rd	
FCVTZU (vector, integer)	Scalar		0	1	1	1	1	1	1	0	1	x	1	0	0	0	0	1	1	0	1	1	1	0			Rn							Rd	
FRSQRTE	Scalar		0	1	1	1	1	1	1	0	1	x	1	0	0	0	0	1	1	1	0	1	1	0			Rn							Rd	
AdvSIMD scalar pairwise			0	1	U	1	1	1	1	0	size		1	1	0	0	0	opcode					1	0			Rn							Rd	
ADDP (scalar)	-		0	1	0	1	1	1	1	0	-	-	1	1	0	0	0	1	1	0	1	1	1	0			Rn							Rd	
FMAXNMP (scalar)	-		0	1	1	1	1	1	1	0	0	x	1	1	0	0	0	0	1	1	0	0	1	0			Rn							Rd	
FADDP (scalar)	-		0	1	1	1	1	1	1	0	0	x	1	1	0	0	0	0	1	1	0	1	1	0			Rn							Rd	
FMAXP (scalar)	-		0	1	1	1	1	1	1	0	0	x	1	1	0	0	0	0	1	1	1	1	1	0			Rn							Rd	
FMINNMP (scalar)	-		0	1	1	1	1	1	1	0	1	x	1	1	0	0	0	0	1	1	0	0	1	0			Rn							Rd	
FMINP (scalar)	-		0	1	1	1	1	1	1	0	1	x	1	1	0	0	0	0	1	1	1	1	1	0			Rn							Rd	
AdvSIMD scalar copy			0	1	op	1	1	1	1	0	0	0	0	imm5				0	imm4				1			Rn							Rd		
DUP (element)	Scalar		0	1	0	1	1	1	1	0	0	0	0	-	-	-	-	-	0	0	0	0	0	1			Rn							Rd	
AdvSIMD scalar x indexed element			0	1	U	1	1	1	1	1	size		L	M	Rm				opcode					H	0			Rn							Rd
SQDMLAL, SQDMLAL2	Scalar		0	1	0	1	1	1	1	1	-	-	L	M	Rm				0	0	1	1	H	0			Rn							Rd	
SQDMLSL, SQDMLSL2	Scalar		0	1	0	1	1	1	1	1	-	-	L	M	Rm				0	1	1	1	H	0			Rn							Rd	
SQDMULL, SQDMULL2	Scalar		0	1	0	1	1	1	1	1	-	-	L	M	Rm				1	0	1	1	H	0			Rn							Rd	
SQDMULH (by element)	Scalar		0	1	0	1	1	1	1	1	-	-	L	M	Rm				1	1	0	0	H	0			Rn							Rd	
SQRDMULH (by element)	Scalar		0	1	0	1	1	1	1	1	-	-	L	M	Rm				1	1	0	1	H	0			Rn							Rd	
FMLA (by element)	Scalar		0	1	0	1	1	1	1	1	1	x	L	M	Rm				0	0	0	1	H	0			Rn							Rd	
FMLS (by element)	Scalar		0	1	0	1	1	1	1	1	1	x	L	M	Rm				0	1	0	1	H	0			Rn							Rd	
FMUL (by element)	Scalar		0	1	0	1	1	1	1	1	1	x	L	M	Rm				1	0	0	1	H	0			Rn							Rd	
FMULX (by element)	Scalar		0	1	1	1	1	1	1	1	1	x	L	M	Rm				1	0	0	1	H	0			Rn							Rd	
AdvSIMD scalar shift by immediate			0	1	U	1	1	1	1	1	0	immh				immb		opcode					1			Rn							Rd		
SSHR	Scalar		0	1	0	1	1	1	1	1	0	!=0000				immb		0	0	0	0	0	0	1			Rn							Rd	
SSRA	Scalar		0	1	0	1	1	1	1	1	0	!=0000				immb		0	0	0	1	0	1			Rn							Rd		
SRSR	Scalar		0	1	0	1	1	1	1	1	0	!=0000				immb		0	0	1	0	0	1			Rn							Rd		
SRSRA	Scalar		0	1	0	1	1	1	1	1	0	!=0000				immb		0	0	1	1	0	1			Rn							Rd		
SHL	Scalar		0	1	0	1	1	1	1	1	0	!=0000				immb		0	1	0	1	0	1			Rn							Rd		

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
SQSHL (immediate)		Scalar	0	1	0	1	1	1	1	1	0		!=0000			immb		0	1	1	1	0	1				Rn							Rd	
SQSHRN, SQSHRN2		Scalar	0	1	0	1	1	1	1	1	0		!=0000			immb		1	0	0	1	0	1				Rn							Rd	
SQRSHRN, SQRSHRN		Scalar	0	1	0	1	1	1	1	1	0		!=0000			immb		1	0	0	1	1	1				Rn							Rd	
SCVTF (vector, fixed-pc		Scalar	0	1	0	1	1	1	1	1	0		!=0000			immb		1	1	1	0	0	1				Rn							Rd	
FCVTZS (vector, fixed-pc		Scalar	0	1	0	1	1	1	1	1	0		!=0000			immb		1	1	1	1	1	1				Rn							Rd	
USHR		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		0	0	0	0	0	1				Rn							Rd	
USRA		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		0	0	0	1	0	1				Rn							Rd	
URSHR		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		0	0	1	0	0	1				Rn							Rd	
URSRA		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		0	0	1	1	0	1				Rn							Rd	
SRI		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		0	1	0	0	0	1				Rn							Rd	
SLI		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		0	1	0	1	0	1				Rn							Rd	
SQSHLU		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		0	1	1	0	0	1				Rn							Rd	
UQSHL (immediate)		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		0	1	1	1	0	1				Rn							Rd	
SQSHRUN, SQSHRUN		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		1	0	0	0	0	1				Rn							Rd	
