



**THE DATASHEET OF  
MK74CB218BRLFTR**



Part #	# of Outputs	Output Type	# of Inputs	Max Output Frequency (MHz)	Input Type	Output Voltage Level	Output Skew	Additive Phase Noise	Package Type
8541101	10	LVDS	2	200	Differential	2.5, 3.3	30	0.29	32-TQFP
5T907	10	LVC MOS, HSTL	1	250	Differential	2.5, 1.8	25	n/a	48-TSSOP
5T9310	10	LVDS	2	1000	Differential	2.5, 3.3	25	n/a	40-VFQFPN
853S61111	10	LVPECL	2	2700	Differential	2.5, 3.3	35	0.12	32-VFQFPN
854S036	10	LVDS	2	2000	Differential	3.3	100	0.06	32-VFQFPN
49FCT20805	10	LVC MOS	2	0-166	LVC MOS	2.5	200	n/a	20-SSOP, 20-QSOP, 20-VFQFPN
49FCT3805B	10	LVC MOS	2	0-166	LVC MOS	3.3, 5	500	n/a	20-SSOP, 20-QSOP, 20-SOIC
49FCT3805E	10	LVC MOS	2	0-166	LVC MOS	3.3, 5	500	n/a	20-SSOP, 20-QSOP
49FCT805CT	10	LVC MOS	2	0-166	LVC MOS	3.3, 5	700	n/a	20-SSOP, 20-QSOP, 20-SOIC
49FCT806A	10	LVC MOS	2	0-166	LVC MOS	3.3, 5	700	n/a	20-SSOP, 20-SOIC
5V2310	10	LVC MOS	2	0-200	LVC MOS	2.5, 3.3	100	n/a	24-TSSOP, 20-VFQFPN
74FCT20807	10	LVC MOS	1	0-166	LVC MOS	2.5	700	n/a	20-TSSOP, 20-QSOP
74FCT3807E	10	LVC MOS	1	0-133	LVC MOS	3.3	100	n/a	20-SSOP
74FCT807C	10	LVC MOS	1	0-100	LVC MOS	5	350	n/a	20-SSOP, 20-QSOP, 20-SOIC
LV810	10	LVC MOS	1	1-133	1.5V LVC MOS, 2.5V LVC MOS	1.5, 2.5	200	n/a	20-SSOP, 20-QSOP
8312I	12	LVC MOS	1	250	LVC MOS	2.5, 3.3, 1.8	160	0.04	32-TQFP
83948I	12	LVC MOS	2	250	LVC MOS, Differential	3.3	350	n/a	32-TQFP
83948I-147	12	LVC MOS	2	350	LVC MOS, Differential	2.5, 3.3	160	0.14	32-TQFP
853S12I	12	LVPECL	1	1500	Differential	2.5, 3.3	50	0.06	32-VFQFPN
9DB1233	12	HCSL	1	5 - 166	HSCL	3.3	50	50	64-TSSOP
8316	16	LVC MOS	1	150	LVC MOS	1.2	380	n/a	32-VFQFPN
8343-01	16	LVC MOS	1	200	LVC MOS	2.5, 3.3	250	n/a	32-TQFP
8501	16	HCSL	1	500	Differential	2.5, 3.3	100	n/a	48-TQFP
8516I	16	LVDS	1	700	Differential	2.5, 3.3	90	0.148	48-TQFP
8530I-01	16	LVPECL	1	500	Differential	3.3	75	0.162	48-TQFP
5T9316	16	LVDS	2	1000	LVC MOS, Differential	2.5, 3.3	25	n/a	52-VFQFPN
MK74CB218B	16	LVC MOS	2	0-200	3.3V TTL	3.3	100	n/a	28-QSOP
8532AY-01	17	LVPECL	1	500	LVC MOS, Differential	3.3	50	n/a	52-TQFP
83918I	18	LVC MOS	1	250	LVC MOS, Crystal	2.5, 3.3, 1.8	50	0.4	32-TQFP
83940I-01	18	LVC MOS	2	250	LVC MOS, Differential	2.5, 3.3	150	0.1	32-TQFP
9DB1933	19	HCSL	1	5 - 166	HSCL	3.3	50	50	72-MLF
851021	21	HCSL	1	250	Differential	2.5, 3.3	395	0.2	64-TQFP
8534-01	22	LVPECL	2	500	Differential	3.3	100	0.4	64-TQFP
8344-01	24	LVC MOS	2	250	Differential	2.5, 3.3	200	0.21	48-TQFP

