

# Advanced Logic ICs

Selection guide



February 2005

# Digital and analog NEATSwitches

Part number	Function	Description	I <sub>cc</sub> @ 5V (Max) [μA]	R <sub>ON</sub> @ 5V (typ) [Ω]	BW [MHz]	V <sub>CC</sub> [V]	I <sub>S</sub> [mA]	Package
74H1G66STR	1 x SPST	Single bilateral switch	10	70	150	2 to 12	25	SOT23-5L
74V1G66CTR	1 x SPST	Single bilateral switch	10	6.5	180	2 to 5.5	50	SOT323-5L
74V1G66STR	1 x SPST	Single bilateral switch	10	6.5	180	2 to 5.5	50	SOT23-5L
74V1T66CTR	1 x SPST	Single bilateral switch	10	6.5	180	4.5 to 5.5	50	SOT323-5L
74V1T66STR	1 x SPST	Single bilateral switch	10	6.5	180	4.5 to 5.5	50	SOT23-5L
74V2G66STR	2 x SPST	Dual bilateral switch	10	6.5	180	2 to 5.5	50	SOT23-8L
74V2T66STR	2 x SPST	Dual bilateral switch	10	10	180	4.5 to 5.5	50	SOT23-8L
74V1T384CTR	1 x SPST	Single high-speed bus switch	10	7	NA	4 to 5.5	50	SOT323-5L
74V1T384STR	1 x SPST	Single high-speed bus switch	10	7	NA	4 to 5.5	50	SOT23-5L
74V1G384CTR	1 x SPST	Single high-speed bus switch	10	7	NA	3 to 5.5	50	SOT323-5L
74V1G384STR	1 x SPST	Single high-speed bus switch	10	7	NA	3 to 5.5	50	SOT23-5L
74V2G384STR	2 x SPST	Dual high-speed bus switch	10	7	NA	3 to 5.5	50	SOT23-8L
74V2T384STR	2 x SPST	Dual high-speed bus switch	10	7	NA	4 to 5.5	50	SOT23-8L
B5S162861TTR	20 x SPST	20-bit two port, 25Ω series resistor, 2 enable, bus switch	3	28	NA	4 to 5.5	128	TSSOP48
B5S162862TTR	20 x SPST	20-bit two port, 4 enable, 25Ω series resistor, bus switch	3	28	NA	4 to 5.5	128	TSSOP48
B5S16861TTR	20 x SPST	20-bit two port, 5Ω series resistor, 2 enable, bus switch	3	5	NA	4 to 5.5	128	TSSOP48
B5S16862TTR	20 x SPST	20-bit two port, 4 enable, 5Ω series resistor, bus switch	3	5	NA	4 to 5.5	128	TSSOP48

Part number	Function #	Description	I <sub>cc</sub> @ 3V (Max) [μA]	R <sub>ON</sub> @ 5V (typ) [Ω]	BW [MHz]	V <sub>CC</sub> [V]	I <sub>S</sub> [mA]	Package
STG3157CTR	1 x SPDT	Single bilateral switch	1	5.2	250	1.65 to 5.5	128	SOT323-6L
STG3680QTR	2 x SPDT	Low-voltage 0.5Ω/0.8Ω max dual SPDT switch with BBM*	0.2	0.4	50	1.4 to 4.3	500	QFN16
STG3684QTR	2 x SPDT	Low-voltage 0.5Ω max dual SPDT switch with BBM*	0.2	0.4	50	1.4 to 4.3	500	QFN16
STG3690QTR	4 x SPDT	Low-voltage 0.5Ω max quad SPDT switch with BBM*	0.2	5	50	1.4 to 4.3	500	QFN16
STG3699QTR	4 x SPDT	Low-voltage 0.5Ω max quad SPDT switch with BBM* and 1.8V full control at 3.0V	0.2	0.4	50	1.4 to 4.3	500	QFN16
STG3699TTR	4 x SPDT	Low-voltage 0.5Ω Max quad SPDT switch with BBM* and 1.8V full control at 3.0V	0.2	0.4	50	1.4 to 4.3	500	TSSOP16
STG719STR	1 x SPDT	Low-voltage 4Ω SPDT switch with BBM*	1	6	200	1.8 to 5.5	50	SOT23-6L

\* BBM = Break-before-make-feature # SPDT = Single pole dual throw SPST = Single pole single throw