SQRSHRUN, SQRSHR		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		1	0	0	0	1	1				Rn							Rd	
UQSHRN		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		1	0	0	1	0	1				Rn							Rd	
UQRSHRN, UQRSHRN		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		1	0	0	1	1	1				Rn							Rd	
UCVTF (vector, fixed-pc		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		1	1	1	0	0	1				Rn							Rd	
FCVTZU (vector, fixed-pc		Scalar	0	1	1	1	1	1	1	1	0		!=0000			immb		1	1	1	1	1	1				Rn							Rd	
Crypto three-reg SHA			0	1	0	1	1	1	1	0	size	0				Rm		0	opcode		0	0					Rn							Rd	
SHA1C	-		0	1	0	1	1	1	1	0	0	0	0			Rm		0	0	0	0	0	0				Rn							Rd	
SHA1P	-		0	1	0	1	1	1	1	0	0	0	0			Rm		0	0	0	1	0	0				Rn							Rd	
SHA1M	-		0	1	0	1	1	1	1	0	0	0	0			Rm		0	0	1	0	0	0				Rn							Rd	
SHA1SU0	-		0	1	0	1	1	1	1	0	0	0	0			Rm		0	0	1	1	0	0				Rn							Rd	
SHA256H	-		0	1	0	1	1	1	1	0	0	0	0			Rm		0	1	0	0	0	0				Rn							Rd	
SHA256H2	-		0	1	0	1	1	1	1	0	0	0	0			Rm		0	1	0	1	0	0				Rn							Rd	
SHA256SU1	-		0	1	0	1	1	1	1	0	0	0	0			Rm		0	1	1	0	0	0				Rn							Rd	
Crypto two-reg SHA			0	1	0	1	1	1	1	0	size	1	0	1	0	0			opcode					1	0			Rn							Rd
SHA1H	-		0	1	0	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0			Rn							Rd	
SHA1SU1	-		0	1	0	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	1	1	0				Rn							Rd	
SHA256SU0	-		0	1	0	1	1	1	1	0	0	0	1	0	1	0	0	0	0	1	0	1	0				Rn							Rd	
Crypto AES			0	1	0	0	1	1	1	0	size	1	0	1	0	0			opcode					1	0			Rn							Rd
AESE	-		0	1	0	0	1	1	1	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0			Rn							Rd	
AESD	-		0	1	0	0	1	1	1	0	0	0	1	0	1	0	0	0	0	1	0	1	1	0			Rn							Rd	
AESMC	-		0	1	0	0	1	1	1	0	0	0	1	0	1	0	0	0	0	1	1	0	1	0			Rn							Rd	
AESIMC	-		0	1	0	0	1	1	1	0	0	0	1	0	1	0	0	0	0	1	1	1	1	0			Rn							Rd	
AdvSIMD three same			0	Q	U	0	1	1	1	0	size	1				Rm			opcode				1				Rn							Rd	
SHADD	-		0	Q	0	0	1	1	1	0	-	-	1			Rm		0	0	0	0	0	1				Rn							Rd	
SQADD	Vector		0	Q	0	0	1	1	1	0	-	-	1			Rm		0	0	0	0	1	1				Rn							Rd	
SRHADD	-		0	Q	0	0	1	1	1	0	-	-	1			Rm		0	0	0	1	0	1				Rn							Rd	
SHSUB	-		0	Q	0	0	1	1	1	0	-	-	1			Rm		0	0	1	0	0	1				Rn							Rd	
SQSUB	Vector		0	Q	0	0	1	1	1	0	-	-	1			Rm		0	0	1	0	1	1				Rn							Rd	
CMGT (register)	Vector		0	Q	0	0	1	1	1	0	-	-	1			Rm		0	0	1	1	0	1				Rn							Rd	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
CMGE (register)		Vector	0	Q	0	0	1	1	1	0	-	-	1			Rm			0	0	1	1	1	1			Rn						Rd	
SSHL Vector			0	Q	0	0	1	1	1	0	-	-	1			Rm			0	1	0	0	0	1			Rn						Rd	
SQSHL (register)		Vector	0	Q	0	0	1	1	1	0	-	-	1			Rm			0	1	0	0	1	1			Rn						Rd	
SRSHL		Vector	0	Q	0	0	1	1	1	0	-	-	1			Rm			0	1	0	1	0	1			Rn						Rd	
SQRSHL		Vector	0	Q	0	0	1	1	1	0	-	-	1			Rm			0	1	0	1	1	1			Rn						Rd	
SMAX		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			0	1	1	0	0	1			Rn						Rd	
SMIN		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			0	1	1	0	1	1			Rn						Rd	
SABD		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			0	1	1	1	0	1			Rn						Rd	
SABA		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			0	1	1	1	1	1			Rn						Rd	
ADD (vector)		Vector	0	Q	0	0	1	1	1	0	-	-	1			Rm			1	0	0	0	0	1			Rn						Rd	
CMTST		Vector	0	Q	0	0	1	1	1	0	-	-	1			Rm			1	0	0	0	1	1			Rn						Rd	
MLA (vector)		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			1	0	0	1	0	1			Rn						Rd	
MUL (vector)		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			1	0	0	1	1	1			Rn						Rd	
SMAXP		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			1	0	1	0	0	1			Rn						Rd	
