

# WorldGSM™ BSC-20000i

## THE URBAN HIGH CAPACITY OPTIMISED BASE STATION CONTROLLER

- Compact Design
- Industry Standard Platform
- Optimized Power Consumption
- Easy to Install
- Integrated PCU
- Supports up to 2000 TRX



# WorldGSM™ BSC-20000i

## DETAILS

### COMPACT BSC FOR URBAN DEPLOYMENTS

WorldGSM™ Base station controller is designed to complement All-IP architecture GSM offering. BSC-20000i is developed specifically for world's lowest power consumption base stations.

WorldGSM™ BSC-20000i is an engineering breakthrough: A complete standalone base station controller in a compact box - easy to install at the periphery of any existing GSM network. It establishes and controls the radio base station connections to efficiently utilize the available radio spectrum and resources.

The state-of-art WorldGSM™ BSC-20000i features complete remote management. All operations & maintenance, including software updates, are performed through the WorldGSM™ remote OMC. Once installed, no radio network expertise is needed on site. It is built on a highly optimized hardware and software platform that's fully GSM compliant and integrates easily with any existing GSM network.

### EASILY SCALABLE

WorldGSM™ BSC/TRC offers a vastly improved capacity and is scalable up to 2000 TRX inclusive of very low form factor, footprint & power consumption. Higher traffic handling capacity can be directly correlated with the CAPEX, as the operator does not need to invest in more BSC's with increasing traffic growth/site requirement.

WorldGSM™ BSC-20000i is backward compatible with all previous BTS hardware releases including VNL RBTS and VBTS.

### ALL IP ARCHITECTURE

Faced with increased demand of bandwidth intensive services, IP solutions allows operators to remove expensive TDM trunks and SS7 multiplexing equipments for access network designs. Operators can use public or sub-public IP network as a mean to reduce their cost.

### HIGHLIGHTS

- **High Circuit and Packet Handling Capacity**
- **All IP Architecture**
- **Low Form Factor with Small Footprint**
- **Highly Scalable**  
*With Flexible BTS Configuration*
- **Compact and Easy to Install**
- **Remote Management**  
*Operation, Maintenance and Updates through the WorldGSM™ OMC*
- **3GPP Rel 5 compliant, Rel 8 for AoIP**
- **Carrier-Grade Availability**
- **Deployed Together with any 3GPP Compliant MSC**

### KEY SPECIFICATIONS

- **Frequency Bands:** GSM 850, 900, 1800, 1900 MHz
- **Capacity:** Up to 2000 TRX
- **Dimensions with Enclosure:**  
*(H x W x D in mm) 573 x 448.8 x 527.2*
- **Weight:** 70 kg
- **Average Power Consumption:** Less than 3 KW

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## DETAILS

### EASY INTEGRATION

WorldGSM™ BSC-20000i provides channel allocation functions, GPRS/EGPRS management and inbuilt media processing functionality, henceforth making integration with All IP Core Network. Being an all IP based system, it can be interoperable by using standard IP based networking equipments. Again, the integration is simplified by multiple folds.

### ENHANCED SOFTWARE

The WorldGSM™ BSC-20000i can take mobile handover/cell reselection on the basis of inbuilt software algorithms. It supports variant BTS types radiating in multiple frequency 850/900/1800/1900 MHz bands. As a backhaul capital expenditure saving feature, the BSC supports local switching.

The software has been designed to maintain highest reliability, ensuring minimum service outage. The operator can remotely manage BSC hardware and associated network elements from a central location.

### COMPACT

The WorldGSM™ BSC-20000i provides a compact hardware architecture where all configurations are created within a single cabinet. The controller is based on the industry standard ATCA hardware platform characterized by its flexibility, low cost of ownership, and excellent in-service performance.

All important network features are available to optimize radio coverage and backhaul capacity, thus improving network quality.

### RELIABLE

The WorldGSM™ BSC-20000i is an extremely robust solution with carrier grade in-service performance. All software upgrades can be made without disturbing ongoing traffic.

### WORLDGSM™ BENEFITS

- **Reduce OPEX and Dramatically low CAPEX**  
*Lowest power consumption, Self sustainable, Solar viable, Capacity on demand, Simple to deploy*
- **Flexible Coverage and Capacity Solutions**  
*Wide product range to suit rural and urban capacity requirements  
Capacity distribution for flexible point of presence*
- **Fully Standard Compliant**  
*Complies to 3GPP and IEEE specifications*
- **Compact and Highly Integrated**  
*Smaller footprints, Faster time to market, Fully managed components*

# WorldGSM™ BSC-20000i

## SPECIFICATIONS

SYSTEM	
Type	Indoor
Power Supplies	Dual, Redundant, Hot-swappable
Processor Redundancy	N + 1
Processor HA Scheme	Active/Hot Standby
FEATURES	
3GPP Compliance	Release 5, Release 8 for AoIP
Physical Interface Support	Ethernet and Option of E1/STM1/STM4
Interface to MSC	TDM or IP
Signaling	SS7 or SIGTRAN
Interface to BTS	Abis over IP
Integrated Transcoding at BSC	Yes
Voice Codecs	EFR/FR/AMR-HR/AMR-FR
Data	GPRS(CS1 - CS4), EGPRS (MCS1 - MCS9)
Support for Local Switching	Yes
CAPACITY	
TRX Support	500 to 2000
TRAU Capacity	Up to 24000 channels
INTERFACE OPTIONS	
Ethernet	Up to 8 x 1G, 2 x 10G
TDM	Up to 64 E1, 32 STM1, 8 STM4
DIMENSIONS & POWER	
Dimensions (HxWxD in mm)	573 x 448.8 x 527.2
Weight	Fully Loaded Approx. 70 kg
Mount	19" Industrial Rack Mountable
Power Consumption	Less than 3 kW
Power Supply Options	-40 VDC to -72 VDC

# WorldGSM™ BSC-20000i

## SPECIFICATIONS

REGULATORY COMPLIANCES	
Storage	ETS 300 019-2-1, Class 1.2
Transportation	ETS 300 019-2-2, Class 2.3
Operating Conditions	ETS 300 019-2-3, Class 3.1
Temperature Range	-5° to +55° C (23° to 131° F)
Restriction of Hazardous Substances	EU2002/95/EC (RoHS)
QM Classification	QM333 Class B
EMI	EN-300-386 Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Telecommunication Network Equipment; ElectroMagnetic Compatibility (EMC) Requirements, Telecommunication Equipment Room (Attended) FCC 47 CFR Part 15 Subpart B (US), Class A
Safety	Compliance to UL/CSA 60950-1, EN 60950-1 and IEC 60950-1 CB Scheme. Marked with U.S. NRTL, Canadian Safety and CE Mark.

## ABOUT VNL

VNL makes WorldGSM™, a complete GSM solution that helps mobile operators reach rural markets profitably. It is completely solar powered and optimized for rural markets. For the first time, mobile operators can build profitable businesses serving low-ARPU users in rural and remote communities.

**The microtelecom revolution is ready to begin and VNL is leading the charge.**

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## CORPORATE HEADQUARTERS

VNL, 21-B, Sector 18, Udyog Vihar  
Gurgaon 122 015, Haryana, INDIA  
Tel +91 124 309 2000  
[www.vnl.in](http://www.vnl.in)

