

74xx Logic Series IC Functions by Number

No	Description	No	Description
00	Quad 2-Input NAND Gate	01	Quad 2-Input NAND Gate (OC)
02	Quad 2-Input Positive NOR Gate	03	Quad 2-Input Positive NAND Gate
04	Hex Inverter	05	Hex Inverter (OC)
06	Hex Inverter Buffer/Driver (OC)	07	30V,40mA Hex Buffer Driver (OC)
08	Quad 2-Input AND Gate	09	Quad 2-Input Positive AND Gate (OC)
10	Triple 3-Input Positive NAND Gate	11	Triple 3-Input Positive AND Gate
14	Hex Inverting Schmitt Trigger	16	Hex Inverter Buffer/Driver (OC)
17	15V,40mA Hex Buffer Driver (OC)	20	Dual 4-Input Positive NAND Gate
21	Dual 4-Input Positive AND Gate	25	Dual 4-Input Positive NOR Gate
26	Quad 2-Input NAND Gate (OC)	27	Triple 3-Input NOR Gate
28	Quad 2-Input NOR Buffer	30	8-Input Positive NAND Gate
31	Delay Element	32	Quad 2-Input Positive OR Gate
33	Quad 2-Input NOR Buffer (OC)	37	Quad 2-Input Positive NAND Buffer
38	Quad 2-Input NAND Buffer (OC)	42	BCD To Decimal Decoder (1-of-10)
45	BCD To Decimal Decoder/Driver (OC)	46	BCD To 7 Segment Decoder/Driver (30V)
47	BCD To 7 Segment Decoder/Driver (15V)	48	BCD To 7 Segment Decoder/Driver
57	Dual 2 Wide 2-Input AND-OR Invert Gate	58	Dual AND-OR Gate
73	Dual JK Flip-Flop with Reset; Negative-Edge Trigger	74	Dual D-Type Flip-Flop with Set and Reset; Positive-Edge Trigger
75	Quad Bistable Transparent Latch	76	Dual JK Master Slave Flip-Flop
77	4-Bit Bistable Latch	83	4-Bit Binary Full Adder
85	4-Bit Magnitude Comparator	86	Quad 2-Input EXCLUSIVE-OR Gate
90	Decade Counter	93	4-Bit Binary Ripple Counter
97	6-Bit Asynchronous Binary Rate Multiplier	107	Dual JK Flip-Flop with Reset; Negative-Edge Trigger
109	Dual JK Flip-Flop with Set and Reset; Positive-Edge Trigger	112	Dual JK Flip-Flop with Set and Reset; Negative-Edge Trigger
121	One Short Multivibrator	122	Retriggerable Monostable Multivibrator
123	Dual Retriggerable Monostable Multivibrator with Reset	124	Dual Voltage Controlled Oscillator
125	Quad Buffer/Line Driver (3-State)	126	Quad Buffer/Line Driver (3-State)
128	Quad 2-Input NOR Line Driver	132	Quad 2-Input NAND Schmitt Trigger
133	13-Input NAND Gate	136	Quad Exclusive OR Gate (OC)
137	3-to-8 Line Decoder/Demultiplexer with Address Latches; Inv	138	3-to-8 Line Decoder/Demultiplexer; Inverting
139	Dual 2-to-4 Line Decoder/Demultiplexer	140	Dual 4-Input NAND Line Driver