SMINP		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			1	0	1	0	1	1			Rn						Rd	
SQDMULH (vector)		Vector	0	Q	0	0	1	1	1	0	-	-	1			Rm			1	0	1	1	0	1			Rn						Rd	
ADDP (vector)		-	0	Q	0	0	1	1	1	0	-	-	1			Rm			1	0	1	1	1	1			Rn						Rd	
FMAXNM (vector)		-	0	Q	0	0	1	1	1	0	0	x	1			Rm			1	1	0	0	0	1			Rn						Rd	
FMLA (vector)		-	0	Q	0	0	1	1	1	0	0	x	1			Rm			1	1	0	0	1	1			Rn						Rd	
FADD (vector)		-	0	Q	0	0	1	1	1	0	0	x	1			Rm			1	1	0	1	0	1			Rn						Rd	
FMULX		Vector	0	Q	0	0	1	1	1	0	0	x	1			Rm			1	1	0	1	1	1			Rn						Rd	
FCMEQ (register)		Vector	0	Q	0	0	1	1	1	0	0	x	1			Rm			1	1	1	0	0	1			Rn						Rd	
FMAX (vector)		-	0	Q	0	0	1	1	1	0	0	x	1			Rm			1	1	1	1	0	1			Rn						Rd	
FRECPS		Vector	0	Q	0	0	1	1	1	0	0	x	1			Rm			1	1	1	1	1	1			Rn						Rd	
AND (vector)		-	0	Q	0	0	1	1	1	0	0	0	1			Rm			0	0	0	1	1	1			Rn						Rd	
BIC (vector, register)			0	Q	0	0	1	1	1	0	0	1	1			Rm			0	0	0	1	1	1			Rn						Rd	
FMINNM (vector)		-	0	Q	0	0	1	1	1	0	1	x	1			Rm			1	1	0	0	0	1			Rn						Rd	
FMLS (vector)		-	0	Q	0	0	1	1	1	0	1	x	1			Rm			1	1	0	0	1	1			Rn						Rd	
FSUB (vector)		-	0	Q	0	0	1	1	1	0	1	x	1			Rm			1	1	0	1	0	1			Rn						Rd	
FMIN (vector)		-	0	Q	0	0	1	1	1	0	1	x	1			Rm			1	1	1	1	0	1			Rn						Rd	
FRSQRTS		Vector	0	Q	0	0	1	1	1	0	1	x	1			Rm			1	1	1	1	1	1			Rn						Rd	
ORR (vector, register)			0	Q	0	0	1	1	1	0	1	0	1			Rm			0	0	0	1	1	1			Rn						Rd	
ORN (vector)		-	0	Q	0	0	1	1	1	0	1	1	1			Rm			0	0	0	1	1	1			Rn						Rd	
UHADD		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	0	0	0	0	1			Rn						Rd	
UQADD		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	0	0	0	1	1			Rn						Rd	
URHADD		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	0	0	1	0	1			Rn						Rd	
UHSUB		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	0	1	0	0	1			Rn						Rd	
UQSUB		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	0	1	0	1	1			Rn						Rd	
CMHI (register)		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	0	1	1	0	1			Rn						Rd	
CMHS (register)		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	0	1	1	1	1			Rn						Rd	
USHL		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	1	0	0	0	1			Rn						Rd	
UQSHL (register)		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	1	0	0	1	1			Rn						Rd	
URSHL		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	1	0	1	0	1			Rn						Rd	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
UQRSHL		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	1	0	1	1	1			Rn							Rd
UMAX		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	1	1	0	0	1			Rn							Rd
UMIN		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	1	1	0	1	1			Rn							Rd
UABD		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	1	1	1	0	1			Rn							Rd
UABA		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			0	1	1	1	1	1			Rn							Rd
SUB (vector)		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			1	0	0	0	0	1			Rn							Rd
CMEQ (register)		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			1	0	0	0	1	1			Rn							Rd
MLS (vector)		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			1	0	0	1	0	1			Rn							Rd
PMUL		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			1	0	0	1	1	1			Rn							Rd
UMAXP		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			1	0	1	0	0	1			Rn							Rd
UMINP		-	0	Q	1	0	1	1	1	0	-	-	1			Rm			1	0	1	0	1	1			Rn							Rd
SQRDMULH (vector)		Vector	0	Q	1	0	1	1	1	0	-	-	1			Rm			1	0	1	1	0	1			Rn							Rd
FMAXNMP (vector)		-	0	Q	1	0	1	1	1	0	0	x	1			Rm			1	0	1	1	0	1			Rn							Rd
FADDP (vector)		-	0	Q	1	0	1	1	1	0	0	x	1			Rm			1	1	0	1	0	1			Rn							Rd
