



## Customized Microwave Solutions

SAF Tehnika is among the world's top microwave carrier-class point-to-point radio manufacturers, publicly traded in NASDAQ, ISO certified, with R & D and complete production in Europe, distributed in 99 countries worldwide, covering spectrum 1.4-38GHz and licence-free 17 and 24GHz with capacities up to 720Mbps full-duplex.



Abruzzo region, Italy



**Customer:** Micso s.r.l  
**Industry:** WISP  
**Location:** Abruzzo region, Italy  
**Solution:** 17GHz SAF FreeMile (100Mbps) microwave radio system

“We kept an eye on SAF Tehnika for months until they came up with FreeMile 17 GHz radios which were exactly what we were waiting for.”

**Normando Marcolongo**  
Network Engineer  
Micso s.r.l.

### THE CUSTOMER

Micso s.r.l. is a nation-wide wireless ISP and system integrator. Their growing wireless network has become one of the largest in Italy with more than 4000 customers located in half of the Italian regions.

### CHALLENGE

Micso s.r.l. have more than 300 unlicensed spectrum wireless links in their network. They had a problem to keep in shape a couple of high bandwidth backhaul links in the crowded 5.4GHz band. Micso tried different technologies and topologies but the limitations of the 802.11 family were fairly evident at a certain point. Unfortunately, licensed spectrum was not an option in their case.

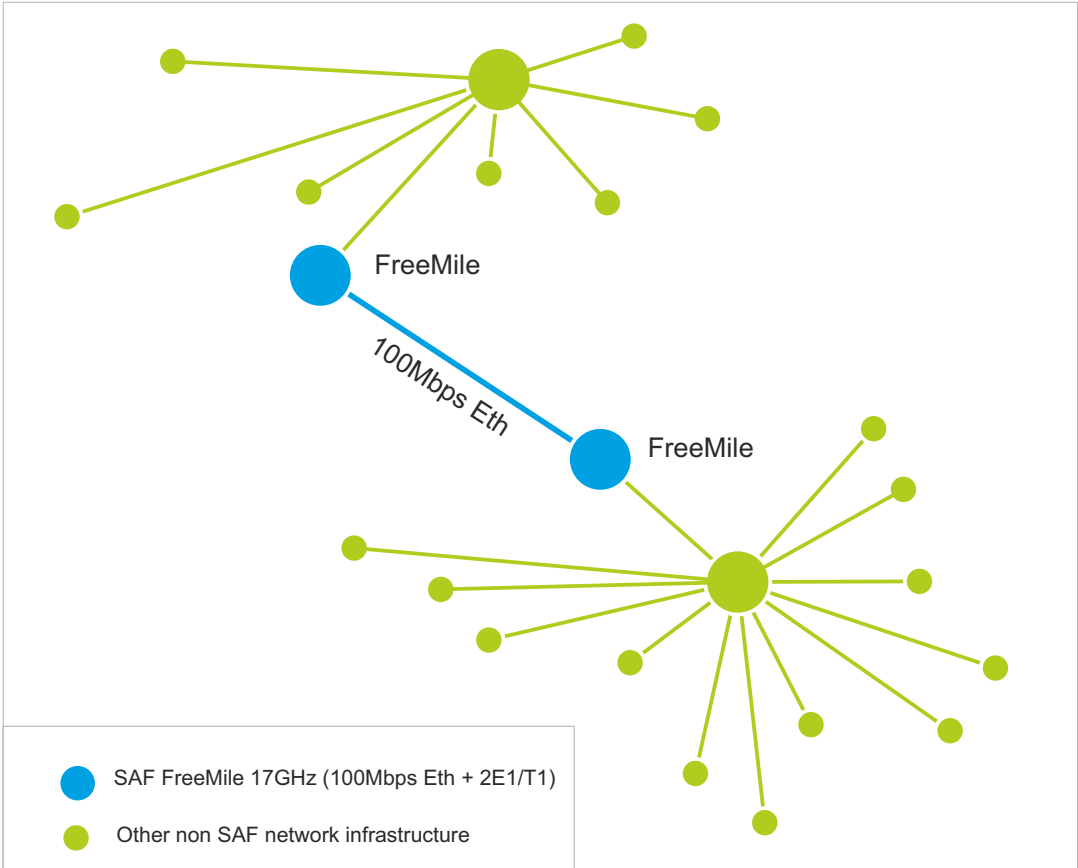


SAF FreeMile 17

### SOLUTION

Micso chose SAF FreeMile microwave radio system because it provided 100Mbps Full Duplex capacity and the best total cost of ownership comparing to other vendor products. Micso was fully satisfied with the quality of FreeMile radio links and the cooperative support of SAF Tehnika team. Among others Micso liked the performance and the simplicity of FreeMile radio link, which can be easily assembled and configured in a matter of minutes. And the final adjustments were easy to perform because of the simple construction of antenna and radio mounting. Now with the use of SAF FreeMile Micso has 100% packet transfer and hitless adaptive modulation.

**Micso topology utilizing SAF links**



**Technical Specification**

SAF FreeMile 17	
Frequency Band	17 GHz
Capacity	up to 100Mbps
Channel bandwidth	10 / 30 Mhz
Modulation	QPSK / 16QAM / 32QAM / 64QAM
E1	2xE1/T1 (RJ-45)
Interfaces	RJ-45 (electrical)
Max Ethernet frame size	1916 bytes
Tx Power	-25 to -12dBm

