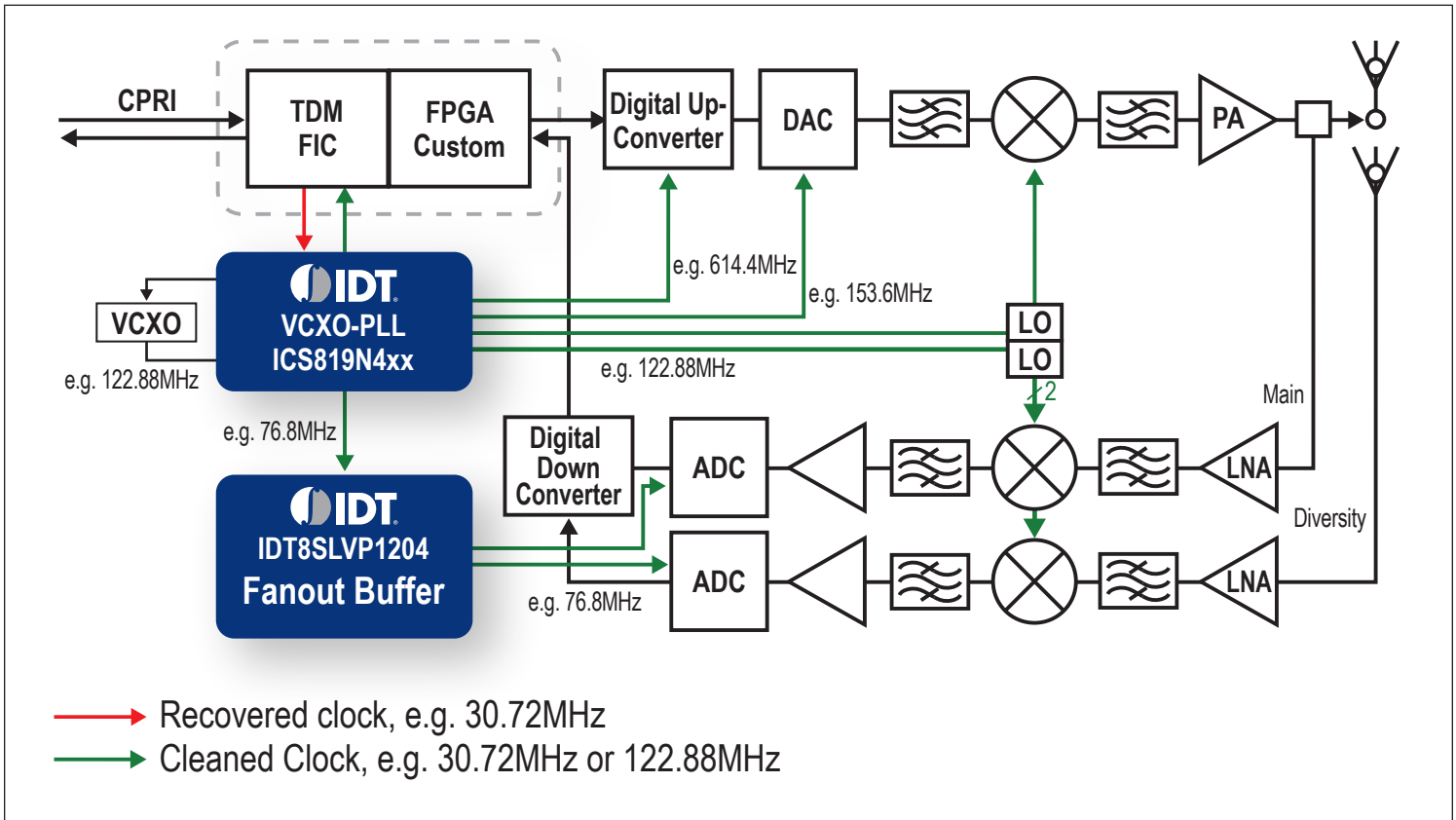




Integrated Device Technology

# High-Performance, Low-Phase Noise Clocks Buffers

POWER MANAGEMENT | ANALOG & RF | INTERFACE & CONNECTIVITY | CLOCKS & TIMING | MEMORY & LOGIC | TOUCH & USER INTERFACE | VIDEO & DISPLAY | AUDIO