DISCLAIMER Integrated Device Technology, Inc. (IDT) and its subsidiaries reserve the right to modify the products and/or specifications described herein at any time and at IDT's sole discretion. All information in this document, including descriptions of product features and performance, is subject to change without notice. Performance specifications and the operating parameters of the described products are determined in the independent state and are not guaranteed to perform the same way when installed in customer products. The information contained herein is provided without representation or warranty of any kind, whether express or implied, including, but not limited to, the suitability of IDT's products for any particular purpose, an implied warranty of merchantability, or non-infringement of the intellectual property rights of others. This document is presented only as a guide and does not convey any license under intellectual property rights of IDT or any third parties. IDT's products are not intended for use in life support systems or similar devices where the failure or malfunction of an IDT product can be reasonably expected to significantly affect the health or safety of users. Anyone using an IDT product in such a manner does so at their own risk, absent an express, written agreement by IDT. Integrated Device Technology, IDT and the IDT logo are registered trademarks of IDT. Other trademarks and service marks used herein, including protected names, logos and designs, are the property of IDT or their respective third party owners. © Copyright 2010. All rights reserved. OV\_FANOUTBUFFERS\_REVA0512

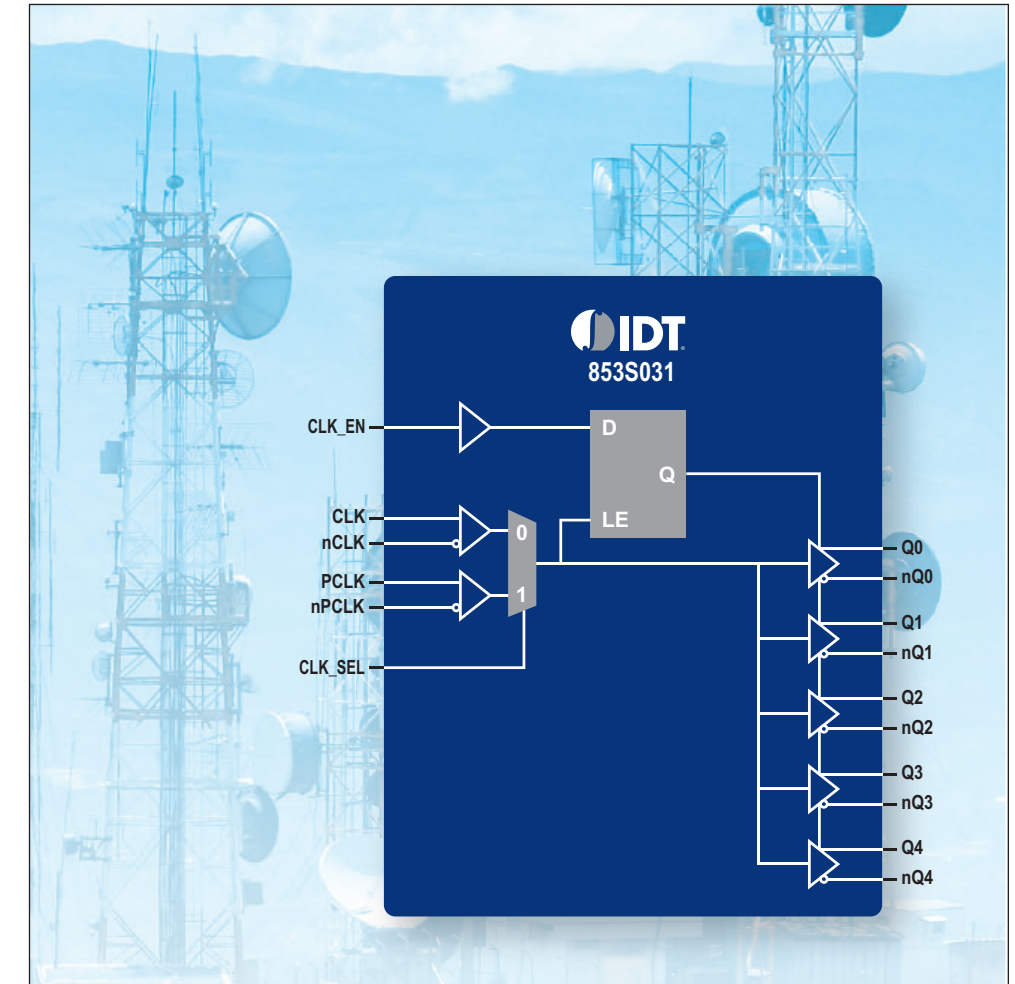
**FUNCTIONS**

- Devices with up to 27 outputs
- Single-ended or differential outputs such as LVPECL, LVDS, HSTL, SSTL and CML available
- PCIe compliant HCSL outputs