# Level translators

Part number	N bit	Description	I <sub>o</sub> [mA]	t <sub>PD</sub> [ns]	V <sub>CC</sub> [V]	V <sub>I</sub> [V]	Package
74LVX3245MTR	8	Low-voltage, high-performance HCMOS level translator	24	8	2.7 to 5.5	0 to V <sub>CCB</sub>	SO-24
74LVX3245TTR	8	Low-voltage, high-performance HCMOS level translator	24	8	2.7 to 5.5	0 to V <sub>CCB</sub>	TSSOP24
74LVX4245MTR	8	Low-voltage, high-performance HCMOS level translator	24	8	2.7 to 5.5	0 to V <sub>CCB</sub>	SO-24
74LVX4245TTR	8	Low-voltage, high-performance HCMOS level translator	24	8	2.7 to 5.5	0 to V <sub>CCB</sub>	TSSOP24
74LVXC3245MTR	8	Low-voltage, high-performance HCMOS level translator	24	8	2.7 to 5.5	0 to V <sub>CCB</sub>	SO-24
74LVXC3245TTR	8	Low-voltage, high-performance HCMOS level translator	24	8	2.7 to 5.5	0 to V <sub>CCB</sub>	TSSOP24
74LVXC4245MTR	8	Low-voltage, high-performance HCMOS level translator	24	8	2.7 to 5.5	0 to V <sub>CCB</sub>	SO-24
74LVXC4245TTR	8	Low-voltage, high-performance HCMOS level translator	24	8	2.7 to 5.5	0 to V <sub>CCB</sub>	TSSOP24
74VCX1632245LBR	16	Very low-voltage HCMOS, dual supply level translator	8/24	4.3	1.65 to 3.6	0 to 3.6	TFBGA54
74VCX1632245TBR	16	Very low-voltage HCMOS, dual supply level translator	8/24	4.3	1.65 to 3.6	0 to 3.6	µTFBGA42
74VCX1632245TTR	16	Very low-voltage HCMOS, dual supply level translator	8/24	4.3	1.65 to 3.6	0 to 3.6	TSSOP48
74VCXH1632245LBR	16	Very low-voltage HCMOS, dual supply level translator, with bus hold	8/24	4.3	1.65 to 3.6	0 to 3.6	TFBGA54
74VCXH1632245TBR	16	Very low-voltage HCMOS, dual supply level translator, with bus hold	8/24	4.3	1.65 to 3.6	0 to 3.6	µTFBGA42
74VCXH1632245TTR	16	Very low-voltage HCMOS, dual supply level translator, with bus hold	8/24	4.3	1.65 to 3.6	0 to 3.6	TSSOP48
74VCXHQ163245TBR	16	Dual supply bus transceiver level translator with bus hold and EMI noise control	2.6	5.5	1.4 to 3.6	0 to 3.6	µTFBGA42
74VCXHQ163245TTR	16	Dual supply bus transceiver level translator with bus hold and EMI noise control	2.6	5.5	1.4 to 3.6	0 to 3.6	TSSOP48
ST16C32245LBR	14	Dual supply bus transceiver level translator, a side series resistor, 2 I <sup>2</sup> C lines	8/24	4.4	1.65 to 3.6	0 to 3.6	TFBGA54
ST16C32245TBR	14	Dual supply bus transceiver level translator, a side series resistor, 2 I <sup>2</sup> C lines	8/24	4.4	1.65 to 3.6	0 to 3.6	µTFBGA42
ST16C32245TTR	14	Dual supply bus transceiver level translator, a side series resistor, 2 I <sup>2</sup> C lines	8/24	4.4	1.65 to 3.6	0 to 3.6	TSSOP48
ST1G3234BJR	1	Ultra low-voltage single bit level translator	10	4.4	1.4 to 3.6	0 to 3.6	Flip-Chip5
ST4G3234BJR	4	Ultra low-voltage 4-bit level translator	10	4.4	1.4 to 3.6	0 to 3.6	Flip-Chip11
ST4G3235BJR	4	Ultra low-voltage 4-bit level translator (2-bit low to high+2-bit high to low)	10	4.4	1.4 to 3.6	0 to 3.6	Flip-Chip11

