SAF

FreeMile 5.8 MIMO™

100Mbps Full Duplex Licence Free →

SAF FreeMile 5.8 MIMO all outdoor system is a Licence Free **5.8GHz radio** for Ethernet packet data transmission. Making use of ground breaking 2x2 MIMO technology, the SAF FreeMile 5.8 MIMO delivers real Ethernet throughput capability of up to 200Mbps (100Mbps full-duplex) combined with high packets-per-second performance.
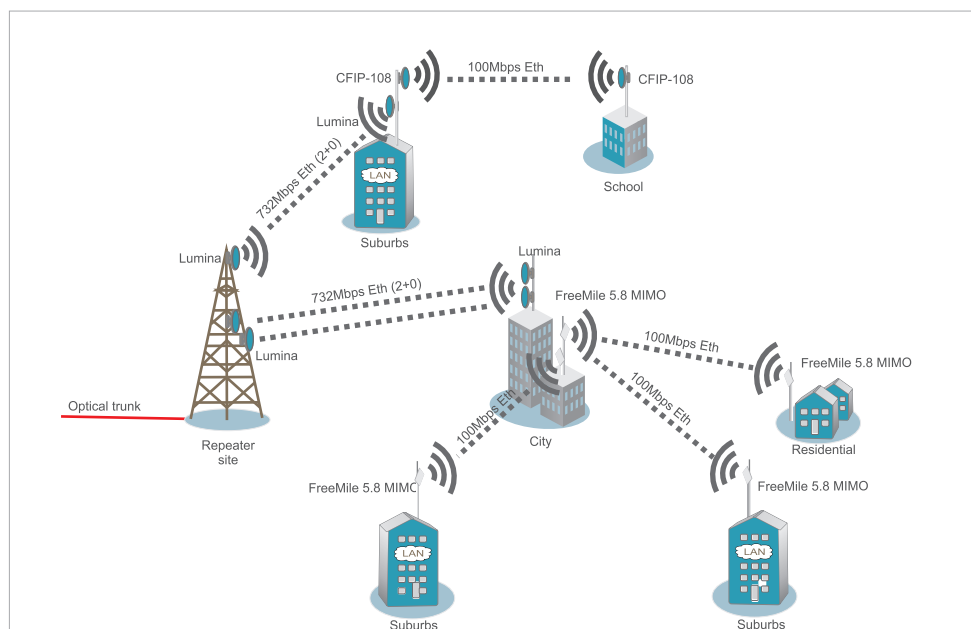
This product enables carrier-class point-to-point capability, ideal for dedicated access or backhaul applications (including VoIP or other small packet applications). SAF FreeMile 5.8 MIMO presents leading proprietary software mechanisms to set the utmost standard in spectral efficiency.

SAF FreeMile 5.8 MIMO product features an integrated dual-polarized antenna (or 2 N-type connectors for the 5-N product). Product showcases an array of advanced software mechanisms that provide optimal point-to-point connectivity for high throughput, long distance links. SAF's proprietary FreeMile 5.8 MIMO PTP mechanisms utilize techniques such as Dynamic Time Division Duplexing (TDD) to dynamically allocate bandwidth in the direction needed, thus increasing link efficiency and greatly decreasing the impact that distance has on throughput of the link.

PRODUCT HIGHLIGHTS

- 5 GHz PTP bridge, ideal for last mile access, private networks
- Flexible center channel and channel width capability (20/40 MHz) for throughput optimization
- True TCP throughput up to 100Mbps full duplex (200Mbps aggregated)
- High packet-per-second (PPS) rate ideal for VoIP backhaul applications
- Low packet latency (2ms)
- ARQ (Selective Repeat) for very high throughput
- Dynamic TDD for allocating bandwidth in real-time to the direction needed
- Integrated dual-polarized antenna (or 2 N-type connectors with external antenna)
- Passive Power over Ethernet built-in for single cable installation
- Built-in high class surge protection according to IEC 61000
- Advanced security technologies

LAST MILE ACCESS

GENERAL

Model	FreeMile-5.8-A23	FreeMile-5.8-N
Frequency range (Ghz)	5GHz (5.180 - 5.825)	
Duplex scheme	Time Division Duplexing(TDD)	
Channel bandwidth	20 / 40 MHz	
Modulation	BPSK / QPSK / 16QAM/ 64QAM	
Capacity range	100 Mbps Ethernet	
Wireless technology	2x2 MIMO	
Operating mode	Point to point	
Max. transmit power	2 chains x 25dBm	
Configuration	1+0	
Traffic Interfaces	10/100 BaseT	
Tx Power, dBm	+25	
RSL Threshold at BER 10^{-6}	From -66dBm up to -93dBm	
Error correction	FEC, Selective ARQ	
ACM (Adaptive Coding & Modulation)	Hitless	
ATPC	Yes	
DFS	Yes	
Data encryption	Hardware based AES	

ANTENNA

Type	Integrated directional panel	
Polarization	Dual (Vertical & Horizontal)	
Gain V/Hi	23/23 dB	External antenna
3dB Beam-width V/H	8/8 degrees	
Antenna size, mm	385x375x40	

PORTS

Ethernet with power over Ethernet cable	RJ-45 (data traffic, management port, power)	
Antenna connectors	integrated	2x N-Type

MANAGEMENT FEATURES

System configuration interface	User friendly web GUI, SSH CLI, SNMP, v1/2c/3 with traps, centralized Remote Control Management System
Management	RJ-45 (in-band, optional VLAN tag.)
RSSI	LED on FODU, WEB management

ETHERNET

Real data (TCP) throughput	200Mbps Tx+Rx aggregated (100Mbps full-duplex)
Max packets per second	72 000
Packet latency	2 ms (64 bytes packet)

MECHANICAL & ELECTRICAL

Temperature range	-33°C to +55°C	
Ingress protection	IP67	
Dimensions HxWxD, mm / weight, kg	470 x 320 x 390 / 3	362 x 287 x 249 / 2.3
Surge Arrestor	Built-in surge arrestor for Power and Data lines	
Input DC voltage	23 – 48 V DC	
Power consumption	15W	

Go FreeMile™

EU
Produced in Europe

www.saf-freemile.com
www.saftehnika.com
www.saf-lastmile.com