



DISTRIBUTED ANTENNA SYSTEMS

(mBSC)

Multi-Band
Multi-Standard
Multi-Carrier



As wireless applications proliferate, causing mobile usage to increase exponentially, wireless infrastructures are being stretched beyond their capabilities. Carriers, however, still need to meet user demands for coverage when and where needed. That's why today's most efficient carrier networks rely on Distributed Antenna Systems (DAS) by BTI Wireless.

As a global leader in wireless communications since 1999, BTI designs and delivers the highest performing indoor and outdoor DAS solutions to extend coverage and add capacity. Our technology includes the industry's most advanced linear power amplifiers, and we design specifically to minimize space requirements and reduce overall cost of operation.

BTI provides an end-to-end solution, from the DAS hub interface to BTS equipment all the way to the service antennas. Our mBSC product line includes robust solutions for the Point of Interface (POI), Host Unit (HU), Remote Unit (RU), a variety of fiber transport options, and antenna combiners for coverage and capacity in multiple bands.

BTI deploys its products in sports, entertainment, transportation, hospitality, healthcare, education and corporate facilities worldwide.

BTI PRODUCT HIGHLIGHTS

Our comprehensive suite of patented products fully addresses the current market for in-building and outdoor coverage enhancement solutions.

- Best-in-class amplifiers
- Indoor, mid-power DAS
- Outdoor, high-power DAS
- Supports 2G, 3G & 4G LTE (MIMO and SISO) and beyond
- Supports all common frequency bands used in global wireless community
- Mix & match modular architecture — 2W/5W or 20W/40W/80W in the same chassis



EXTEND COVERAGE.
MAXIMIZE PERFORMANCE.
SAVE SPACE.

NEUTRAL HOST VENUE AND IN-BUILDING SOLUTIONS

With the burgeoning demand for seamless wireless everywhere, in-building solutions continue to be an essential element of the network.

The BTI mBSC DAS platform enables mixed deployment of high-power and mid-power remote nodes to support the complex environments unique to in-building and venue coverage.

BTI's highly linear remote nodes deliver uncompromising performance with a modular design that allows you to deploy only what you need today, and inexpensively add on or upgrade as your needs require.

BTI amplifiers support full instantaneous bandwidth for all operating bands, significantly reducing deployment costs by enabling the amplifiers to be shared by all licensed operators in the network. With continuous output power up to 5W per band in our mid-power nodes, and up to 80W per band in our high-power nodes, there is enough capacity for the most challenging environments.

TYPICAL DAS DEPLOYMENT

- Optical Host Unit**
- Mixed 5W/20W Remotes
 - WDM & CWDM Optical Transport
 - 5 bands per fiber (WDM)
 - Local / Remote Management

- High-Power Remote**
- Modular "blade" architecture
 - 5 bands per fiber (WDM)
 - 20, 40, or 80 W/band
 - Ultra Linear PAs (full IBW)



- Point-of-Interface**
- Multi-port/Multi-operator
 - Input Power Monitoring
 - Downlink Automatic Level Control

- Mid-Power Remote**
- 19" Rack or Wall-Mount
 - 5 Bands, 3 MIMO per shelf
 - 5W/band Plug-in Modules
 - Ultra Linear PAs (full IBW)



OUTDOOR DAS

Operators around the world utilize Outdoor DAS to rapidly deploy dense capacity in urban areas, and to extend coverage across challenging terrains. BTI has provided equipment for extensive outdoor DAS networks for operators in North America, EMEA, Asia Pacific and Oceania.

BTI consistently pushes the envelope for maximum output power, and power density (Watts per cubic litre). We provide natural convection-cooled solutions up to 40W per band, and active-cooled remote units up to 80W per band. BTI's modular design allows cost efficient "pay-as-you-grow" and upgrade scenarios important in today's rapidly changing environment.

HEAD END SOLUTIONS

The mBSC Host Unit (HU) product line provides optimal implementation flexibility to reduce cost, minimize space requirements at the DAS hub site, and allow for growth and expansion of the system. Each HU shelf contains fully redundant power supplies and a remote control unit for network/element management of both the host unit and remote node equipment.

Each HU can support different combinations of the BTS Interface Unit (BIU) and Fiber Interface Unit (FIU) line cards. The BIU interfaces to the POI, or directly to a base station, and typically deploys in a one-per-sector configuration, with support for remote node simulcast ratios from 1:1 up to 32:1. The FIU converts RF signals to analog or digital fiber (up to five bands per FIU, with support for two optical links per FIU card), and provides the interface between the HU and remote DAS nodes.