145	BCD To Decimal Decoder/Driver (OC)	147	10-to-4 Line Priority Encoder
148	8-to-3 Priority Encoder	150	16-Input Multiplexer
151	8-Input Multiplexer	153	Dual 4-Input Multiplexer
154	4-to-16 Line Decoder/Demultiplexer	155	Dual 2-to-4 Demultiplexer
156	Dual 2-to-4 Demultiplexer (OC)	157	Quad 2-Input Multiplexer
158	Quad 2-Input Multiplexer; Inverting	159	4-to-16 Line Decoder
160	Presettable Synchronous BCD Decade Counter; Reset	161	Presettable Synchronous 4-Bit Binary Counter; Reset
163	Presettable Synchronous 4-Bit Binary Counter; Reset	164	8-Bit Serial-In/Parallel-Out Shift Register
165	8-Bit Parallel-In/Serial-Out Shift Register	166	8-Bit Parallel-In/Serial-Out Shift Register
169	Synchronous 4-Bit Binary Up/Down Counter	173	Quad D-Type Flip-Flop; Positive-Edge Trigger (3-State)
174	Hex D-Type Flip-Flop with Reset; Positive-Edge Trigger	175	Quad D-Type Flip-Flop with Reset; Positive-Edge Trigger
189	64-Bit Bipolar Scratch Pad Memory	190	Synchronous Decade Up/Down Counter
191	Presettable Synchronous 4-Bit Binary Up/Down Counter	193	Presettable Synchronous 4-Bit Binary Up/Down Counter
194	4-Bit Bidirectional Universal Shift Register	195	4-Bit Parallel Access Shift Register
221	Dual Non-Retriggerable Monostable Multivibrator with Reset	237	3-to-8 Line Decoder/Demultiplexer with Address Latches
238	3-to-8 Line Decoder/Demultiplexer	240	Octal Buffer/Line Driver; Inverting (3-State)
241	Octal Buffer/Line Driver (3-State)	243	Quad Bus Transceiver (3-State)
244	Octal Buffer/Line Driver (3-State)	245	Octal Bus Transceiver (3-State)
251	8-Input Multiplexer (3-State)	253	Dual 4-Input Multiplexer (3-State)
257	Quad 2-Input Multiplexer (3-State)	258	Quad 2-Input Multiplexer; Inverting (3-State)
259	8-Bit Addressable Latch	260	Dual 5-Bit Input NOR Gate
269	8-Bit Up/Down Counter	273	Octal D-Type Flip-Flop with Reset; Positive-Edge Trigger
279	Quad R-S Latch	280	9-Bit Odd/Even Parity Generator/Checker
283	4-Bit Binary Full Adder with Fast Carry	294	16-Bit Programmable Frequency Divider
297	Digital Phase Locked Loop	299	8-Bit Universal Shift Register (3-State)
321	Crystal Oscillator	365	Hex Buffer/Line Driver (3-State)
366	Hex Buffer/Line Driver; Inverting (3-State)	367	Hex Buffer/Line Driver (3-State)
368	Hex Buffer/Line Driver; Inverting (3-State)	373	Octal D-Type Transparent Latch (3-State)