- Differential output frequencies up to 3.2 GHz and single ended LVC MOS outputs for frequencies up to 350 MHz

**BENEFITS/FEATURES**

- Extremely low additive phase noise
- Full differential internal architecture
- Wide variety of output styles
- Crystal fan-out buffers have an internal oscillator
- <100 ps output to output skew
- Industrial temperature ranges available
- Operating voltages from 1.2V to 5V
- Some buffers are available with mixed output signaling.
- Use 1.8V, 2.5V or 3.3V supplies
- Available in commercial and industrial temperature ranges.
- Well suited for use in consumer, computing and embedded applications as well as networking, communications and high-end computing systems.

*Designed for Tight Timing Budgets, Optimized for Low Skew, Delay and Jitter*



Typical Differential fan-out buffer

**Device Overview**

IDT offers the largest portfolio of off-the shelf fan-out buffers in the industry. Fan-out buffers are a useful building block of many clock trees, providing signal buffering and multiple copies of the input signal. Single output buffers are useful for translating a clock from one signaling standard to another (e.g. LVC MOS-in to LVPECL-out). Some devices have an integrated crystal oscillator, requiring only a low cost external fundamental-mode quartz crystal. The integrated oscillator provides an extremely low phase noise reference clock to drive jitter-sensitive devices such as the clock inputs of PHYs. Some IDT fan-out buffers feature fully differential internal architecture—even devices with single-ended I/Os—reducing jitter caused by inherent common-mode noise rejection and improving output skew. The differential circuitry is constant-current and therefore injects less noise into system power supplies than single-ended solutions, reducing EMI compliance concerns.