FMUL (vector)		-	0	Q	1	0	1	1	1	0	0	x	1			Rm			1	1	0	1	1	1			Rn							Rd
FCMGE (register)		Vector	0	Q	1	0	1	1	1	0	0	x	1			Rm			1	1	1	0	0	1			Rn							Rd
FACGE		Vector	0	Q	1	0	1	1	1	0	0	x	1			Rm			1	1	1	0	1	1			Rn							Rd
FMAXP (vector)		-	0	Q	1	0	1	1	1	0	0	x	1			Rm			1	1	1	1	0	1			Rn							Rd
FDIV (vector)		-	0	Q	1	0	1	1	1	0	0	x	1			Rm			1	1	1	1	1	1			Rn							Rd
EOR (vector)		-	0	Q	1	0	1	1	1	0	0	0	1			Rm			0	0	0	1	1	1			Rn							Rd
BSL		-	0	Q	1	0	1	1	1	0	0	1	1			Rm			0	0	0	1	1	1			Rn							Rd
FMINNMP (vector)		-	0	Q	1	0	1	1	1	0	1	x	1			Rm			1	1	0	0	0	1			Rn							Rd
FABD		Vector	0	Q	1	0	1	1	1	0	1	x	1			Rm			1	1	0	1	0	1			Rn							Rd
FCMGT (register)		Vector	0	Q	1	0	1	1	1	0	1	x	1			Rm			1	1	1	0	0	1			Rn							Rd
FACGT		Vector	0	Q	1	0	1	1	1	0	1	x	1			Rm			1	1	1	0	1	1			Rn							Rd
FMINP (vector)		-	0	Q	1	0	1	1	1	0	1	x	1			Rm			1	1	1	1	0	1			Rn							Rd
BIT		-	0	Q	1	0	1	1	1	0	1	0	1			Rm			0	0	0	1	1	1			Rn							Rd
BIF		-	0	Q	1	0	1	1	1	0	1	1	1			Rm			0	0	0	1	1	1			Rn							Rd
AdvSIMD three different			0	Q	U	0	1	1	1	0	size		1			Rm			opcode				0	0			Rn							Rd
SADDL, SADDL2		-	0	Q	0	0	1	1	1	0	size		1			Rm			0	0	0	0	0	0			Rn							Rd
SADDW, SADDW2		-	0	Q	0	0	1	1	1	0	size		1			Rm			0	0	0	1	0	0			Rn							Rd
SSUBL, SSUBL2		-	0	Q	0	0	1	1	1	0	size		1			Rm			0	0	1	0	0	0			Rn							Rd
SSUBW, SSUBW2		-	0	Q	0	0	1	1	1	0	size		1			Rm			0	0	1	1	0	0			Rn							Rd
ADDHN, ADDHN2		-	0	Q	0	0	1	1	1	0	size		1			Rm			0	1	0	0	0	0			Rn							Rd
SABAL, SABAL2		-	0	Q	0	0	1	1	1	0	size		1			Rm			0	1	0	1	0	0			Rn							Rd
SUBHN, SUBHN2		-	0	Q	0	0	1	1	1	0	size		1			Rm			0	1	1	0	0	0			Rn							Rd
SABDL, SABDL2		-	0	Q	0	0	1	1	1	0	size		1			Rm			0	1	1	1	0	0			Rn							Rd
SMLAL, SMLAL2 (vectc -		-	0	Q	0	0	1	1	1	0	size		1			Rm			1	0	0	0	0	0			Rn							Rd
SQDMLAL, SQDMLAL2 Vector		-	0	Q	0	0	1	1	1	0	size		1			Rm			1	0	0	1	0	0			Rn							Rd
SMLSL, SMLSL2 (vectc -		-	0	Q	0	0	1	1	1	0	size		1			Rm			1	0	1	0	0	0			Rn							Rd
SQDMLSL, SQDMLSL2 Vector		-	0	Q	0	0	1	1	1	0	size		1			Rm			1	0	1	1	0	0			Rn							Rd
SMULL, SMULL2 (vectc -		-	0	Q	0	0	1	1	1	0	size		1			Rm			1	1	0	0	0	0			Rn							Rd
SQDMULL, SQDMULL2 Vector		-	0	Q	0	0	1	1	1	0	size		1			Rm			1	1	0	1	0	0			Rn							Rd

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
PMULL, PMULL2	-	-	0	Q	0	0	1	1	1	0	size	1				Rm			1	1	1	0	0	0				Rn					Rd	
UADDL, UADDL2	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			0	0	0	0	0	0				Rn					Rd	
UADDW, UADDW2	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			0	0	0	1	0	0				Rn					Rd	
USUBL, USUBL2	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			0	0	1	0	0	0				Rn					Rd	
USUBW, USUBW2	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			0	0	1	1	0	0				Rn					Rd	
RADDHN, RADDHN2	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			0	1	0	0	0	0				Rn					Rd	
UABAL, UABAL2	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			0	1	0	1	0	0				Rn					Rd	
RSUBHN, RSUBHN2	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			0	1	1	0	0	0				Rn					Rd	
UABDL, UABDL2	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			0	1	1	1	0	0				Rn					Rd	
UMLAL, UMLAL2 (vector)	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			1	0	0	0	0	0				Rn					Rd	
UMLSL, UMLSL2 (vector)	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			1	0	1	0	0	0				Rn					Rd	
UMULL, UMULL2 (vector)	-	-	0	Q	1	0	1	1	1	0	size	1				Rm			1	1	0	0	0	0				Rn					Rd	
AdvSIMD two-reg misc			0	Q	U	0	1	1	1	0	size	1	0	0	0	0	0	opcode					1	0			Rn					Rd		
REV64	-	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	0	0	0	1	0			Rn					Rd	
