



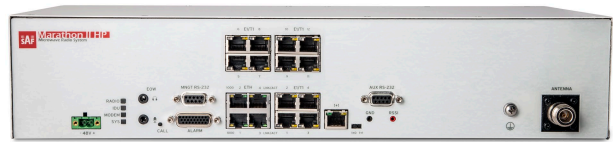
# CFIP Marathon II

The most modern low frequency microwave radio system for industrial applications on the market

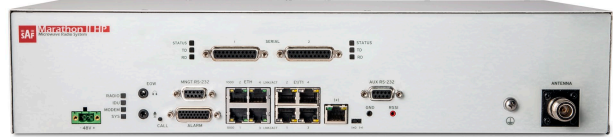


- Built around modern ASIC modem chip
- Fanless design - unique on the market with zero maintenance
- Hitless ACM and ATPC for longer distance and better performance/availability
- User friendly WEB interface , convenient and safe configuration for local and remote site terminals
- Built-in managed Gigabit Ethernet switch with QoS, VLANs, Spanning Tree Protocols for up-to-date network configurations
- Perfectly suitable for long distance links in mountainous areas and over-water paths
- Low power consumption

CFIP Marathon 300 MHz / 1.4 GHz point-to-point long-haul microwave system is the perfect solution for industrial applications where fibre is not available. Primarily designed for remote and rural areas Marathon Full Indoor Unit can establish a link in adverse weather conditions and over long distances, frequently exceeding 100 km. SAF Tehnika Marathon solution is particularly recommended for utility (electricity, water), oil & gas, public safety and transport companies that are looking for reliable data & voice transmission.



Marathon II unit with 4 x 10/100/GE Ethernet and 12 x balanced E1 ports



Marathon II unit with 4 x 10/100/GE Ethernet, 4 x balanced E1 and 2 x V.24/V.28 Serial ports

	Channel bandwidths	Capacity range
<b>Narrow</b>	0.25, 0.5, 1, 1.75, 2, 3.5, 4 MHz	0.1 - 17 Mbps
<b>Wide</b>	1, 1.5, 1.75, 2, 3, 3.5, 4, 5, 7, 8 MHz	0.8 - 43 Mbps

	Marathon II	Marathon II HP
Frequency range (GHz)*	300 - 1535 MHz	
Tx-RX offset*	142 MHz, 52 MHz, 65 MHz, 66.5 MHz, 60.5 MHz, 49 MHz	
Reference	CEPT, ITU, IC, Australia, India	
Modulation	4QAM / 16QAM / 32 QAM / 64 QAM / 128QAM, Hitless ACM	
<b>Guaranteed max. power</b>		
4QAM	+30 dBm	+36 dBm
16QAM	+29 dBm	+35 dBm
32QAM	+28 dBm	+34 dBm
64QAM	+26 dBm	+32 dBm
128QAM	+26 dBm	+32 dBm
Configuration	1+0, 1+1 (HSB, SD, FD) / 2+0, 3+0, 4+0 (built-in ethernet aggregation)	
Performance graphs	Rx level, Tx level, System temperature, Radial MSE, LDPC decoder stress, equalizer graph, Uptime counter	
Switch Type	Managed Gigabit Ethernet Layer 2	
VLAN support	802.1Q (up to 4K VLAN entries)	
QoS	64 level DiffServ (DSCP) or 8 level 802.1p mapped in 4 prioritization queues with VLAN support	
Spanning Tree	802.1D-2004 RSTP, 802.1Q-2005 MSTP	
Gigabit Ethernet	4x RJ-45 (data traffic, management port) 10/100/1000 Base-T	
E1 / T1	4x RJ-45, 4x E1	4x E1 RJ-45 + 8x E1 RJ-45 (optional)
Serial interface port	-	2x DB25 V.24/V.28 (optional)
Service ports	Serial port for management configuration, RSSI port for RSL, EOW, 1+1 protection port, Alarm port	
Max. power consumption	Up to 30W	Up to 45W

\* Inquire SAF Tehnika representative for more information