Part #	# of Outputs	Output Type	# of Inputs	Max Output Frequency (MHz)	Input Type	Output Voltage Level	Output Skew	Additive Phase Noise	Package Type
830S211-01	1	LVC MOS	1	350	Differential	2.5, 3.3	n/a	0.11	8-SOIC
508	1	LVC MOS	1	0-250	PECL	2.5, 3.3		n/a	8-SOIC
557G-08	1	HSCL	2	1-200	HSCL	0.8 - 3.3		n/a	16-TSSOP
8302I	2	LVC MOS	1	200	LVC MOS	2.5, 3.3	40	n/a	8-SOIC
8302-01	2	LVC MOS	1	250	LVC MOS	2.5, 3.3	n/a	n/a	8-SOIC
83026I-01	2	LVC MOS	1	350	Differential	2.5, 3.3, 1.8	15	0.03	8-SOIC, 8-TSSOP
85102I	2	HCSL	2	500	LVC MOS, Differential	2.5, 3.3	65	0.14	64-TQFP
85222-02	2	HSTL	1	350	LVC MOS	2.5, 3.3	25	n/a	8-SOIC
85311I	2	LVPECL	1	1000	Differential	2.5, 3.3	20	0.14	8-SOIC
85322	2	LVPECL	2	267	LVC MOS	2.5, 3.3	n/a	n/a	8-SOIC
85411I	2	LVDS	1	650	Differential	2.5, 3.3	25	0.05	8-SOIC
85211BI-03	2	HSTL	1	700	Differential	1.8	30	n/a	8-SOIC
854S712I	2	LVDS	1	3000	Differential	2.5, 3.3	10	0.08	16-VFQFPN
858S011I	2	CML	1	1500	Differential	2.5, 3.3	25	0.04	16-VFQFPN
74FCT38072	2	LVC MOS	1	0-166	LVC MOS	3.3	100	n/a	8-SOIC
9DB233	2	HCSL	1	5 - 166	HSCL	3.3	50	50	20-SSOP
8305I	4	LVC MOS	2	350	LVC MOS, Differential	2.5, 3.3, 1.8	45	0.04	16-TSSOP
8523	4	HSTL	2	650	Differential	2.5, 3.3	30	0.08	20-TSSOP
8523I-03	4	HSTL	2	650	Differential	1.8	50	n/a	20-TSSOP
8525	4	HSTL	2	266	LVC MOS	1.8	35	n/a	20-TSSOP
8533I-01	4	LVPECL	2	650	Differential	3.3	30	0.06	20-TSSOP
8535I-31	4	LVPECL	1	266	LVC MOS	3.3	30	0.05	20-TSSOP
8545I-02	4	LVDS	2	650	LVC MOS	2.5, 3.3	40	0.13	20-TSSOP
83904I-02	4	LVC MOS	1	200	LVC MOS	2.5, 3.3, 1.8	40	0.16	16-TSSOP
85104I	4	HCSL	2	500	LVC MOS, Differential	2.5, 3.3	100	0.22	20-TSSOP
830154I-08	4	LVC MOS	1	160	LVC MOS	2.5, 3.3, 1.8, 1.5	250	0.09	8-SOIC, 8-TSSOP
854104I	4	LVDS	1	700	Differential	2.5, 3.3	50	0.232	8-SOIC, 8-TSSOP
854105	4	LVDS	1	250	LVC MOS	2.5, 3.3	55	0.16	16-TSSOP
853S314I	4	LVPECL	2	2700	Differential	2.5, 3.3	50	0.14	20-TSSOP
854S204I	4	LVPECL / LVDS	2	3000	Differential	2.5, 3.3	15	0.15	16-TSSOP
8S89831I	4	LVPECL	1	2100	Differential	2.5, 3.3	30	0.31	16-VFQFPN
8S89832I	4	LVDS	1	2000	Differential	2.5, 3.3	25	0.09	16-VFQFPN
2304NZG-11F	4	LVC MOS	1	0-140	LVC MOS	3.3	100	n/a	8-TSSOP
524	4	LVC MOS	1	0-200	LVC MOS	2.5, 3.3, 5	50	n/a	8-SOIC
551	4	LVC MOS	1	0-160	LVC MOS	3.3, 5	250	n/a	8-SOIC
553	4	LVC MOS	1	0-200	LVC MOS	2.5, 3.3, 5	50	n/a	8-SOIC
554G-01A	4	PECL	1	0-200	PECL	3.3, 5	50	n/a	16-TSSOP
556M-04	4	LVC MOS	1	5-27	LVC MOS	2.5, 3.3, 5	50	n/a	8-SOIC
5T30553	4	LVC MOS	1	0-200	LVC MOS	2.5, 3.3	50	n/a	8-SOIC
6P30007A	4	LVDS	2	12.6 - 13.4	LVC MOS, Sine	1.8		n/a	24 VFQFN