REV16 (vector)	-	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	0	0	1	1	0			Rn					Rd	
SADDLP	-	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	0	1	0	1	0			Rn					Rd	
SUQADD	Vector	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	0	1	1	1	0			Rn					Rd	
CLS (vector)	-	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	1	0	0	1	0			Rn					Rd	
CNT	-	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	1	0	1	1	0			Rn					Rd	
SADALP	-	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	1	1	0	1	0			Rn					Rd	
SQABS	Vector	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	1	1	1	1	0			Rn					Rd	
CMGT (zero)	Vector	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	0	0	1	0			Rn					Rd	
CMEQ (zero)	Vector	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	0	1	1	0			Rn					Rd	
CMLT (zero)	Vector	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	1	0	1	0			Rn					Rd	
ABS	Vector	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	1	1	1	0			Rn					Rd	
XTN, XTN2	-	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	1	0	0	1	0	1	0			Rn					Rd	
SQXTN, SQXTN2	Vector	-	0	Q	0	0	1	1	1	0	-	-	1	0	0	0	0	0	1	0	1	0	0	1	0			Rn					Rd	
FCVTN, FCVTN2	-	-	0	Q	0	0	1	1	1	0	0	x	1	0	0	0	0	0	1	0	1	1	0	1	0			Rn					Rd	
FCVTL, FCVTL2	-	-	0	Q	0	0	1	1	1	0	0	x	1	0	0	0	0	0	1	0	1	1	1	1	0			Rn					Rd	
FRINTN (vector)	-	-	0	Q	0	0	1	1	1	0	0	x	1	0	0	0	0	0	1	1	0	0	0	1	0			Rn					Rd	
FRINTM (vector)	-	-	0	Q	0	0	1	1	1	0	0	x	1	0	0	0	0	0	1	1	0	0	1	1	0			Rn					Rd	
FCVTNS (vector)	Vector	-	0	Q	0	0	1	1	1	0	0	x	1	0	0	0	0	0	1	1	0	1	0	1	0			Rn					Rd	
FCVTMS (vector)	Vector	-	0	Q	0	0	1	1	1	0	0	x	1	0	0	0	0	0	1	1	0	1	1	1	0			Rn					Rd	
FCVTAS (vector)	Vector	-	0	Q	0	0	1	1	1	0	0	x	1	0	0	0	0	0	1	1	1	0	0	1	0			Rn					Rd	
SCVTF (vector, integer)	Vector	-	0	Q	0	0	1	1	1	0	0	x	1	0	0	0	0	0	1	1	1	0	1	1	0			Rn					Rd	
FCMGT (zero)	Vector	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	0	0	1	1	0	0	1	0			Rn					Rd	
FCMEQ (zero)	Vector	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	0	0	1	1	0	1	1	0			Rn					Rd	
FCMLT (zero)	Vector	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	0	0	1	1	1	0	1	0			Rn					Rd	
FABS (vector)	-	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	0	0	1	1	1	1	1	0			Rn					Rd	
FRINTP (vector)	-	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	0	0	1	0			Rn					Rd	
FRINTZ (vector)	-	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	0	1	1	0			Rn					Rd	
FCVTPS (vector)	Vector	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	1	0	1	0			Rn					Rd	
FCVTZS (vector, integer)	Vector	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	1	1	1	0			Rn					Rd	

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
URECPE	-	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	1	1	1	0	0	1	0			Rn							Rd
FRECPE	Vector	-	0	Q	0	0	1	1	1	0	1	x	1	0	0	0	0	1	1	1	0	1	1	0			Rn							Rd
REV32 (vector)	-	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	0	0	1	0			Rn							Rd
UADDLP	-	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	1	0	1	0			Rn							Rd
USQADD	Vector	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	0	0	1	1	1	0			Rn							Rd
CLZ (vector)	-	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	0	1	0	0	1	0			Rn							Rd
UADALP	-	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	0	1	1	0	1	0			Rn							Rd
SQNEG	Vector	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	0	1	1	1	1	0			Rn							Rd
CMGE (zero)	Vector	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	1	0	0	0	1	0			Rn							Rd
