

FlexWave™ High Power microBTS EDGE/AMR

IP-Based Multi-Carrier Microcell for Enhanced Coverage and Capacity



ADC's FlexWave™ microBTS is an IP-based solution designed to increase RF coverage and capacity while reducing up front deployment cost and on-going operating expense. The microBTS is perfect for numerous applications, including hot spots and hole fill at the edge of the network, business campuses, universities, stadiums, subways, tunnels, and rural communities.

The microBTS is part of ADC's complete FlexWave Base Station System, supporting EDGE and AMR, with one or two GSM transceivers in one unit. When combined with the FlexWave BSC and indoor InterReach® nanoBTS™, a wireless operator can provide cost-effective coverage and capacity for a wide variety of indoor, expanded venue, and outdoor applications.

Designed to stand up to the harshest environmental conditions and backed by ADC's high quality and support standards, the microBTS allows an operator to rapidly deploy in the most challenging areas of the network.

Features:

- 10 watt (+40 dBm) output for extended coverage
- Fully sealed, IP-67 environmental rating
- Passive cooling for virtually no maintenance
- Small form-factor for stealth deployment
- Simple to install and maintain
- Flexible and economic IP backhaul
- Low power consumption ideal for solar powered applications
- Optional solar power kit for remote applications
- Unique Network Listen™ function

Applications:

- Network hot spot and hole fill
- Business campus, hospitals and universities
- Public hot spots, retail and sports venues
- Convention centers and hotels
- Transportation corridors, bridges and tunnels
- Airports, trains and subways
- Rural communities, public parks and other isolated areas
- Oil platforms

SPEC SHEET



www.adc.com • +1-952-938-8080 • 1-800-366-3891



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Discreet Style. Rugged Design.

The FlexWave microBTS can be placed in virtually any location. The unit can be wall mounted (horizontal or vertical), pole mounted, pole wrapped or ceiling mounted.

With its small form-factor and IP-67 environmental rating, the FlexWave microBTS can be placed discreetly inside light poles, easily concealed in stealth enclosures, or sealed in a sub-terrain vault. The unit can even be painted to inconspicuously match its surroundings. (Figure 1)

The microBTS can withstand harsh weather and environmental conditions, including hot climates, wet regions, salt fog areas, and deployments with a heavy concentration of dust, dirt, brake dust, or other pollutants and contaminants. An optional solar shield is available for direct solar load applications.



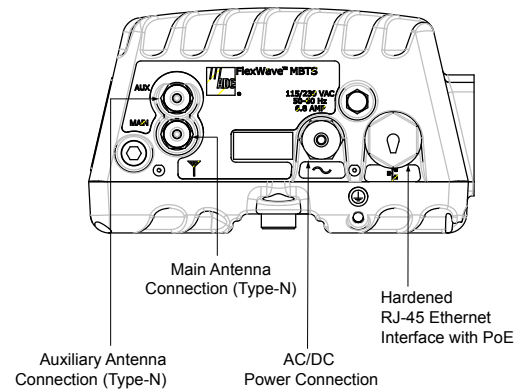
FlexWave microBTS
(Figure 1)

Simple to Install. Easy to Maintain.

The FlexWave microBTS has been designed for fast, easy deployment. It is a fully enclosed, completely integrated solution, with simple connections for power, antennas, and IP backhaul. Ten watt (+40 dBm) output power provides extended coverage and improved RF performance at cell edges.

The microBTS ships with a universal mounting bracket and a hardened, connectorized power cord. The auto-sensing power supply accepts any AC input from 90 to 265 VAC, and -48 VDC input can be supplied as an option.

The unit will typically be mounted very close to the base station antennas, requiring short, low-loss coax feeder connections. The hardened RJ-45 network drop cable can be ordered in several optional lengths, and carries Power-over-Ethernet to power the external IP-backhaul device. Best of all, with its integrated design and no cooling fans and filters, the Flexwave microBTS is virtually maintenance free.



Network Listen Function

A unique Network Listen function supplements the conventional RF planning process, allowing planners to evaluate difficult RF environments to optimize coverage and capacity.