Part #	# of Outputs	Output Type	# of Inputs	Max Output Frequency (MHz)	Input Type	Output Voltage Level	Output Skew	Additive Phase Noise	Package Type
621	4	LVC MOS	1	0-200	VDD to 3.3V LVC MOS	1.2 - 1.8	150	n/a	8-SOIC, 8-VFQFPN
651	4	LVC MOS	1	0-200	LVC MOS	1.5, 1.8, 2.5	250	n/a	8-SOIC
6T39007A	4	LVC MOS, Sine	1	12.6-13.4	LVC MOS, Sine	2.5, 3.3		n/a	24-VFQFPN
74FCT38074	4	LVC MOS	1	0-166	LVC MOS	3.3	100	n/a	8-SOIC
9DB433	4	HCSL	1	5 - 166	HSCL	3.3	50	50	28-SSOP
9DB423B	4	HCSL	1	33 - 400	HSCL	3.3	50	50	28-SSOP, 28-TSSOP
85214I	5	HSTL	2	700	LVC MOS, Differential	2.5, 3.3	40	n/a	20-TSSOP
85105I	5	HCSL	2	500	LVC MOS, Differential	2.5, 3.3	100	0.24	20-TSSOP
85310I-21	5	LVPECL	2	700	Differential	2.5, 3.3	50	0.13	32-LQFP
853S014I	5	LVPECL	2	2000	Differential	2.5, 3.3	20	0.07	20-TSSOP
5V2305	5	LVC MOS	1	0-200	LVC MOS	2.5, 3.3	75	n/a	16-TSSOP, 16-VFQFPN,
74FCT38075	5	LVC MOS	1	0-166	LVC MOS	3.3	100	n/a	8-SOIC
8536I-33	6	LVC MOS, LVPECL	1	266	LVC MOS	2.5, 3.3	80	0.32	20-TSSOP
8536-01	6	LVPECL	2	700	LVC MOS, Differential	2.5, 3.3	55	0.19	24-TSSOP
83905I	6	LVC MOS	1	40	Crystal	2.5, 3.3, 1.8	80	0.18	16-TSSOP
5T9306	6	LVDS	2	1000	LVC MOS, Differential	2.5, 3.3	1000	0.16	28-VFQFPN
853S013I	6	LVPECL	1	2000	Differential	2.5, 3.3	25	0.05	20-SOIC
854S006I	6	LVDS	1	1700	Differential	2.5, 3.3	55	0.067	24-TSSOP
9DB633	6	HCSL	1	5 - 166	HSCL	3.3	50	50	28-SSOP
8308I	8	LVC MOS	2	350	LVC MOS, Differential	2.5, 3.3	160	n/a	24-TSSOP
8538I-26	8	LVC MOS, LVPECL	2	266	LVC MOS, Crystal	2.5, 3.3	112	0.19	24-TSSOP
8538-31	8	LVPECL	2	266	LVC MOS, Crystal	3.3	50	n/a	28-TSSOP
83908I-02	8	LVC MOS	3	200	LVC MOS, Crystal	2.5, 3.3, 1.8	70	0.39	24-TSSOP
85108I	8	HCSL	1	500	Differential	2.5, 3.3	80	0.09	24-TSSOP
85408I	8	LVDS	1	700	Differential	2.5, 3.3	50	0.167	24-TSSOP
853S310I	8	LVPECL	2	2000	Differential	3.3	75	0.14	28-PLCC
552G-02	8	LVC MOS	2	0-200	LVC MOS	2.5, 3.3, 5	50	n/a	16-TSSOP
552AR-01	8	LVC MOS	2	10-200	LVC MOS	3.3, 5	250	n/a	20-SSOP
6P30006A	8	LVC MOS, Sine	1	12.6-13.4	LVC MOS, Sine	1.8		n/a	24-VFQFPN
9DB833	8	HCSL	1	5 - 166	HSCL	3.3	50	50	48-SSOP, 48-TSSOP
9DB823B	8	HCSL	1	33 - 400	HSCL	3.3	50	50	48-SSOP, 48-TSSOP
8521	9	HSTL	2	500	Differential	2.5, 3.3	50	0.17	32-TQFP
8531-01	9	LVPECL	2	500	Differential	3.3	50	0.17	32-TQFP
83947I-147	9	LVC MOS	2	250	LVC MOS	2.5, 3.3	130	0.2	32-TQFP
853S031I	9	LVPECL	2	1600	Differential	2.5, 3.3	55	n/a	32-TQFP
83210	10	HSTL	1	150	LVC MOS	2.5, 3.3	110	n/a	32-TQFP
85210-31	10	HSTL	2	650	Differential	2.5, 3.3	50	n/a	32-TQFP
85310I-11	10	LVPECL	2	700	Differential	2.5, 3.3	55	0.13	32-TQFP
851010	10	HCSL	1	250	Differential	2.5, 3.3	165	0.24	32-TQFP

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View MK74CB218BRLFTR on WIN SOURCE](#)
- ⊖ [IDT, Integrated Device Technology Inc Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management