CMLE (zero)	Vector	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	1	0	0	1	1	0			Rn							Rd
NEG (vector)	Vector	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	0	1	0	1	1	1	0			Rn							Rd
SQXTUN, SQXTUN2	Vector	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	1	0	0	1	0	1	0			Rn							Rd
SHLL, SHLL2	-	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	1	0	0	1	1	1	0			Rn							Rd
UQXTN, UQXTN2	Vector	-	0	Q	1	0	1	1	1	0	-	-	1	0	0	0	0	1	0	1	0	0	1	0			Rn							Rd
FCVTXN, FCVTXN2	Vector	-	0	Q	1	0	1	1	1	0	0	x	1	0	0	0	0	1	0	1	1	0	1	0			Rn							Rd
FRINTA (vector)	-	-	0	Q	1	0	1	1	1	0	0	x	1	0	0	0	0	1	1	0	0	0	1	0			Rn							Rd
FRINTX (vector)	-	-	0	Q	1	0	1	1	1	0	0	x	1	0	0	0	0	1	1	0	0	1	1	0			Rn							Rd
FCVTNU (vector)	Vector	-	0	Q	1	0	1	1	1	0	0	x	1	0	0	0	0	1	1	0	1	0	1	0			Rn							Rd
FCVTMU (vector)	Vector	-	0	Q	1	0	1	1	1	0	0	x	1	0	0	0	0	1	1	0	1	1	1	0			Rn							Rd
FCVTAU (vector)	Vector	-	0	Q	1	0	1	1	1	0	0	x	1	0	0	0	0	1	1	1	0	0	1	0			Rn							Rd
UCVTF (vector, integer)	Vector	-	0	Q	1	0	1	1	1	0	0	x	1	0	0	0	0	1	1	1	0	1	1	0			Rn							Rd
NOT	-	-	0	Q	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0			Rn							Rd
RBIT (vector)	-	-	0	Q	1	0	1	1	1	0	0	1	1	0	0	0	0	0	0	1	0	1	1	0			Rn							Rd
FCMGE (zero)	Vector	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	0	1	0			Rn							Rd
FCMLE (zero)	Vector	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	0	1	1	0	1	1	0			Rn							Rd
FNEG (vector)	-	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	0	1	1	1	1	1	0			Rn							Rd
FRINTI (vector)	-	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	1	1	0	0	1	1	0			Rn							Rd
FCVTPU (vector)	Vector	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	1	1	0	1	0	1	0			Rn							Rd
FCVTZU (vector, integer)	Vector	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	1	1	0	1	1	1	0			Rn							Rd
URSQRTE	-	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	1	1	1	0	0	1	0			Rn							Rd
FRSQRTE	Vector	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	1	1	1	0	1	1	0			Rn							Rd
FSQRT (vector)	-	-	0	Q	1	0	1	1	1	0	1	x	1	0	0	0	0	1	1	1	1	1	1	0			Rn							Rd
AdvSIMD across lanes			0	Q	U	0	1	1	1	0	size		1	1	0	0	0	opcode					1	0			Rn							Rd
SADDLV	-	-	0	Q	0	0	1	1	1	0	-	-	1	1	0	0	0	0	0	0	1	1	1	0			Rn							Rd
SMAXV	-	-	0	Q	0	0	1	1	1	0	-	-	1	1	0	0	0	0	1	0	1	0	1	0			Rn							Rd
SMINV	-	-	0	Q	0	0	1	1	1	0	-	-	1	1	0	0	0	1	1	0	1	0	1	0			Rn							Rd
ADDV	-	-	0	Q	0	0	1	1	1	0	-	-	1	1	0	0	0	1	1	0	1	1	1	0			Rn							Rd
UADDLV	-	-	0	Q	1	0	1	1	1	0	-	-	1	1	0	0	0	0	0	0	1	1	1	0			Rn							Rd
UMAXV	-	-	0	Q	1	0	1	1	1	0	-	-	1	1	0	0	0	0	1	0	1	0	1	0			Rn							Rd
UMINV	-	-	0	Q	1	0	1	1	1	0	-	-	1	1	0	0	0	1	1	0	1	0	1	0			Rn							Rd
FMAXNMV	-	-	0	Q	1	0	1	1	1	0	0	x	1	1	0	0	0	0	1	1	0	0	1	0			Rn							Rd
FMAXV	-	-	0	Q	1	0	1	1	1	0	0	x	1	1	0	0	0	0	1	1	1	1	1	0			Rn							Rd
FMINNMV	-	-	0	Q	1	0	1	1	1	0	1	x	1	1	0	0	0	0	1	1	0	0	1	0			Rn							Rd

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
FMINV		-	0	Q	1	0	1	1	1	0	1	x	1	1	0	0	0	0	1	1	1	1	1	0			Rn							Rd	
AdvSIMD copy			0	Q	op	0	1	1	1	0	0	0	0	imm5				0	imm4				1			Rn							Rd		
DUP (element)		Vector	0	-	0	0	1	1	1	0	0	0	0	-	-	-	-	-	0	0	0	0	0	1			Rn							Rd	
DUP (general)		-	0	-	0	0	1	1	1	0	0	0	0	-	-	-	-	-	0	0	0	0	1	1			Rn							Rd	
SMOV		32-bit	0	0	0	0	1	1	1	0	0	0	0	-	-	-	-	-	0	0	1	0	1	1			Rn							Rd	
UMOV		32-bit	0	0	0	0	1	1	1	0	0	0	0	-	-	-	-	-	0	0	1	1	1	1			Rn							Rd	
INS (general)		-	0	1	0	0	1	1	1	0	0	0	0	-	-	-	-	-	0	0	0	1	1	1			Rn							Rd	
SMOV		64-bit	0	1	0	0	1	1	1	0	0	0	0	-	-	-	-	-	0	0	1	0	1	1			Rn							Rd	