Reduce Costs. Accelerate Revenue.

The FlexWave microBTS allows an operator to reduce costs while at the same time increasing and accelerating revenue. CapEx is drastically reduced through decreased site acquisition, zoning, construction and installation costs. OpEx is also significantly reduced through lower maintenance costs, as well as decreased monthly IP backhaul costs—a considerable savings versus leased T1/E1 alternatives.

At the same time, operators can unlock previously untapped revenue streams by deploying the microBTS in the most problematic areas. Furthermore, with its small form-factor, attractive styling and simple installation, zoning approval and time-to-market can be shortened dramatically, accelerating the start of new revenue.



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Specifications

TRANSMIT FREQUENCIES

GSM 850 Model:	869 to 894 MHz transmit / 824 to 849 MHz receive
GSM 900 Model:	925 to 960 MHz transmit / 880 to 915 MHz receive
GSM 1800 Model:	1805 to 1880 MHz transmit / 1710 to 1785 MHz receive
GSM 1900 Model:	1930 to 1990 MHz transmit / 1850 to 1910 MHz receive
Channel Spacing:	200 kHz
Transceivers:	2

Output Power to antenna port (per carrier)

GMSK (CS 1-4/MCS 1-4)	
850 and 900:	+40 dBm/TRX
1800 and 1900:	+40 dBm/TRX
8PSK (MCS 5-9)	
850 and 900:	+40 dBm/TRX
1800 and 1900:	+40 dBm/TRX
Receiver Sensitivity:	-108 dBm (voice) for 2.0% BER

CONNECTORS

Network Listen:	NMO
Antenna Connectors:	2 Female "N"
Ethernet (sealed):	RJ-45
AC/DC Power (sealed):	3-Pin

USER INTERFACES

Speech Format:	GSM FR and AFR AMR (TCH_AFS and TCH_AHS)
Encryption Support:	Air interface – A5/1, A5/2 Abis over IP Signaling and management – TLS/AES Abis over IP Voice – secure RTP/AES
Circuit switched data:	Single slot BS20 at up to 14.4 kb/s BS21-26, plus BS61, BS81
GPRS and EDGE support:	GPRS Coding schemes CS1-4 E-GPRS Modulation and coding schemes MCS1-9 Multi-slot class 10 Dynamic PDCH for optimizing mix of service for voice/data Link adaptation E-GPRS incremental redundancy and dynamic window size
Network Interface:	Auto-select 10/100 Ethernet with Power-over-Ethernet output to IP backhaul device, per IEEE 802.3af

PHYSICAL

Dimensions:	770 mm x 259 mm x 152 mm (30.30" x 10.20" x 6.00")
Volume:	26.6 Liters (0.94 cubic ft)
Weight:	18.2 kg (40 lbs)
Mounting:	Horizontal or Vertical Wall mount, pole mount, pole wrap, ceiling mount

POWER

AC	
Input Power Consumption:	250 VA typical
Input supply:	90-265 VAC 50-60 Hz
POE (Output):	15 watts, per IEEE 802.3af
DC	
Input Power Consumption:	135 watts 850 and 900 models 140 watts 1800 and 1900 models
Input supply:	42 to 56 VDC (-48 VDC nominal)
POE (Output):	15 watts, per IEEE 802.3af

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Specifications (continued)

ENVIRONMENTAL

Enclosure:	IP 67
Temperature:	-30° to 55° C ambient*, no solar load**
Humidity (non-condensing):	5% to 95%

STANDARDS FCC listed

* Open-air installations. Enclosed installations require airflow/venting to maintain 55° C.

** Solar shield accessory is available for high temperature deployments with solar load.

SPEC SHEET



Website: www.adc.com

From North America, Call Toll Free: 1-800-366-3891 • Outside of North America: +1-952-938-8080

Fax: +1-952-917-3237 • For a listing of ADC's global sales office locations, please refer to our website.

ADC Telecommunications, Inc., P.O. Box 1101, Minneapolis, Minnesota USA 55440-1101

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