

# COMLINEAR<sup>®</sup> Amplifier Products



CADEKA's focus is leading edge analog solutions. Analog is the essence of human experience, it is at the core of our senses...sound, vision, and touch. High performance analog products enhance audio, video, and environmental sensing applications. CADEKA's product focus, amplifiers, are at the core of analog: sensing, amplifying, and conditioning the analog signals present in the systems that engineers design to interface electronics to the analog world. Our theme is "Amplify the Human Experience.™" We are amplifier experts and we are absolutely passionate about being successful with our core competency. – Gary Ross, CEO.

## AMPLIFY THE HUMAN EXPERIENCE™

- Amplifiers with leading performance to power ratios that enable designers to minimize power consumption without sacrificing performance.
- Design and applications support that provide engineers with fast and accurate solutions, allowing designers to minimize their time-to-market.

## High Performance Amplifiers

Part Number	No. of	Power Down	RRIO	Typical										Min V <sub>S</sub> (V)	Max V <sub>S</sub> (V)	Packages
				G=1 BW (MHz)	G=2 BW (MHz)	SR (V/μs)	DG/DP (%/°)	I <sub>S</sub> <sup>1</sup> (mA)	I <sub>OUT</sub> (mA)	e <sub>n</sub> (nV/√Hz)	V <sub>IO</sub> (mV)	I <sub>b</sub> (μA)	A <sub>OL</sub> (dB)			
CLC1001*	1	Yes	Out	2GHz GBWP		610	N/A	13	100	0.65	0.3	30	100	4	12	SOT23-6
CLC1002*	1	Yes	Out	1.1GHz GBWP		360	N/A	13	100	0.65	0.3	30	100	4	12	SOT23-6
CLC1003†	1	No	In/Out	70	25	13.5	N/A	2	60	3.5	0.01	0.07	115	2.5	12	SOT23-5
CLC1004	1	Yes	No	N/A	750	1,400	0.02/0.01	12	100	4	0	3.2	70	4.5	12	SOT23-6
CLC1006	1	No	No	N/A	500	1,400	0.02/0.05	5.5	100	5	0	3.2	61	4.5	12	SOT23-5, SOIC-8
CLC1014	1	No	No	N/A	750	1,400	0.02/0.01	12	100	4	0	3.2	70	4.5	12	SOT23-5
CLC1050*	1	No	No	0.550	0.420	0.288	N/A	0.65	+40/-15	40	2	20	100	3	36	SOT23-5
CLC1603	1	Yes	No	240	200	450	0.01/0.03	1.1	100	4	0.7	2	N/A	4.5	12	SOT23-6
CLC1605	1	No	No	1.5GHz	1.2GHz	2,500	0.01/0.01	12	120	3.7	0	6	N/A	4.5	12	SOT23-5
CLC1606	1	No	No	1.3GHz	1.2GHz	3,300	0.01/0.01	7.5	120	3	0	3	N/A	4.5	12	SOT23-5, SOIC-8
CLC2000	2	No	No	510	250	210	0.009/0.06	7	200	4.5	0.3	10	TBD	5	12	SOIC-8
CLC2005	2	No	Out	260	90	145	N/A	4.2	55	16	1.4	3	78	2.5	5.5	SOIC-8
CLC2050*	2	No	No	0.550	0.420	0.288	N/A	0.35	+40/-15	40	2	20	100	3	36	SOIC-8
CLC2058*	2	No	No	4.86	3.55	2.8	N/A	2.5	+35/-60	10	1	70	100	4	36	SOIC-8
CLC2059*	2	No	No	13.7	6.8	7	N/A	3	+45/-80	4	0.5	150	110	4	36	SOIC-8
CLC2600	2	No	No	300	230	1,300	0.03/0.04	3.3	50	6.4	1.4	1.3	TBD	±4	±6	SOIC-8
CLC2601	2	No	No	550	335	1,500	0.01/0.06	5.2	52	7	2.7	2.6	TBD	±4	±6	SOIC-8
CLC3004	3	Yes	No	N/A	750	1,400	0.02/0.01	12	100	4	0	3.2	70	4.5	12	SOIC-16
CLC3600	3	No	No	300	230	1,300	0.03/0.04	3.3	50	6.4	1.4	1.3	TBD	±4	±6	SOIC-14
CLC3601	3	No	No	550	335	1,500	0.01/0.06	5.2	52	7	2.7	2.6	TBD	±4	±6	SOIC-14
CLC3603	3	Yes	No	240	200	450	0.01/0.03	1.1	100	4	0.7	2	N/A	4.5	12	SOIC-16
CLC3605	3	Yes	No	1.5GHz	1.2GHz	2,500	0.01/0.01	12	120	3.7	0	6	N/A	4.5	12	SOIC-16
CLC3613	3	No	No	240	200	450	0.01/0.03	1.1	100	4	0.7	2	N/A	4.5	12	SOIC-14
CLC4050*	4	No	No	0.550	0.420	0.288	N/A	0.25	+40/-15	40	2	20	100	3	36	SOIC-14
CLC4600	4	No	No	300	230	1,300	0.03/0.04	3.3	50	6.4	1.4	1.3	TBD	±4	±6	SOIC-14
CLC4601	4	No	No	550	335	1,500	0.01/0.06	5.2	52	7	2.7	2.6	TBD	±4	±6	SOIC-14