## Power logic for LED driving

Part number	Description	V <sub>DD</sub> [V]	I <sub>o</sub> [mA]	Interface	Constant current control	Current matching [%]	Output detection	Package
STP08C596B1	8-bit constant current LED sink driver	5	120	SPI	Y	3	N	DIP-16
STP08C596M	8-bit constant current LED sink driver	5	120	SPI	Y	3	N	SO-16
STP08C596MTR	8-bit constant current LED sink driver	5	120	SPI	Y	3	N	SO-16
STP08C596TTR	8-bit constant current LED sink driver	5	120	SPI	Y	3	N	TSSOP16
STP08CL596B1	8-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	DIP-16
STP08CL596M	8-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	SO-16
STP08CL596MTR	8-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	SO-16
STP08CL596TTR	8-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	TSSOP16
STP16C596B1R	16-bit constant current LED sink driver	5	120	SPI	Y	3	N	DIP-24
STP16C596M	16-bit constant current LED sink driver	5	120	SPI	Y	3	N	SO-24
STP16C596MTR	16-bit constant current LED sink driver	5	120	SPI	Y	3	N	SO-24
STP16C596TTR	16-bit constant current LED sink driver	5	120	SPI	Y	3	N	TSSOP24
STP16C596XTTR	16-bit constant current LED sink driver	5	120	SPI	Y	3	N	TSSOP24 (exposed-pad)
STP16CL596B1R	16-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	DIP-24
STP16CL596M	16-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	SO-24
STP16CL596MTR	16-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	SO-24
STP16CL596TTR	16-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	TSSOP24
STP16CL596XTTR	16-bit constant current LED sink driver	3.3	90	SPI	Y	3	N	TSSOP24 (exposed-pad)

## Power logic for industrial and automotive applications

Part number	Description	V <sub>DD</sub> [V]	I <sub>o</sub> [mA]	Interface	Constant current control	Current matching [%]	Output detection	Package
STPIC6A259M	Power logic 8-bit addressable latch	5	350	SPI	N	NA	N	SO-24
STPIC6A259MTR	Power logic 8-bit addressable latch	5	350	SPI	N	NA	N	SO-24
STPIC6C595M	Power logic 8-bit addressable latch	5	250	SPI	N	NA	N	SO-16
STPIC6C595MTR	Power logic 8-bit addressable latch	5	250	SPI	N	NA	N	SO-16
STPIC6C595TTR	Power logic 8-bit addressable latch	5	250	SPI	N	NA	N	TSSOP16

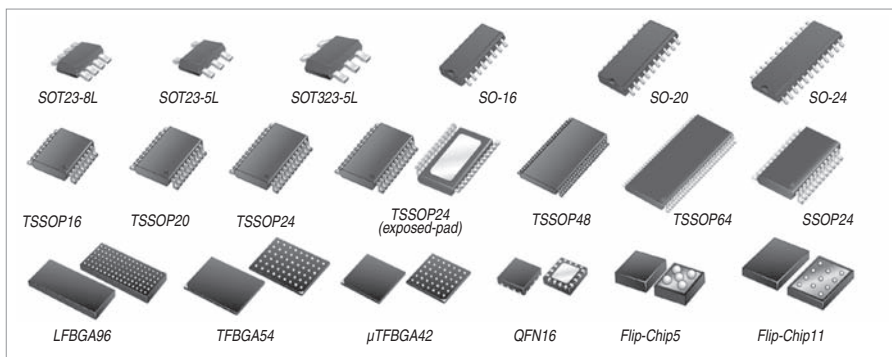
## Power logic for automotive applications

Part number	Description	V <sub>DD</sub> [V]	I <sub>o</sub> [mA]	Interface	Constant current control	Current matching [%]	Output detection	Package
STPIC44L02PTR	4 channel serial and parallel low side Pre-FET driver	5	2	SER-PAR	N	NA	N	SSOP24