## FEATURES AND BENEFITS

- Wide selection of differential output buffers
- Optimized for low additive phase noise
- Fast output rise fall/time (as low as 100ps)
- Low-skew outputs
- Accept LVDS, LVPECL, HSTL, CML inputs
- Support small packages (e.g. VFQN 3x3 to 5x5mm)
- Support integrated input termination networks for differential signals

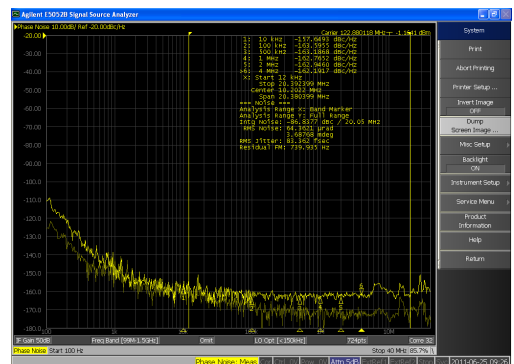
## APPLICATIONS

- Wireless infrastructure BTS
- Radio boards
- Driving ADC/DAC devices
- Wireline and Communications

## Low Additive Phase Noise, Differential Clock Fanout Buffers for Wireless Infrastructure Radio Equipment

### Device Overview

IDT's family of high-performance, low additive phase noise buffers is the ideal choice for use in designs where a clean frequency source is critical to a system's operation and performance. IDT fan-out buffers feature fully differential internal architecture, 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. These buffers are typically used for clock distribution on wireless infrastructure designs of radio boards where low phase noise is required. IDT's buffers are ideal for space-constraint designs by offering small footprint packaging as well as integrating the input termination network for differential signals.



IDT8SLVP1204 Additive Phase Noise 83fs RMS(12kHz - 20MHz)



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RF Frequency Buffer Components					
Device	I/O	Function	Supply voltage	Max. Clock Freq. (MHz)	Package
853S0111	LVPECL	1:2 Fanout Buffer	2.5V, 3.3V	2500	8-TSSOP, 8-SOIC
8SLVP1102I	LVPECL	1:2 Fanout Buffer	2.5V, 3.3V	2000	16-VFQFN
8SLVP2102I	LVPECL	Dual 1:2 Fanout buffer	2.5V, 3.3V	2000	16-VFQFN
853S9252I	LVPECL	1:2 Fanout Buffer	2.5V, 3.3V	3000	16-VFQFN
853S54I-01	LVPECL	Dual 2:1, 1:2 mux, loopback	2.5V, 3.3V	2500	16-VFQFN
859S0212I	LVPECL/LVDS	1:2 Fanout Buffer (2:1 Mux)	2.5V, 3.3V	3000	16-TSSOP
859S0412I	LVPECL/LVDS	1:2 Fanout Buffer (4:1 Mux)	2.5V, 3.3V	3000	20-TSSOP
853S014I	LVPECL	1:5 Fanout Buffer	2.5V, 3.3V	2000	20-TSSOP
853S013I	LVPECL	Dual 1:3 Fanout Buffer	2.5V, 3.3V	2000	20-SOIC
8S89831I	LVPECL	1:4 Fanout Buffer	2.5V, 3.3V	2100	16-VFQFN
8SLVP1204I	LVPECL	1:4 Fanout Buffer	2.5V, 3.3V	2000	16-VFQFN
8S89832I	LVDS	1:4 Fanout Buffer	2.5V, 3.3V	2000	16-VFQFN
8S89833I	LVDS	1:4 Fanout Buffer	2.5V, 3.3V	2000	16-VFQFN
859S0424I	LVPECL/LVDS	1:4 Fanout Buffer (4:1 Mux)	2.5V, 3.3V	3000	24-TSSOP
8S58021I	LVPECL	1:4 Fanout Buffer	2.5V, 3.3V	2500	16-VFQFN
853S314I	LVPECL	1:4 Fanout Buffer	2.5V, 3.3V	2700	20-TSSOP, 20-SSOP
8SLVP2104I	LVPECL	Dual 1:4 Fanout Buffer	2.5V, 3.3V	2000	28-VFQFN
853S006I	LVPECL	1:6 Fanout Buffer	2.5V, 3.3V	2000	20-TSSOP
8S58035I	LVPECL	1:6 Fanout Buffer (2:1 Mux)	2.5V, 3.3V	3200	32-VFQFN
8SLVP2106I	LVPECL	Dual 1:6 Fanout Buffer	2.5V, 3.3V	2000	40-VFQFN
8SLVP1208I	LVPECL	1:8 Fanout Buffer	2.5V, 3.3V	2000	28-VFQFN
8SLVP2108I	LVPECL	Dual 1:8 Fanout Buffer	2.5V, 3.3V	2000	48-VFQFN
853S031I	LVPECL	1:9 Fanout Buffer	2.5V, 3.3V	1600	32-LQFP
853S6111I	LVPECL	1:10 Fanout Buffer	2.5V, 3.3V	2700	32-TQFP
853S111AI	LVPECL	1:10 Fanout Buffer	2.5V, 3.3V	2500	32-TQFP
853S111BI	LVPECL	1:10 Fanout Buffer	2.5V, 3.3V	2500	32-TQFP, 32-VQFN
853S12I	LVPECL	1:12 Fanout Buffer	2.5V, 3.3V	1500	32-VFQFN
8SLVP1212I	LVPECL	1:12 Fanout Buffer	2.5V, 3.3V	2000	40-VFQFN
853S024	LVPECL	1:24 Fanout Buffer	2.5V, 3.3V	1500	64-TQFP