374	Octal D-Type Flip-Flop; Positive Edge-Trigger (3-State)	375	Quad Latch
377	Octal D-Type Flip-Flop with Data Enable; Positive-Edge Trigger	378	Hex D-Type Flip-Flop with Enable
390	Dual Decade Ripple Counter	393	Dual 4-Bit Binary Ripple Counter
399	Quad 2-Input Multiplexer	423	Dual Retriggerable Monostable Multivibrator with Reset
465	Octal Buffer Tri-State Output	521	Octal Comparator
534	Octal D-Type Flip-Flop; Positive Edge-Trigger; Inverting (3-State)	540	Octal Buffer/Line Driver; Inverting (3-State)
541	Octal Buffer/Line Driver (3-State)	543	Octal Registered Transceiver
563	Octal D-Type Transparent Latch; Inverting (3-State)	564	Octal D-Type Flip-Flop; Positive-Edge Trigger; Inverting (3-State)
569	Synchronous Bidirectional Binary Counter	573	Octal D-Type Transparent Latch (3-State)
574	Octal D-Type Flip-Flop; Positive Edge-Trigger (3-State)	579	8-Bit Up/Down Counter
580	Inverting Octal D-Type Latch	589	8-Bit Shift Register with Input Latch
592	8-Bit Binary Counter with Input Register	593	8-Bit Binary Counter O/P Register TS I/O
594	8-Bit Shift Register with Output Register	595	8-Bit Ser-In/Ser Or Par-Out Shift Register with Out Latches (3-State)
597	8-Bit Shift Register with Input Flip-Flops	604	16 to 8 Multiplexer (High Speed)
624	Voltage Controlled Oscillator	628	Voltage Controlled Oscillator
629	Voltage Controlled Oscillator	640	Octal Bus Transceiver; Inverting (3-State)
641	Octal Bus Transceiver	645	Octal Bus Transceiver
646	Octal Bus Transceiver/Register (3-State)	652	Octal Bus Transceiver/Register (3-State)
670	4 x 4 Register File (3-State)	674	16-Bit Shift Register 16-Bit Parallel Output
682	8-Bit Magnitude Comparator	684	8-Bit Magnitude Comparator
688	8-Bit Magnitude Comparator	821	10-Bit D-Type Flip-Flop
825	8-Bit D-Type Flip-Flop	827	8-Bit Buffer/Line Driver
841	10-Bit Transparent Latch	843	9-Bit Transparent Latch
902	Hex Buffer (TTL Interface)	906	Open Drain Buffer (Active Pull Down)
908	Dual High Voltage CMOS Driver	912	Display Controller 6 Digit 8 Segment
914	Hex Schmitt Trigger External Voltage Inputs	922	16 Key Keyboard Encoder
923	20 Key Keyboard Encoder	925	4 Digit Counter Multiplexed 7 Segment Drive
2244	Octal Tri-State Buffer with Resistor	2245	Octal Tri-State Transceiver with Resistor
3245	Octal Tri-State Translating Transceiver	3257	Quad 2:1 Mux/Demux Bus Switch
3383	Octal Bus Exchange Switch	3384	10-Bit Bus Switch
4002	Dual 4-Input NOR Gate	4015	Dual 4-Bit Serial-In/Parallel-Out Shift Register
4016	Quad Bilateral Switches	4017	Johnson Decade Counter with 10 Decoded Outputs
4020	14-Stage Binary Ripple Counter	4024	7-Stage Binary Ripple Counter
4040	12-Stage Binary Ripple Counter	4046	Phase Locked Loop
4049	Hex Inverting High-to-Low Level Shifter	4050	Hex High-to-Low Level Shifter
4051	8-Channel Analog Multiplexer/Demultiplexer	4052	Dual 4-Channel Analog Multiplexer/Demultiplexer
4053	Triple 2-Channel Analog Multiplexer/Demultiplexer	4059	Programmable Divide-By-N Counter
4060	14-Stage Binary Ripple Counter with Oscillator	4066	Quad Bilateral Switches
4067	16-Channel Analog Multiplexer/Demultiplexer	4075	Triple 3-Input OR Gate
4078	8-Input NOR/OR Gate	4094	8-Stage Shift-and-Store Bus Register
4245	Octal Tri-State Translating Transceiver	4316	Quad Bilateral Switches
4351	8-Channel Analog Multiplexer/Demultiplexer with Latch	4353	Triple 2-Channel Analog Multiplexer/Demultiplexer with Latch
4511	BCD To 7-Segment Latch/Decoder/Driver	4514	4-to-16 Line Decoder/Demultiplexer with Input Latches
4515	4-to-16 Line Decoder/Demultiplexer with Input Latches; Inverting	4518	Dual Synchronous Up Counter
4520	Dual 4-Bit Synchronous Binary Counter	4538	Dual Retriggerable Precision Monostable Multivibrator
5555	Programmable Delay Timer with Oscillator	6323	Programmable Ripple Counter with Oscillator (3-State)
7014	Hex Non-Inverting Precision Schmitt-Trigger	7030	9-Bit x 64-Word FIFO Register (3-State)
7046	Phase-Locked-Loop with Lock Detector	7266	Quad 2-Input EXCLUSIVE-NOR Gate
7403	4-Bit x 64-Word FIFO Register (3-State)	7540	Octal Schmitt Trigger Buffer/Line Driver; Inverting (3-State)
7541	Octal Schmitt Trigger Buffer/Line Driver (3-State)	7731	Quad 64-Bit Static Shift Register
9114	Nine Wide Schmitt Trigger Buffer; Open Drain Outputs; Inverting	9115	Nine Wide Schmitt Trigger Buffer; Open Drain Outputs
9323	Programmable Ripple Counter with Oscillator (3-State)	22106	8x8 Crosspoint Switch
40103	8-Bit Synchronous Binary Down Counter	40105	4-Bit x 16-Word FIFO Register

