Berex Wireless Communication Products at CDI

Description

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Wireless communication system designers are challenged to find ways to improve their coverage in areas of po quality. While there are several ways to accomplish this, two common methods include the use of **repeaters or di antenna systems (DAS)**.

While both solutions can provide improved coverage, their use cases are quite different. Repeaters work well whe area of poor signal quality is small or isolated. By boosting the RF signal in both the uplink and downlink direction coverage issues can be overcome. In contrast, a DAS system is better suited to situations where the signal quality occur in multiple locations. One example could be inside a large building, when signals from outside have trouble penetrating the exterior walls. In this case, the use of multiple remote bi-directional amplifiers is linked to a single s often using optical fibers.

While many RF components are critical to designing both repeaters and RF amplifies used in DAS systems, CDIâ supplier BeRex has a number of devices which can really improve the performance of such systems. A few such c are featured below.

Low-Noise Amplifiers (LNA)

Low-Noise Amplifiers (LNA) are used to amplify the weak signals received from remote devices without adding additional noise into the system. BeRex offers two new LNA products which really stand out. Both are offered in a 2Ã—2 mm DFN8 package and offer extremely low current consumption and fast turn on/off times to support Time-Division Duplex (TDD) systems.

Part #	Freq. Range (MHz)	Linear Gain (dB)	OIP3/Tone (dBm)	NF (dB)
BLB04	2500 â€“ 5000	18	33	**0.59**

BLB28	2500 â€“ 7000	21.5	31.5	0.69
BLB01	500 â€“ 1500	21.4	30.5	0.44

Gain Blocks

Gain Blocks are used in both repeater and DAS products, which require a significant amount of gain for both the uplink and downlink paths. These devices provide a lot of gain in a small and inexpensive package. BeRex offers a wide range of gain blocks, including the new BGM26 2-stage gain device shown below.

Part #	Freq. Range (MHz)	Linear Gain (dB)	P1dB (dBm)	Vcc (V) / Ic
BG13D	5 â€“ 6000	17.9	17.7	5 / 65
BGH5	40 â€“ 6000	14.0	14.0	3.3 / 5
BGM26	1700-6000	**31.5**	195	5 / 90

Digital Variable-Gain Amplifier (DVGA)

Digital Variable-Gain Amplifier (DVGA) products are used to manage the overall gain of the RF path. Using the integrated variable attenuator, the system monitor can reduce or increase the gain as needed, both at factory calibration and dynamically while deployed in the field. BeRex offers a very wide range of DVGA products, including dual-path, single-path, parallel-control, serial-control, and wideband operation. The table below lists some of the newest products available from CDI and BeRex.

Part #	Freq. Range (MHz)	Max Gain (dB)	P1dB (dBm)	Control Rang Size (d
BVA1761	5 â€“ 6000	17	20	31.75 / 0
BVA2762	500 â€“ 8000	**40.5**	21.2	31.75 / 0
BVA2182 (Dual RF Path)	500 â€“ 3800	33.4	21.2	31.5 / 0

The products listed above are a small sample of those available from CDI and BeRex. Other functional blocks incl wideband and high-power amplifiers, digital step attenuators, RF switches, and wideband power dividers.

Contact CDI to learn more about the solutions we can offer to make your repeater, tower-mounted amplifier, or di antenna system design a successful one.

Berex at Component, Distributors, Inc. (CDI)
Toll-Free: 1-800-777-7334 **Email:** sales@cdiweb.com

Category

1. BeRex
2. Ewave
3. RF-Microwave

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