

# WorldGSM™ RBTS

THE WORLD'S MOST ENERGY  
EFFICIENT GSM BASE STATION  
FOR MAXIMISING COVERAGE  
IN RURAL NETWORKS

- 65 Watts per TRX
- Near Zero OPEX Rural Coverage
- Solar Powered, Rural Optimised
- No Air Conditioning Required
- Easy to Install & Deploy



# WorldGSM™ RBTS

## DETAILS

### WORLD'S MOST ENERGY EFFICIENT BTS FOR MAXIMISING COVERAGE IN RURAL AREAS

The WorldGSM™ RBTS is a complete rural communications system that can be entirely solar powered, requiring only 65 watts of power per TRX (depending on configuration). It bolts on to a WorldGSM™ Rural Site and starts transmitting in minutes. The WorldGSM™ RBTS supports all GSM band options (850, 900, 1800 and 1900 MHz).

Telecom equipment for rural and remote areas must be able to cope with demanding weather conditions, lack of grid power, and limited or no access to skilled engineers.

WorldGSM™ RBTS is designed to operate outdoors in harsh environments. There's no need for a shelter, air conditioning, grid power, generator or diesel fuel. It can be installed and maintained by local workers.

**Fully-functional GSM has never been this simple.**

WorldGSM™ RBTS, it is finally possible for mobile operators to reach rural markets profitably.

### WORLDGSM™ BENEFITS

- **Extends Existing GSM Networks to Rural Areas**  
*Low power, compact equipment optimized to overcome all challenges operators face in deploying rural networks*
- **Near Zero OPEX and Dramatically Lower CAPEX**  
*Makes telecom services profitable even at very low ARPU levels*
- **The World's First Truly Sustainable GSM Network**  
*Significantly decreases operating costs by replacing grid power and diesel generators with solar energy*
- **Provides Macro Coverage**
- **Flexible Deployment Configurations**  
*Coverage on demand*
- **Up to 72 Hrs of Battery Autonomy**

### HIGHLIGHTS

- **Lowest Power Consumption**
- **Flexible Configurations**  
*Capacity on Demand*  
*Coverage on Demand*
- **3GPP & ETSI Compliant**
- **Designed Specifically for Rural Markets**  
*Auto Configuration - Plug & Play*  
*Near Zero Maintenance*
- **Small Form Factor**
- **No Moving Parts**
- **Industry Standard Broadband**

# WorldGSM™ RBTS

## SPECIFICATIONS

SYSTEM	
Type	Outdoor
Mounting	Pole, Wall or Tower
Frequency Options	GSM 850/900/1800/1900 MHz
Number of TRX	2
RF Output at Antenna Port	+40 dBm/10 Watts
Receiver Sensitivity (EFR/TU50 excluding diversity)	-110 dBm
Antenna Diversity Support	Yes

BACKHAUL TRANSMISSION	
1.5/2.4/5.8 GHz Backhaul Transmission	Separate Unit (TDN)

FEATURES	
3GPP Compliance	Release 5
GSM Service	Voice, SMS, GPRS
Power System Monitoring	Yes
Broadband Option	Yes

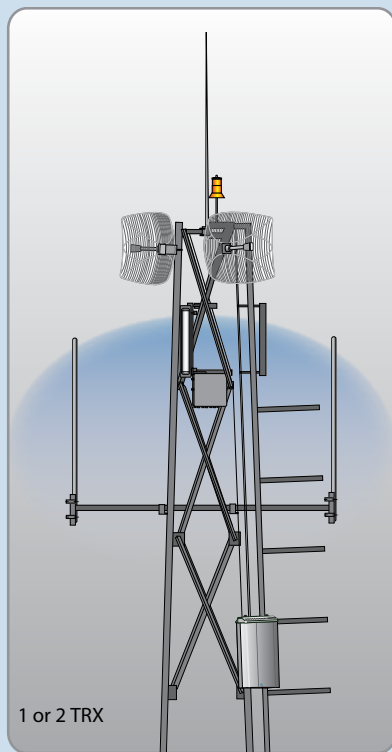
CAPACITY	
Voice Timeslots	14 /15
Ethernet Interfaces	1

DIMENSIONS, WEIGHT & POWER	
Dimensions (WxHxD in mm)	420 x 710 x 235
Weight (Kg)	22
Power Supply	+24 V (DC)
Power Consumption – BTS only (Watts)	130

ENVIRONMENT	
Water and Dust Protection	IP 65
Storage	ETS 300 019-1-1, Class 1.1
Transportation	ETS 300 019-1-2, Class 2.3
Operating Conditions	ETS 300 019-1-4, Class 4.2H
Operating Temperature Range	-5° C to +55 °C

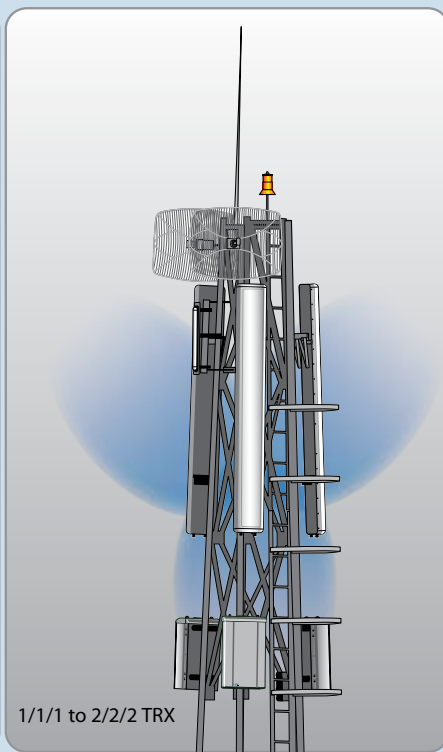
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## APPLICATION NOTES



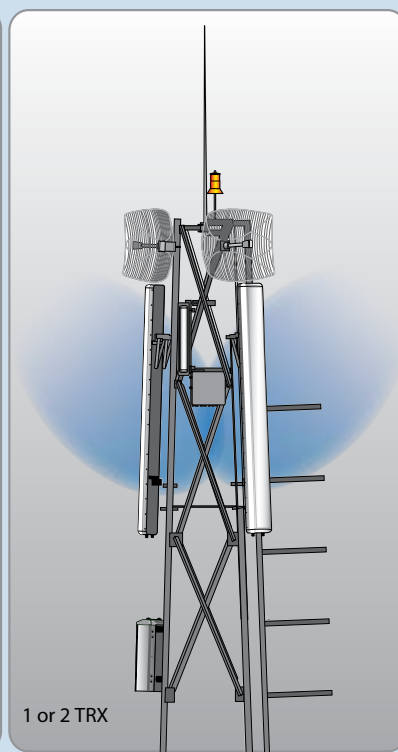
### APPLICATION 1

Rural Site - Omni Antennas



### APPLICATION 2

Rural Site - Panel Antennas



### APPLICATION 3\*

Road Site - Panel Antennas

Graphical representation. Top section of Rural Site tower depicted.

\* Requires additional power splitter.

## 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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VNL-PDS-RBTS | October 2010  
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