



# Microwave Radio Experts



SAF Tehnika is among the world's top microwave carrier-class point-to-point data transmission equipment manufacturers and distributors. Originally incorporated and having its headquarters in Northern Europe, SAF Tehnika has become a global company within just a decade, covering all relevant market segments in more than 130 countries worldwide. SAF products are ISO 9001:2008 certified and correspond to the major industry standards such as ETSI, FCC, and Industry Canada.

The company's product portfolio covers most licenced and licence-free frequency bands within the range of 300MHz-42GHz with capacities of up to 1 Gigabit full-duplex. SAF Tehnika has also created the world's smallest spectrum analyzer - Spectrum Compact.

SAF Tehnika is committed to the production and delivery of customer-adapted wireless solutions at a competitive price,

while maintaining the highest quality standards.

Company's shares are publicly traded in NASDAQ Riga stock exchange (SAF1R).

## Why choose SAF Tehnika:

- 20 years of experience in the field of microwave engineering
- Global presence in more than 130 countries
- Customer oriented policy with excellent technical & customer support
- Short lead times and local stock for selected product lines
- Rapid logistics processes
- Innovative engineering and ability to provide highly customized solutions
- Exceptional, market leading quality and warranty terms
- Manufactured in the European Union

# SAF Tehnika product highlights\*

## TEST AND MEASUREMENT TOOLS

### Spectrum Compact and SG Compact

World's smallest handheld spectrum analyzers for 2 - 87 GHz and signal generators for 6 - 40 GHz frequency bands

- Excellent tools for: fast, reliable antenna alignment, interference detection, radio troubleshooting, Tx power measurements and other microwave system analysis
- Smallest devices on the market for on-site spectrum analysis
- Market-leading noise floor of -105 dB: excellent for long distance remote site analysis
- Instant on/off functionality and resistive touchscreen
- Line of Sight verification of up to 85km / 52,82mi

## POINT-TO-POINT MICROWAVE DATA TRANSMISSION EQUIPMENT

### Integra series (Integra-G, Integra-GS, Integra-W, Integra-WS)

Integrated carrier-grade microwave radio, delivering up to 1Gbps full-duplex

- Highest throughput with 2048QAM modulation and bandwidth coverage from 3.5MHz up to 112MHz in a single hardware design
- Up to 1Gbps throughput with header compression
- High performance pre-distortion algorithm enables high Tx power
- Unique All-Outdoor integration of antenna, radio, modem, Ethernet network processor with 3 Gigabit ports for user traffic
- Slip-fit design allows integration with existing high performance antenna systems or with 2+0 aggregation setups
- Industry best corrosion resistance
- Easy to install

### FreeMile series

#### FreeMile 5 GE MIMO

Carrier-grade radio for Ethernet packet data transmission

- System optimized for small packet transfer. Capacity of up to 105Mbps FDX / up to 210Mbps aggregate
- SAF PoE injector (IEEE 802.3af) supports 24 to 60V DC input, any polarity to ground
- Carrier grade metal enclosure, IP67 ingress protection, industrial grade EMC protection, built-in lightning protection on Gb Ethernet cable

#### FreeMile 17/24GHz

Full-outdoor licence-free carrier-grade last mile radio providing 100Mbps Fast Ethernet

- Lowest latency among licence free equipment for best VoIP and video-streaming applications
- Minimized interference with narrow-beam antennas and built-in ACM/ATPC

### CFIP Marathon

The most advanced low frequency microwave radio system for industrial applications

- Ideal for TETRA and SCADA applications
- Long Distance Operation (Up to 100km+ / 62,14mi+)
- Unique fanless design that does not require any maintenance
- Modem: ACM and ATPC for longer distance and reliable performance
- Built-in managed Gigabit Ethernet switch for up-to-date network configurations
- All-indoor system for ideal surge protection.

### CFIP Lumina and CFIP-106/108

Full-outdoor radios with up to 366Mbps Gigabit Ethernet capacity for IP networks

- Patented ODU mounting clamps for quick and easy installation
- Industry leading reliability and durability in harsh environments
- Low power consumption for sites with alternative energy sources, such as solar panels and wind turbines
- Ideal for last-mile access with narrow channel sizes
- Full-outdoor form factor, ideal for hybrid wireless network installations with Ethernet and E1/T1 connectivity
- Built-in managed Gigabit switch for shelter-free installations
- Fibre optics up to radio for 100% lightning protection
- Proven reputation – delivered to 130 countries across all continents

### CFIP PhoeniX series (PhoeniX, ProeniX C, PhoeniX M)

Compact and feature rich split-mount solutions for broadcasting, telecom industry, government and many other industries

- Ability to install the system in various network topologies and configurations
- Flexible TDM/IP architecture allows easy transition from TDM-only to hybrid or IP-only with additional option for ASI interfaces for digital video broadcasting
- XPIC support enables 2+0 configuration using both polarizations in a single channel
- Fanless cooling system and split mount architecture
- Built-in managed Carrier Gigabit Ethernet switch with AES256-bit over-the-air encryption

### Active Repeaters and solutions for Ultra-Low Latency Networks

- Industry leading active repeaters with the lowest latency specifications
- Full range of customized equipment for LL networks
- Experience in large LL network development
- Top performance and exceptional technical assistance
- Ability to provide highly customized solutions based on customer's requirements
- Deployed in major LL networks in Europe and the USA
- Full-scale project management and on-site assistance

\* For more detailed information about SAF products visit [www.saftehnika.com](http://www.saftehnika.com) or contact your SAF representative [info@saftehnika.com](mailto:info@saftehnika.com)  
Product features may vary between different models and configurations. They are subject to change without prior notice.