TTL Families

Family	Description	Family	Description
74	True TTL	74L	Low power
74S	Schottky	74H	High speed
74LS	Low power - Schottky	74AS	Advanced - Schottky
74ALS	Advanced - Low power - Schottky	74F(AST)	Fast - (Advanced - Schottky)
74C	CMOS.....check Vcc levels	74HC (U)	High speed - CMOS (Unbuffered output)
74HCT	High speed - CMOS - TTL inputs	74AHC	Advanced - High speed - CMOS
74AHCT	Advanced - High speed - CMOS - TTL inputs	74FCT (-A,-T,-AT)	Fast - CMOS - TTL inputs (speed variations)
74AC	Advanced - CMOS	74ACT	Advanced - CMOS - TTL inputs
74FACT	AC, ACT (Q) series	74ACQ	Advanced - CMOS - Quiet outputs
74ACTQ	Advanced - CMOS - TTL inputs - Quiet outputs		

Bus Driver Families

Family	Description	Family	Description
74ABT	Advanced - BiCMOS - Technology	74ABTE	ABT - Enhanced Transceiver Logic

74ABTH	Advanced - BiCMOS - Technology - bus Hold	74BCT	BiCMOS - TTL inputs
74BTL	Backplane - Transceiver - Logic (BiCMOS)	74FB	Futurebus+
74GTL	Gunning - Transceiver - Logic	74GTLP	GTL - Plus

Low Voltage Families

Family	Description	Family	Description
74ALB	Advanced - Low Voltage - BiCMOS	74LV (U)	Low - Voltage (Unbuffered output) (CMOS)
74LVC (R) (U)	LV - CMOS (damping Resistor)(Unbuffered output)	74LVCH	Low - Voltage - CMOS - bus Hold
74ALVC	Advanced - Low - Voltage - CMOS	74LVT (R) (U)	LV - TTL (damping Resistor)(Unbuffered output) (BiCMOS)
74LVTZ	Low - Voltage - TTL - High Impedance power-up	74ALVC (R) ALV	CMOS (bus Hold) (damping Resistor)
74ALVCH	Advanced - Low - Voltage - CMOS - bus Hold	74LCX	LV - CMOS (operates with 3v and 5v supplies)
74VCX	LV - CMOS (operates with 1.8v and 3.6v supplies)		

Standard Logic Competitive Position

Technology	Type	TI	On Semi	Fairchild	Philips	Toshiba	IDT	Pericom	Hitachi
Bipolar	LS/S/TTL	164	81	176					124
	ALS/AS/F	189		268	217				
	ECL		336	42					
CMOS	CD4000	89	81	51	90	30			88
	HC/HCT	200	68	77	275	140			191
	AC/ACT/FACT	189	88	189		83			73
	AHC/VHC	42	53	57	55	63			
	LV	43	27	24	47	24			48
	FCT	97					123	147	
	LVC/LCX	82	27	53	78	70	127	25	49
	ALVC/VCX	106	16	48	34	42	111	50	56
	AVC	20			13				
	Bus Switch	67		39		26	115	108	5
BiCMOS	BCT	26							17
	ABT	90		33	106				
	LVT	64		49	49				
	ALVT	13			35			6	