REMOTE NODE SOLUTIONS

Delivering superior linear power amplification in the smallest footprint, BTI's modular fiber-fed remote nodes are the premier differentiating component of the BTI DAS offering. BTI supports a full range of RF coverage solutions using DAS within all common operating bands in use around the world.

The mBSC system supports up to 5 bands on a single WDM fiber, as well as supporting multi-sector and MIMO configurations on a single CWDM fiber. Delivering the highest performance standards, BTI solutions minimize the noise figure introduced by DAS deployments, and support full instantaneous bandwidth required for multi-operator, neutral-host DAS designs.



#	E-UTRA Band Name	Downlink (MHz)	Uplink (MHz)	Mid-Power Node		High-Power Node		
				2W	5W	20W	40W	80W
1	IMT 2100	2110-2170	1920-1980	✓	✓	✓	✓	✓
2	PCS 1900	1930-1995	1850-1915	✓	✓	✓	✓	✓
3	DCS 1800	1805-1880	1710-1785	✓	✓	✓	✓	✓
4	AWS	2110-2180	1710-1780	✓	✓	✓	✓	✓
5	CELL 850	869-894	824-849	✓	✓	✓	✓	
7	2.6 GHz	2620-2690	2500-2570	✓	✓	✓	✓	
8	EGSM 900	925-960	880-915	✓	✓	✓	✓	
12	US 700-L	728-746	698-716	✓	✓	✓	✓	
13	US 700-U	746-757	776-787	✓	✓	✓	✓	
14	US SMR 700	758-775	788-805	✓	✓	✓	✓	
27	US SMR 800	851-869	806-824	✓	✓	✓	✓	
28	APAC 700	758-803	703-748	✓	✓	✓	✓	
40	TDD 2.3 GHz	2300-2400		✓	✓	✓	✓	
41	TDD 2.5 GHz	2496-2690		✓	✓	✓	✓	

ELEMENT SYSTEM MANAGEMENT (EMS)

The BTI EMS is a software-based, centralized management utility for all BTI products installed in a single Site, or across multiple Sites.

- Configuration Management
- Fault Management
- Performance Management
- Administration

Our EMS allows you to set the system operating parameters, retrieve/relay system alarms and status messages, and update the system firmware. mEMS provides an intuitive graphical user interface and supports SNMPv2 as the interface to a network operations center.



SERVICE & SUPPORT

We are here to help you seamlessly integrate an intelligent, efficient and flexible wireless solution. We offer design support, training, field support and technical support.

OEM

BTI has an established history as a technology partner to a broad range of top-tier Telecommunications OEMs. Since inception, BTI has provided turn-key engineering, design and manufacturing of component modules, or complete white-branded system assemblies used within OEM base station equipment or coverage enhancement products.

About Us: As global experts in wireless communication, BTI Wireless (BTI) continually delivers innovative solutions that allow mobile users worldwide to experience reliable coverage in the highest-profile, highest-capacity and hardest-to-cover public, private and government facilities. BTI prides itself on its technology expertise, designing and manufacturing products that include high-performance power amplifiers, DAS, small cells, and other RF subsystems. Founded in 1999, the privately held company is headquartered in Cypress, California with offices across the Americas and Asia-Pacific.

Wireless Coverage Around the World

Just a few of our global projects include:

Transportation

- **Airports:** Toronto Pearson International, Ottawa, Toronto City, Calgary, Adelaide, Hong Kong International Airport
- **Metro/Railways:** Hong Kong MTR, Canadian National Railway
- **Bridges:** Sydney Harbour Bridge

Corporate & Enterprise

- Toronto Stock Exchange, Place Ville Marie, Eighth Avenue Place, New York by Gehry, Petronas Towers, Cosco Tower; International Finance Centre; One Island East; The Centrium; Grand Millennium Plaza; Grand Central Plaza
- **Shopping Centers:** Sherway Gardens, Yorkdale Mall, Concorde Mills, Tsuen Wan Plaza, Emax CAS, V City, Macquarie, Miranda Fair, Top Ryde City

Stadiums & Arenas

- Air Canada Centre, Videotron Arena, Bell Centre, Rogers Centre, HiSense Arena, Baku Crystal Hall

Education

- Robarts Library, University of Toronto, Queen's University
- Singapore Management University

Healthcare

- Toronto General, Chum, Fiona Stanley, Hong Kong Baptist, Kelowna General

Hospitality

- **Convention Centers:** Anaheim, Melbourne
- **Hotels:** Westin Harbour Castle, Crowne Plaza, Four Seasons, Jumeirah Bilgah Beach, JW Marriott Hotel Absheron



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