**Notes:**

1. Supply Current per Channel, † Sampling now, \* Preliminary

## Video Filter Drivers

Part Number	Input Chan	Output Chan	Power Down	Gain (dB)	-3dB Filter Cutoff (MHz)	Stopband Attenuation (dB)	DG/DP (%/°)	I <sub>S</sub> /Channel (mA)	Input	Output	Min V <sub>S</sub> (V)	Max V <sub>S</sub> (V)	Packages
CLC3800	3	3	No	6	8	55	0.3/0.2	2.9	DC-Coupled	AC- or DC-Coupled	3	7	SOIC-8, DFN-8
CLC3801	3	3	No	9	8	55	0.3/0.2	2.9	DC-Coupled	AC- or DC-Coupled	3	7	SOIC-8, DFN-8

## General Purpose Comparators

Part Number	No. of Channels	Output Type	Response Time (μs)	V <sub>IO</sub> (mV)	CMIR (V)	I <sub>S</sub> /Channel (mA)	Min V <sub>S</sub> (V)	Max V <sub>S</sub> (V)	Packages
CLC2550*	2	Open Collector	1.3	2	+V <sub>S</sub> - 1.5	0.6	2	36	SOIC-8
CLC4550*	4	Open Collector	1.3	2	+V <sub>S</sub> - 1.5	0.9	2	36	SOIC-14

## High Speed Comparators

Part Number	No. of Channels	Typical								Packages
		BW (MHz)	SR (V/ns)	Propagation Delay (ns)	Overdrive Dispersion (ns)	Common Mode Voltage (V)	TR / TF (ns)	V <sub>IO</sub> (mV)	Power Dissipation (mW)	
CLC2500*	2	900	10	0.65	0.1	-2.5 / +4.0	0.18 / 0.08	±3.0	350	PLCC-20

## Instrumentation Amplifiers

Part Number	No. of Amplifiers	Power Down	Gain Setting Mode	Gain Range	GBWP (MHz)	CMRR (dB)	I <sub>S</sub> /Channel (mA)	e <sub>n</sub> (nV/√Hz)	Max V <sub>IO</sub> (μV)	Min V <sub>S</sub> (V)	Max V <sub>S</sub> (V)	Packages
CLC1200*	1	No	Resistor	1 to 10,000	0.7	130	1.3	6.6	125	±2.3	±18	SOIC-8, DIP-8, CERDIP-8
CLC1201*	1	No	Fixed	10	0.8	110	1.1	13	250	±2.3	±18	SOIC-8, DIP-8, CERDIP-8
CLC1202*	1	No	Fixed	50	0.2	130	1.1	9	125	±2.3	±18	SOIC-8, DIP-8, CERDIP-8
CLC1203*	1	No	Fixed	500	0.1	130	1.1	9	125	±2.3	±18	SOIC-8, DIP-8, CERDIP-8

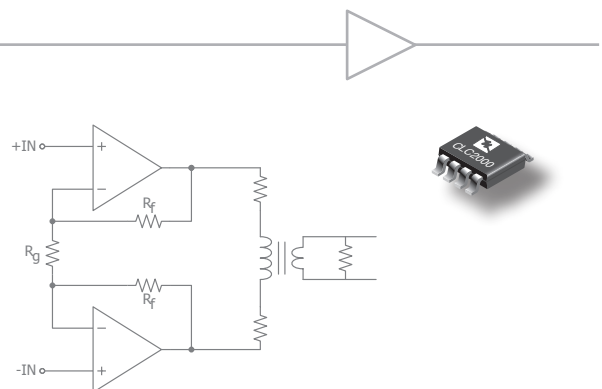
\*Preliminary

## Product Highlights

### Additional Features and Benefits

#### Comlinear CLC2000 – High Output Current Dual Amplifier

- 9.4V<sub>pp</sub> output drive into R<sub>L</sub> = 25Ω
- Using both amplifiers, 18.8V<sub>pp</sub> differential output drive into R<sub>L</sub> = 50Ω
- 210V/μs slew rate
- ±200mA@V<sub>O</sub> = 9.4V<sub>pp</sub>
- 500MHz bandwidth at G = 1, 250MHz at G = 2
- 4.5nV/√Hz input voltage noise



For additional information regarding our products, please visit the CADEKA at: [cadeka.com](http://cadeka.com)

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