UMOV		64-bit	0	1	0	0	1	1	1	0	0	0	0	-	-	-	-	-	0	0	1	1	1	1			Rn							Rd	
INS (element)		-	0	1	1	0	1	1	1	0	0	0	0	-	-	-	-	-	0	-	-	-	-	1			Rn							Rd	
AdvSIMD vector x indexed element			0	Q	U	0	1	1	1	1	size		L	M	Rm				opcode				H	0			Rn							Rd	
SMLAL, SMLAL2 (by el -			0	Q	0	0	1	1	1	1	-	-	L	M	Rm				0	0	1	0	H	0			Rn							Rd	
SQDMLAL, SQDMLAL2 Vector			0	Q	0	0	1	1	1	1	-	-	L	M	Rm				0	0	1	1	H	0			Rn							Rd	
SMLSL, SMLSL2 (by el -			0	Q	0	0	1	1	1	1	-	-	L	M	Rm				0	1	1	0	H	0			Rn							Rd	
SQDMLSL, SQDMLSL2 Vector			0	Q	0	0	1	1	1	1	-	-	L	M	Rm				0	1	1	1	H	0			Rn							Rd	
MUL (by element)		-	0	Q	0	0	1	1	1	1	-	-	L	M	Rm				1	0	0	0	H	0			Rn							Rd	
SMULL, SMULL2 (by el -			0	Q	0	0	1	1	1	1	-	-	L	M	Rm				1	0	1	0	H	0			Rn							Rd	
SQDMULL, SQDMULL2 Vector			0	Q	0	0	1	1	1	1	-	-	L	M	Rm				1	0	1	1	H	0			Rn							Rd	
SQDMULH (by element Vector			0	Q	0	0	1	1	1	1	-	-	L	M	Rm				1	1	0	0	H	0			Rn							Rd	
SQRDMULH (by element Vector			0	Q	0	0	1	1	1	1	-	-	L	M	Rm				1	1	0	1	H	0			Rn							Rd	
FMLA (by element)		Vector	0	Q	0	0	1	1	1	1	1	x	L	M	Rm				0	0	0	1	H	0			Rn							Rd	
FMLS (by element)		Vector	0	Q	0	0	1	1	1	1	1	x	L	M	Rm				0	1	0	1	H	0			Rn							Rd	
FMUL (by element)		Vector	0	Q	0	0	1	1	1	1	1	x	L	M	Rm				1	0	0	1	H	0			Rn							Rd	
MLA (by element)		-	0	Q	1	0	1	1	1	1	-	-	L	M	Rm				0	0	0	0	H	0			Rn							Rd	
UMLAL, UMLAL2 (by el -			0	Q	1	0	1	1	1	1	-	-	L	M	Rm				0	0	1	0	H	0			Rn							Rd	
MLS (by element)		-	0	Q	1	0	1	1	1	1	-	-	L	M	Rm				0	1	0	0	H	0			Rn							Rd	
UMLSL, UMLSL2 (by el -			0	Q	1	0	1	1	1	1	-	-	L	M	Rm				0	1	1	0	H	0			Rn							Rd	
UMULL, UMULL2 (by el -			0	Q	1	0	1	1	1	1	-	-	L	M	Rm				1	0	1	0	H	0			Rn							Rd	
FMULX (by element)		Vector	0	Q	1	0	1	1	1	1	1	x	L	M	Rm				1	0	0	1	H	0			Rn							Rd	
AdvSIMD modified immediate			0	Q	op	0	1	1	1	1	0	0	0	0	0	a	b	c	cmode				o2	1	d	e	f	g	h						Rd
MOVI		32-bit shifted immediate	0	-	0	0	1	1	1	1	0	0	0	0	0	a	b	c	0	x	x	0	0	1	d	e	f	g	h						Rd
ORR (vector, immediate		32-bit	0	-	0	0	1	1	1	1	0	0	0	0	0	a	b	c	0	x	x	1	0	1	d	e	f	g	h						Rd
MOVI		16-bit shifted immediate	0	-	0	0	1	1	1	1	0	0	0	0	0	a	b	c	1	0	x	0	0	1	d	e	f	g	h						Rd
ORR (vector, immediate		16-bit	0	-	0	0	1	1	1	1	0	0	0	0	0	a	b	c	1	0	x	1	0	1	d	e	f	g	h						Rd
MOVI		32-bit shifting ones	0	-	0	0	1	1	1	1	0	0	0	0	0	a	b	c	1	1	0	x	0	1	d	e	f	g	h						Rd
MOVI		8-bit	0	-	0	0	1	1	1	1	0	0	0	0	0	a	b	c	1	1	1	0	0	1	d	e	f	g	h						Rd
FMOV (vector, immedia		Single-precision	0	-	0	0	1	1	1	1	0	0	0	0	0	a	b	c	1	1	1	1	0	1	d	e	f	g	h						Rd
MVNI		32-bit shifted immediate	0	-	1	0	1	1	1	1	0	0	0	0	0	a	b	c	0	x	x	0	0	1	d	e	f	g	h						Rd
BIC (vector, immediate)		32-bit	0	-	1	0	1	1	1	1	0	0	0	0	0	a	b	c	0	x	x	1	0	1	d	e	f	g	h						Rd
MVNI		16-bit shifted immediate	0	-	1	0	1	1	1	1	0	0	0	0	0	a	b	c	1	0	x	0	0	1	d	e	f	g	h						Rd
BIC (vector, immediate)		16-bit	0	-	1	0	1	1	1	1	0	0	0	0	0	a	b	c	1	0	x	1	0	1	d	e	f	g	h						Rd
MVNI		32-bit shifting ones	0	-	1	0	1	1	1	1	0	0	0	0	0	a	b	c	1	1	0	x	0	1	d	e	f	g	h						Rd
MOVI		64-bit scalar	0	0	1	0	1	1	1	1	0	0	0	0	0	a	b	c	1	1	1	0	0	1	d	e	f	g	h						Rd

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
MOVI		64-bit vector	0	1	1	0	1	1	1	1	0	0	0	0	0	a	b	c	1	1	1	0	0	1	d	e	f	g	h					Rd
FMOV (vector, immedia		Double-precision	0	1	1	0	1	1	1	1	0	0	0	0	0	a	b	c	1	1	1	1	0	1	d	e	f	g	h					Rd
AdvSIMD shift by immediate			0	Q	U	0	1	1	1	1	0	immh			immb			opcode				1	Rn				Rd							
SSHR		Vector	0	Q	0	0	1	1	1	1	0	immh			immb			0	0	0	0	0	1	Rn				Rd						
SSRA		Vector	0	Q	0	0	1	1	1	1	0	immh			immb			0	0	0	1	0	1	Rn				Rd						
SRSHR		Vector	0	Q	0	0	1	1	1	1	0	immh			immb			0	0	1	0	0	1	Rn				Rd						
