

# WorldGSM™ Micro1-NIB (for Mobile Operators)

A compact, small capacity, Integrated MSC, BSC and Radio in a Box for Mobile Operators

## OVERVIEW

The WorldGSM™ Micro1-NIB is a small capacity, 3GPP compliant, integrated switch and radio solution available in all standard GSM frequency bands -850/900/1800/1900 for Mobile operators, who can rapidly expand mobile services in enterprises – remote enterprises like mines, off-shore oil fields, and urban enterprises like SMBs, corporate parks etc.

This box enables Mobile operators rapidly extend their services – voice, data and messaging- in various market segments, where **local services needs to be maintained** irrespective of backhaul availability like

- **Remote Enterprises** like mines, offshore oil fields, usually deprived of mobile services due to accessibility challenge
- **Enterprises** like SMBs, Hospitals requiring dedicated coverage and capacity
- **Rural and/or Remote Communities** where stable backhaul link is an issue.
- **Public Safety Agencies** like for emergency response, where time to provide services with minimum infrastructure dependencies is the key

The box is packaged with accessories necessary for required for simple Outdoor site deployment, making it a truly DIY (Do-It-Yourself) Site deployment.

NIB has a simplified web based GUI for O&M. For deployments involving multiple NIB units, VNL Cloud OMC is deployed for O&M.

## BENEFITS

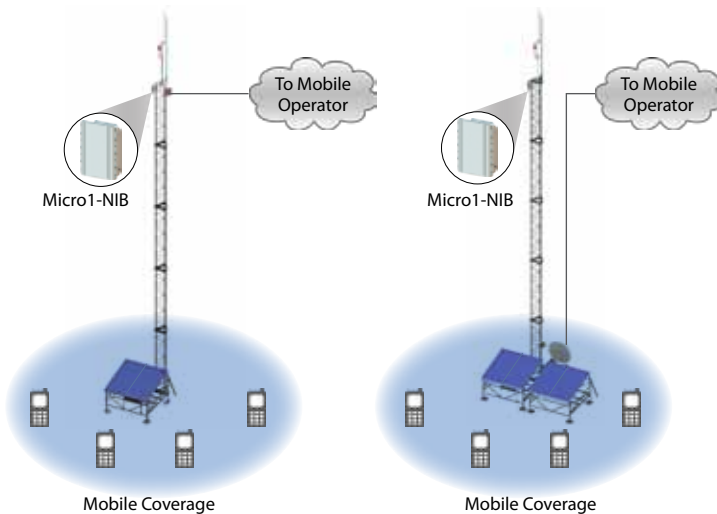
- **Local voice services for registered users can continue even in case of backhaul outage**
- **Overcome challenges in remote deployments and help to provide mobile coverage to remote areas quickly**
- **Expand rapidly and scale due to simple infrastructure requirements for complete site deployment**
- **Near zero opex (as site can operate on 100% solar power and near zero maintenance cost), makes telecom services profitable even at low ARPU levels**
- **Coverage and capacity on demand, for both indoor and outdoor deployments**



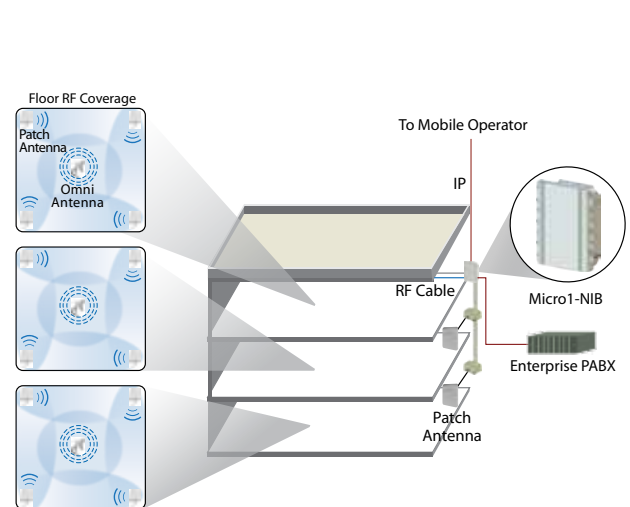
Micro1-NIB

## HIGHLIGHTS

- **Supports AMR, EGPRS, Handovers with Best in Class Power Consumption – Reduced Opex**
- **Compact Form Factor – Easy to transport and Install**
- **3GPP Standards Compliant – Better Performance and Interoperability**
- **High Service Availability - Local Services can Continue in Case of Backhaul Disconnect**
- **SON (Self Organizing Networks) Support, DIY (Do-It-Yourself) Installation, Operation and Maintenance**



Typical Micro1-NIB Outdoor Site with IP radio or VSAT backhaul towards Mobile operator



Typical Micro1-NIB Indoor deployment with a few indoor patch, omni antennas and IP backhaul towards Mobile operator

Related Products: Deployed with Cloud OMC; Other variants: Micro2-NIB

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## SPECIFICATIONS

<b>SWaP ( Size, Weight and Power)</b>	
Dimensions (HxWxD)	350 x 275 x 107 mm
Weight / Volume	5 Kg Approx / 2.5L
Power Supply	48V DC
Power Consumption	60W
<b>SYSTEM</b>	
Type	Indoor, Outdoor
Mounting	Pole, Wall
Frequency Band	GSM 850 / 900 / 1800/ 1900
Functionality	Integrated GSM 3GPP Network Elements – 1 TRX BTS, BSC, PCU, MSC, and SIP/RTP
RF Power Output at Antenna Port	+33dbm (2W)
Receiver Sensitivity	-109 dbm
<b>CAPACITY</b>	
Subscriber ( 2% GOS, 25mE traffic per subscriber, 14 AMR HR )	328
BHCA	1000
Concurrent Voice Calls	7 with FR, 14 with AMR-HR
EGPRS Timeslots	Configurable ( upto 7 )
<b>FEATURES</b>	
User Services	GSM Voice, SMS, GPRS, EGPRS, Cell Broadcast
Supplementary Services	Call Hold/Waiting/Forwarding/Multi-Party Call/DTMF/USSD
Handover	Yes
3GPP Compliance	Release 5
CAMEL Phase	Phase 2,3
Voice Codec	GSM: AMR, EFR, FR :Towards MSC/VoIP Switch: G.711, G.729, iLBC
GPRS, EGPRS	CS 1-4, MCS1-9
Lawful Interception	Yes
Clock	GPS, IEEE1588v2
SON	Yes*
<b>PHYSICAL INTERFACES</b>	
Ethernet Port	1 (RJ45, Fast Ethernet)
Power Input	48V DC
Network Scan Antenna Port	SMA-Female
RF Antenna Port	N-Female
<b>INTERFACES</b>	
HLR/SMSC	MAP over SIGTRAN
SCF	CAP over SIGTRAN
SGSN	Gb over IP
MSC/GMSC	MAP over SIGTRAN, SIP,RTP
BILLING	FTP
O&M ( To VNL Cloud OMC )	IP
PBX/VOIP Switch ( Optional )	SIP, RTP
<b>ENVIRONMENT</b>	
Water and Dust Protection	IP 65
Storage	ETS 300 019-1-1, Class 1.1
Transportation	ETS 300 019-1-2, Class 2.2
Operating Conditions	ETS 300 019-1-3, Class 3.3 ETS 300 019-1-4, Class 4.1
Operating Temperature Range	-20° C to +55 °C / -30° C to +55 °C ( For Specific Requirement)

\* Roadmap

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