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SG - RANTM

SHARED GSM RADIO ACCESS NETWORK



CDOT SG-RAN™ SYSTEM

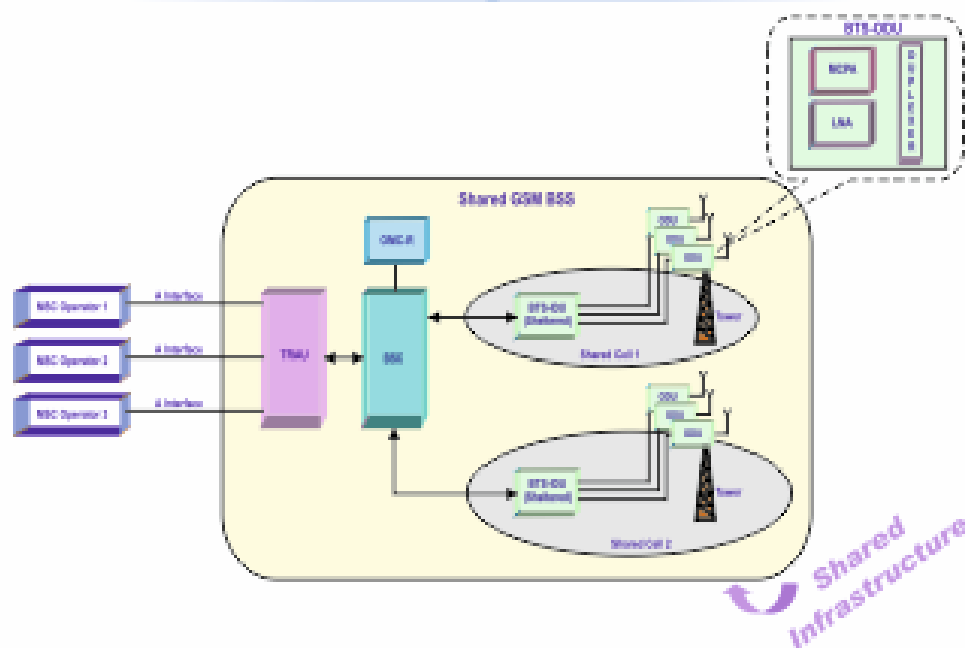
CDOT Shared GSM RAN enables sharing of Active Infrastructure by Multiple Mobile Operators. This helps the operators in reducing their CAPEX and OPEX. The power efficient design of the SG-RAN makes it ideally suited for rural environment.

The SG-RAN provides the BSS functionality in the GSM network

SG-RAN™ HIGHLIGHTS

- + Provides BSS functionality in GSM Network
- + Consists of BSC, BTS, TRAU and OMC-R
- + Provides capability of Active Infrastructure Sharing by Multiple Operators
- + Provides reduced power consumption by Tower Mounting the Power Amplifier
- + Ideally suited for Rural, sub-urban regions due to rugged, power efficient and cost efficient design
- + Completely indigenenous development

Component of SG-RAN™



SG-RAN™ FEATURES

- + Operation in GSM 900 and DCS 1800 band
- + Framework of 3GPP, Rel.99 specifications for GSM
- + 3 sectors of 6 TRX each per BTS (6x6x6)
- + 128 TRX per BSC, scalable upto 512 TRX
- + Shared Active infrastructure for upto 3 operators
- + Secure OMC-R interface for each operator
- + Software upgradable to GPRS/EDGE
- + BTS Housing: IDU + ODU
 - ODU : Tower Mounted, less power consumption
 - IDU: TRXs in Ruggedized Shelter,
 - No Airconditioners, small footprint

SG-RAN™ BSC

Features :

- + Provision for sharing of active infrastructure between operators
- + Independent, secure management interface for each operator
- + Cost-effective scalable solution to efficiently meet growing capacity and coverage needs
- + Seamless interoperability ensured by complying to 3GPP GSM specifications
- + Software architecture based on the latest object-oriented design technology
- + Modular architecture
- + Standard E1 trunk connections Star or daisy chain connection to BTS
- + Latest quad core processor with Redundant and hot-swappable components
- + 19" Standard Rack

Technical Specifications:

- + Capacity: 128 TRX
- + Maximum Operators: 3
- + GSM Band Supported: GSM 900 and DCS1800
- + Maximum BTS : 22
- + No. of E1 : 54
- + Interfaces : BTS and MSC : E1
OMC-R : Ethernet
- + Power Supply : 230VAC, 50Hz
- + Mechanical: 19" rack, 14U height



SG-RAN™ BTS IDU

Features :

- + Compact design
- + Power efficient design
- + Modular design, scalable configuration
- + Software upgradable to GPRS/EDGE
- + Works in non-AC environment



Technical Specifications:

- + Frequency : 890-915 (Rec.) & 935-960 (Trans.) MHz,
1710-1785 (Rec.) & 1805-1880 (Trans.) MHz
- + Capacity : upto 18 TRX per BTS
- + Multi-sector, multi-operator configuration
- + Receiver Diversity implemented
- + Standard E1 interface to BSC
- + Daisy Chain or Star configuration
- + Power Supply : 230VAC
- + Mechanical : 19" rack, 14U height

SG-RAN™ BTS ODU

Features :

- + Tower Mounted Outdoor Unit (ODU) duplex operation
- + Works in GSM 900 and DCS1800 bands
- + Contains MCPA and LNA
- + Supports antenna diversity
- + Lightning protected
- + Supports both AC & DC power input



Technical Specifications:

- + Frequency : 890-915 (Rec.) & 935-960 (Trans.) MHz, 1710-1785 (Rec.) & 1805-1880 (Trans.) MHz
- + Multi-Carrier operation, up to 8 carriers per ODU
- + Output power : 24W
- + LNA gain : 30dB
- + Receiver sensitivity : -110dBm
- + Power Supply : 230VAC (+48V DC optional)
- + Mechanical: 500mm(H)x400mm(W)x200mm(D)

SG-RAN™ TRAU Specifications

Features :

- + Support of FR, EFR,HR and AMR-NB with dynamic Resource Pooling
- + AMR-FR (all 8 codecs) AMR-HR (all 8 codecs) as defined by 3GPP. Dynamic shifting from one codec set to another codec set for Voice Quality/Capacity Improvement.
- + Comfort noise evaluation and insertion
- + Down-link DTX for Speech
- + Dynamic Allocation of Half Rate Channels

SG-RAN™ OMC-R

Features :

- + Configuration management
- + Performance management
- + Security management
- + Fault management
- + GUI based management for above mentioned functionalities.
- + Browser-based user terminal support(LOI/ROI)



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