SRSRA		Vector	0	Q	0	0	1	1	1	1	0	immh			immb			0	0	1	1	0	1	Rn				Rd						
SHL		Vector	0	Q	0	0	1	1	1	1	0	immh			immb			0	1	0	1	0	1	Rn				Rd						
SQSHL (immediate)		Vector	0	Q	0	0	1	1	1	1	0	immh			immb			0	1	1	1	0	1	Rn				Rd						
SHRN, SHRN2	-		0	Q	0	0	1	1	1	1	0	immh			immb			1	0	0	0	0	1	Rn				Rd						
RSHRN, RSHRN2	-		0	Q	0	0	1	1	1	1	0	immh			immb			1	0	0	0	1	1	Rn				Rd						
SQSHRN, SQSHRN2	Vector		0	Q	0	0	1	1	1	1	0	immh			immb			1	0	0	1	0	1	Rn				Rd						
SQRSHRN, SQRSHRN	Vector		0	Q	0	0	1	1	1	1	0	immh			immb			1	0	0	1	1	1	Rn				Rd						
SSHLL, SSHLL2	-		0	Q	0	0	1	1	1	1	0	immh			immb			1	0	1	0	0	1	Rn				Rd						
SCVTF (vector, fixed-pc	Vector		0	Q	0	0	1	1	1	1	0	immh			immb			1	1	1	0	0	1	Rn				Rd						
FCVTZS (vector, fixed-r	Vector		0	Q	0	0	1	1	1	1	0	immh			immb			1	1	1	1	1	1	Rn				Rd						
USHR		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			0	0	0	0	0	1	Rn				Rd						
USRA		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			0	0	0	1	0	1	Rn				Rd						
URSHR		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			0	0	1	0	0	1	Rn				Rd						
URSRA		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			0	0	1	1	0	1	Rn				Rd						
SRI		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			0	1	0	0	0	1	Rn				Rd						
SLI		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			0	1	0	1	0	1	Rn				Rd						
SQSHLU		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			0	1	1	0	0	1	Rn				Rd						
UQSHL (immediate)		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			0	1	1	1	0	1	Rn				Rd						
SQSHRUN, SQSHRUN	Vector		0	Q	1	0	1	1	1	1	0	immh			immb			1	0	0	0	0	1	Rn				Rd						
SQRSHRUN, SQRSHR	Vector		0	Q	1	0	1	1	1	1	0	immh			immb			1	0	0	0	1	1	Rn				Rd						
UQSHRN		Vector	0	Q	1	0	1	1	1	1	0	immh			immb			1	0	0	1	0	1	Rn				Rd						
UQRSHRN, UQRSHRN	Vector		0	Q	1	0	1	1	1	1	0	immh			immb			1	0	0	1	1	1	Rn				Rd						
USHLL, USHLL2	-		0	Q	1	0	1	1	1	1	0	immh			immb			1	0	1	0	0	1	Rn				Rd						
UCVTF (vector, fixed-pc	Vector		0	Q	1	0	1	1	1	1	0	immh			immb			1	1	1	0	0	1	Rn				Rd						
FCVTZU (vector, fixed-r	Vector		0	Q	1	0	1	1	1	1	0	immh			immb			1	1	1	1	1	1	Rn				Rd						
AdvSIMD TBL/TBX			0	Q	0	0	1	1	1	0	op2		0	Rm			0	len		op	0	0	Rn				Rd							
TBL		Single register table	0	Q	0	0	1	1	1	0	0	0	0	Rm			0	0	0	0	0	0	Rn				Rd							
TBX		Single register table	0	Q	0	0	1	1	1	0	0	0	0	Rm			0	0	0	1	0	0	Rn				Rd							
TBL		Two register table	0	Q	0	0	1	1	1	0	0	0	0	Rm			0	0	1	0	0	0	Rn				Rd							
TBX		Two register table	0	Q	0	0	1	1	1	0	0	0	0	Rm			0	0	1	1	0	0	Rn				Rd							
TBL		Three register table	0	Q	0	0	1	1	1	0	0	0	0	Rm			0	1	0	0	0	0	Rn				Rd							
TBX		Three register table	0	Q	0	0	1	1	1	0	0	0	0	Rm			0	1	0	1	0	0	Rn				Rd							
TBL		Four register table	0	Q	0	0	1	1	1	0	0	0	0	Rm			0	1	1	0	0	0	Rn				Rd							
TBX		Four register table	0	Q	0	0	1	1	1	0	0	0	0	Rm			0	1	1	1	0	0	Rn				Rd							
AdvSIMD ZIP/UZP/TRN			0	Q	0	0	1	1	1	0	size		0	Rm			0	opcode		1	0	Rn				Rd								
UZP1		-	0	Q	0	0	1	1	1	0	size		0	Rm			0	0	0	1	1	0	Rn				Rd							
TRN1		-	0	Q	0	0	1	1	1	0	size		0	Rm			0	0	1	0	1	0	Rn				Rd							

instruction	page	variant	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ZIP1		-	0	Q	0	0	1	1	1	0	size	0				Rm			0	0	1	1	1	0			Rn					Rd		
UZP2		-	0	Q	0	0	1	1	1	0	size	0				Rm			0	1	0	1	1	0			Rn					Rd		
TRN2		-	0	Q	0	0	1	1	1	0	size	0				Rm			0	1	1	0	1	0			Rn					Rd		
ZIP2		-	0	Q	0	0	1	1	1	0	size	0				Rm			0	1	1	1	1	0			Rn					Rd		
AdvSIMD EXT			0	Q	1	0	1	1	1	0	op2	0				Rm			0	imm4				0			Rn					Rd		
EXT		-	0	Q	1	0	1	1	1	0	0	0	0			Rm			0	imm4				0			Rn					Rd		