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DMR-Stargate Mk-II 4.9GHz-5.8GHz 300Mbps Point to Multi-Point System

The DMR-StarGate Mk-II point-to-multipoint radio is a hi-power, linear 2x2 MIMO radio with enhanced receiver performance. The DMR-StarGate point-to-multipoint radio system utilizes the advantages of OFDM modulation and MIMO technology along with a proprietary Time Division Multiple Access (TDMA) protocol to provide exceptional range and speed (100+Mbps real TCP) performance.

Further performance enhancements are achieved with optional GPS Synchronization, providing precision synchronization and timing to eliminate co-location interference and enhance frequency re-use capability

The DMR-StarGate TDMA protocol allows each client to send and receive data using a pre-designated time slot scheduled by an intelligent AP controller.

This "time slot" method of provisioning clients eliminates hidden node collisions and maximizes airtime efficiency, providing magnitudes of performance improvements in latency, throughput and scalability when compared with other outdoor systems in its class.

FEATURES

- Frequency range 4.9GHz – 5.8GHz
- Integrated Dual Polarized Sector Antenna (Base Station): 15dBi - 120°
- Integrated Dual Polarized Flat Panel (Corporate Subscriber Unit): 25dBi - 11°
- Integrated Dual Polarized Flat Panel (Residential Subscriber Unit): 15dBi - 20°
- Fixed P2MP solution that can deliver 300 Mbps air-rate per sector (150+Mbps layer 2 TCP)
- Static Routing
- High spectral efficiency (7.5bits/Hz)
- Long Range (30Km+)
- Intelligent QoS – priority given to voice/video for seamless access
- Traffic Shaping – Up and down stream traffic shaping per client
- Scalability – High capacity and can support more than 120 clients per sector
- Advanced Time Division Multiple Access Protocol (TDMA)– Reduced latency & improved throughput
- GPS Synchronization (BSS4958G) – Synchronized transmission eliminates colocation interference
- Channel Re-use & Frequency reuse for improved scalability with BSS2327G
- Dual Ethernet Ports (BSS4958G) providing power to a second device using PoE.
- Robust air i/face based on MIMO & OFDM techn provides high capacity with NLOS performance
- Highly-secure remote management via SSL, SSH and SNMPv1 and SNMPv3[2]
- AirContol NMS forms part of standard equipment
- Provides AES encryption technology,
- MAC, Ethertype and IP address packet filtering for granular network security.
- Built in real-time spectrum analyzer (standard with all equipment)
- Integrated Lightning Protection
- Very Low Power Consumption: Base Station 8W per sector, Subscriber Station 6.5W
- Designed for rural African conditions with low infrastructure level and limited power availability

APPLICATIONS

Connecting Communities	Cost-effective access within communities, municipalities and educational institutions specifically in rural low-density areas
Security & Surveillance	Wireless connectivity for High Definition cameras in applications that require high bandwidth and low jitter.
Last Mile Access	Broadband services for residential, business and public enterprise users, with secure access differentiation as well as NLOS connectivity in diverse environments such as medium-density urban areas or foliage in rural areas.
Enterprise Networks	Leased line replacement for cost-effective connectivity, providing services between nodes in enterprises, campuses and remote sites

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DMR-StarGate Mk-II Model 4958 Series

Configuration			
BSS3437 P/N 4958-05320	Base Station 4.9-5.8 GHz 120° 11dBi Integrated Antenna		
BSS3437G P/N 4958-05330	Base Station 4.9-5.8 GHz 120° 11dBi Integrated Antenna with GPS Synchronization		
CSU3437 P/N 4958-05310	Corporate Subscriber Unit 4.9-5.8 GHz 19dBi Integrated Antenna		
RSU 2327 P/N 4958-05300	Residential Subscriber Unit 4.9-5.8 GHz 15dBi Integrated Antenna		
Capacity			
Base Station:	150 Mbps Full Duplex (Layer-2 TCP) per Sector		
Subscriber:	150 Mbps Full Duplex (Layer-2 TCP) per TDMA time-slot		
Interfaces			
Wired Ethernet	1x10/100 BASE-TX (Cat 5, RJ-45) Ethernet	2x10/100 BASE-TX (Cat 5, RJ-45) Ethernet (BSS2327G)	
Radio Specifications			
Number of CSUs per BSS	Up to 120		
Range	Up to 30 Km		
Frequency Bands	4.9GHz to 5.8GHz Granularity: 5MHz with - 2.0MHz offset		
Channel Bandwidths	5MHz, 10MHz, 20MHz & 40MHz		
Modulation	2x2 MIMO- OFDM (BPSK/QPSK/16QAM/64-QAM) with Adaptive Modulation & Coding		
Duplex and Access Technology			
Encryption	AES128		
Radio Performance (Air Interface)			
Modulation & Coding Schemes	MCS8-MCS10 (30-90 Mbps)	MCS11-MCS13 (120-240Mbps)	MCS14-MCS15 (270Mbps-300Mbps)
TX Power			
RX Sensitivity (1x10^{-6} BER)			-75dBm to -78dBm
Networking			
QoS	Intelligent QoS – priority given to voice/video for seamless access		
Routing	Static Routing		
Management			
BSS & SSU Management	Web based management and/or AirContol NMS		
Protocol	SSH, HTTPS, SNMPv1[1], SNMPv3[2]		
Spectrum Analyser	Advanced ~~Spectrum~~ Analyzer Functionality: Waterfall, Waveform, and Real-time spectral views		
Power			
Power Feed	All power provided by Power over Ethernet units (PoE)		
Power consumption	BSS4958: 8W CSU4958: 6.5W RSU4958: 6.5W		
Environmental			
Operating Temperature Range	-35°C to +70°C		
Storage Temperature Range	-55°C to +85°C		
Operating Humidity			
Shock & Vibration	ETSI 300-019-1.4		
Mechanical			
Construction	Sealed die-cast aluminum housings with Gore® Vent equalizer		
Dimensions (Incl. Antenna)	BSS2327:140(w)x700(h)x120(d), CSU2327:400(w)x400(h)x100(d), RSU2327:315(w)x315(h)x110(d)		
Weight (Incl. Antenna)			
Standard Compliance			
FCC	FCC part 90Y, 47CFR Class B, Part15, Sub-part B		
ETSI/ITU	EN302 502, EN 301 893, EN302 326-2 v1.2.2, EN300 386, EN 301 489-1, EN 301-489-4		
Regulatory	ICASA TA-2007/1243		

Notes:

1) SNMPv1 Read only

2) SNMPv3 to be released Q1 2012