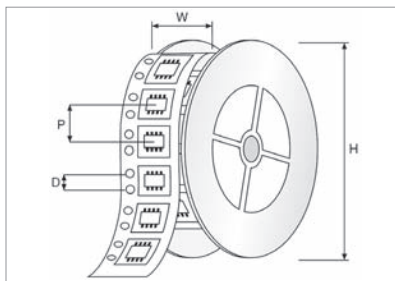
# Application specific devices

Application	Part number	Description	V <sub>CC</sub> [V]	V <sub>I</sub> [V]	I <sub>O</sub> [mA]	Package
Printer peripherals	<b>74ACT1284MTR</b>	High-speed IEEE1284 transceivers	4.5 to 5.5	0 to V <sub>CC</sub>	14 @ V <sub>CC</sub> = 4.5V	SO-20
Printer peripherals	<b>74ACT1284TTR</b>	High-speed IEEE1284 transceivers	4.5 to 5.5	0 to V <sub>CC</sub>	14 @ V <sub>CC</sub> = 4.5V	TSSOP20
Printer peripherals	<b>74LVC161284TTR</b>	High-speed IEEE1284 transceivers	3 to 3.6	0 to V <sub>CC</sub>	14/84 @ V <sub>CC</sub> = 3V	TSSOP48
Printer peripherals	<b>74LVCZ161284ATTR</b>	High-speed IEEE1284 transceivers	3 to 3.6	0 to V <sub>CC</sub>	14/84 @ V <sub>CC</sub> = 3V	TSSOP48
Telecom	<b>74ACT8244TTR</b>	Relay driver	4.75 to 5.25	0 to V <sub>CC</sub>	50/70 @ V <sub>CC</sub> = 4.75V	TSSOP20
Telecom	<b>74GTL1655ATTR</b>	GTL transceiver	3 to 3.6	0 to 3.6	24/100 @ V <sub>CC</sub> = 3V	TSSOP64
Telecom	<b>74GTL1655TTR</b>	GTL transceiver	3 to 3.6	0 to 3.6	24/100 @ V <sub>CC</sub> = 3V	TSSOP64
Parallel camera sensor	<b>ST16C32245LBR</b>	Dual supply bus transceiver level translator, a side series resistor, two I <sup>2</sup> C lines	1.65 to 3.6	0 to 3.6	8 @ V <sub>CC</sub> = 3V	TFBGA54
Parallel camera sensor	<b>ST16C32245TBR</b>	Dual supply bus transceiver level translator, a side series resistor, two I <sup>2</sup> C lines	1.65 to 3.6	0 to 3.6	8 @ V <sub>CC</sub> = 3V	μTFBGA42
Parallel camera sensor	<b>ST16C32245TTR</b>	Dual supply bus transceiver level translator, a side series resistor, two I <sup>2</sup> C lines	1.65 to 3.6	0 to 3.6	8 @ V <sub>CC</sub> = 3V	TSSOP48
Display parallel I/F	<b>74VCXHQ163245TBR</b>	Dual supply bus transceiver level translator with bus hold and EMI noise control	1.4 to 3.6	0 to 3.6	2.6 @ V <sub>CC</sub> = 2.6V	μTFBGA42
Parallel display I/F	<b>74VCXHQ163245TTR</b>	Dual supply bus transceiver level translator with bus hold and EMI noise control	1.4 to 3.6	0 to 3.6	2.6 @ V <sub>CC</sub> = 2.6V	TSSOP48

# Surface mounting packages

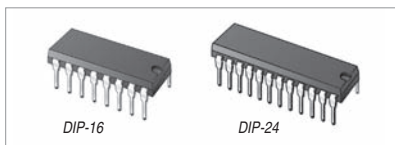


Package	H (inch)	W (tape width mm)	P (mm)	D (mm)
SOT23-5L/8L, SOT323-5L/6L, QFN16 (3X3), Flip-Chip5, Flip-Chip11	7	8	4	4
TSSOP48, SO-24, SO-20, TSSOP64	13	24	12	4
μTFBGA42	13	12	8	4
SO-16, TSSOP16, TFBGA54	13	16	8	4
TSSOP24, SSOP24, TSSOP20, TSSOP24 (exposed-pad)	13	16	12	4
LFBGA96	13	24	8	4



Packages	Quantity
SO-24, SO-20	1,000 pcs
SOT23-5L/8L, SOT323-5L, QFN16 (3X3), μTFBGA42, Flip-Chip5, Flip-Chip11	3,000 pcs
TSSOP48, TSSOP64	2,000 pcs
SO-16, TSSOP16, TSSOP24, TSSOP20, TFBGA54	2,500 pcs
SSOP24	1,350 pcs
LFBGA96	3,500 pcs

# Through-hole packages



Package	Base quantity	Bulk quantity
DIP-16	25 pcs	1,000 pcs
DIP-24	15 pcs	750 pcs



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