Node A

The universal multiband, multiservice,
software-based repeater platform

COMMSCOPE®

Node A—universal multiband, multiservice digital repeater platform

Flexible. Scalable. Ubiquitous. Ready for anything the future holds. Singleband or multiband, one operator or many, Node A connects your network to a more flexible future.

Flexible and future-ready

Whether your application calls for band selective, channel selective or a combination of both, the Node A platform is capable of meeting the needs of any single band/single operator requirements or can be expanded to address full multiband/multiple operator applications.

The "A" stands for technology "agnostic", meaning—regardless of protocols, spectrum reassignments, or whatever new wireless technologies may emerge—you'll be able to support it on Node A with minimal changes.

Node A's modular scalable architecture allows the user to quickly modify, upgrade or expand the repeater platform by simply adding RF cards and software features.

The platform is available in medium- and high-power classes, making it ideal for driving both passive and optical distributed antenna systems for medium to large facilities.

Several innovative software functions, such as an embedded spectrum analyzer for setup and interference logging, and uplink muting, are available through optional software keys. In addition, CommScope provides A.I.M.O.S., a comprehensive OMC. The implemented standard SNMP-based MIB also allows easy integration into a third-party OMC. The Node A is available in software optimized platforms for public safety, commercial, or mixed applications.

Performance assurance

The patented architecture utilizes state-of-the-art technology to offer significantly higher dynamic range and processing power than any other digital repeater on the market. The high dynamic range allows operation in the presence of strong transmitters/interferers without the need for external filtering or attenuation. Internal filters are constructed on the fly through the user interface to adapt to new requirements or changes in the outdoor environment, without the need to download external files.

When using the advanced filtering capabilities of the Node A, only desired signals are transmitted, which results in optimum utilization of the Node A's output power capacity. While amplifying the

desired signals, the undesired signals are not amplified by the Node A and potential interference issues are mitigated.

The resulting coverage footprint is greatly increased and is not affected by changes in the outside RF environment. Also, with the undesired signal levels significantly reduced, the potential of nearby base station sites degrading coverage is eliminated.

Input spectrum

Output spectrum
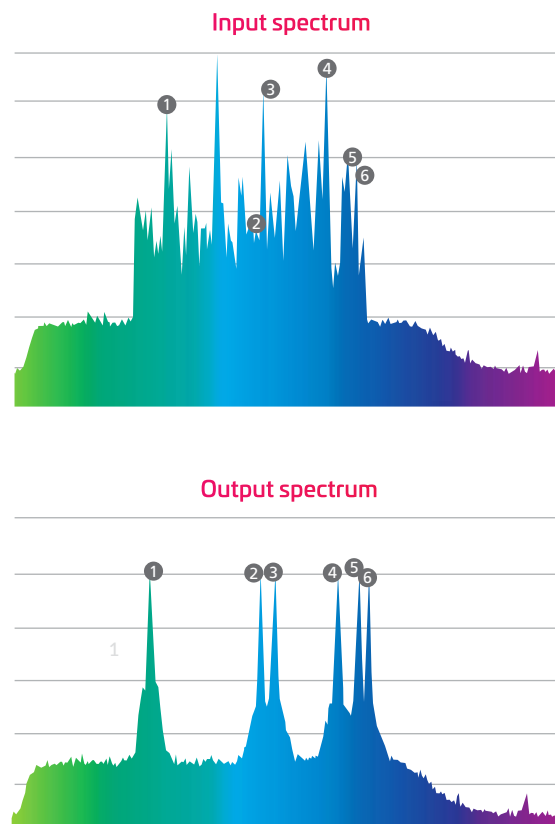
The high-power RF cards make use of an advanced feed forward power amplifier technology, which drastically reduces power consumption and heat dissipation. The lower power consumption means increased system reliability, reduced thermal loading on the equipment room, and decreased battery backup requirements. The Node A is fully compliant with all applicable regulatory standards (e.g., FCC, ETSI, IC, etc.).

Integrated multiband combiner and modem

Main power connection (AC or DC)

LAN interface

Full-band RF card

Available in medium- or high-power options

Set up fast, get online fast

Repeater configuration and setup is performed through an intuitive auto setup wizard. Context-sensitive help screens make it a snap to get online fast without bringing in bulky test equipment.

Individual channels or band segments can be set up independently in either gain or power mode, useful in public safety or multi-operator applications where the donor signals are received at significantly different levels.

In addition to the normal alarm reporting, Node A also includes advanced QoS measurements and reports, such as inbound and outbound channel power, pilot power and RSSI to accelerate setup and ensure proper operation afterward. All repeater functions are accessible locally or remotely using circuit switch or packet data wireless modems integrated in the Node A chassis.

Node A features and benefits

- Supports up to four frequency bands in a single chassis with fully integrated multiband combiner and modem for remote monitoring and control.

- Software-based platform enables on-the-fly filter changes and development of new features and capabilities without expensive hardware upgrades.

- Channel- and band-selective automatic gain power control for multi-operator and public safety applications.

- Available in both medium- and high-power classes to enhance coverage in a wide range of facility footprints to optimize total system cost.

- Intuitive auto setup wizard and help screens for easy system configuration, minimizing setup time and reliance on expensive and bulky test equipment.

- Advanced QoS measurements and reports, including inbound and outbound measurement of channel power/pilot power/RSSI to facilitate setup and verify ongoing system operation.

- Remote alarming through SNMP or SMS using wireless data.

- Seamless integration with other CommScope products (e.g., ION®-B/ION-M).

- Rated for both indoor and outdoor use with versatile rack mount, wall mount, or pole mounting options.

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

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