RF Frequency Divider Components					
Device	I/O	Function	Supply voltage	Max. Clock Freq. (MHz)	Package
853S1208I	LVPECL	÷1, ÷2 Divider, Dual 1:4 Fanout Buffer	2.5V, 3.3V	700	48-LQFP
853S1204I	LVPECL	÷1, ÷2 Divider and 1:4 Fanout Buffer	2.5V, 3.3V	700	24-TSSOP
MC100ES6039	LVPECL	÷2/÷4, ÷4/÷6 Divider	3.3V	1000	20-SOIC, 20-TSSOP
MC100ES6226	LVPECL	÷1, ÷2 Divider, Triple 1:3 Fanout Buffer	2.3V, 2.5V	3000	32-LQFP
8S73034I	LVPECL	÷1, ÷2, ÷8 Divider	2.5V, 3.3V	3200	16-SOIC, 16-TSSOP
8S89200I	LVDS	÷1, ÷2, ÷8 Divider with 1:4, 1:3 and 1:1 Fanout	2.5V	3000, 1500	32-VFQFN
8S89202I	LVPECL	÷1, ÷2, ÷8 Divider with 1:4, 1:3 and 1:1 Fanout	2.5V, 3.3V	3000, 1500	32-VFQFN
8S89874I	LVPECL	÷1, ÷2, ÷4, ÷8, ÷16 Divider with 1:2 Fanout Buffer	2.5V, 3.3V	2000	16-VFQFN
8S89875I	LVDS	÷1, ÷2, ÷4, ÷8, ÷16 Divider with 1:2 Fanout Buffer	2.5V	2500	16-VFQFN
8S89876I	LVDS	÷1, ÷2, ÷4, ÷8, ÷16 Divider with 1:2 Fanout Buffer	3.3V	2500	16-VFQFN
874328I-01	LVPECL/LVDS	÷1, ÷4 Divider and 1:20 Fanout Buffer	2.5V	650	64-TQFP

RF Frequency Multiplexer Components					
Device	I/O	Function	Supply voltage	Max. Clock Freq. (MHz)	Package
853S01I	LVPECL	2:1 Mux	2.5V, 3.3V	2500	16-VFQFN, 16-TSSOP
MC100ES6254	LVPECL	2x2 Switch/Dual 1:3/Single 1:6 Fanout	2.5V, 3.3V	3000	32-LQFP
853S057I	LVPECL	4:1 Mux	2.5V, 3.3V	3000	20-TSSOP
853S058I	LVPECL	8:1 Mux	2.5V, 3.3V	2500	24-TSSOP
853S012I	LVPECL	12:1 Mux	2.5V, 3.3V	3200	32-VFQFN
853S202I	LVPECL	12:2 Mux/Switch	2.5V, 3.3V	3000	48-LQFP

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