SICURIT
PERIMETER PROTECTION SYSTEMS

AVANTGARDE
IR | MW | DT

IP Microwave Barrier

with brand new Planar Antenna
AVANTGARDE-MW/100 (IMTMW100)

Picture for illustration purposes only

AVANTGARDE MW/100, designed to operate alongside the current parabolic antenna models, represents the latest generation of Sicurit's IP&PoE digital volumetric microwave barriers.

Equipped with an X band planar antenna (10.525 GHz), it integrates an advanced digital signal processing (ADSP) system that significantly reduces false alarms while enhancing the ability to detect genuine intrusion attempts and report any temporary obstructions within its detection field.

AVANTGARDE MW/100 is available in two variants: a 12 VDC version for conventional security installations, and a PoE (IEEE 802.3af) version for streamlined IP deployments. The PoE model enables both power supply and data transmission over a single cable, reducing installation time and infrastructure complexity.

The system can optionally be fine-tuned directly via a dedicated wireless configuration interface.

Copyright©2026 – SICURIT Alarmitalia _ All rights reserved

NEW & UNIQUE FEATURES

16 channels with "Random Shuffle" algorithm

Equipped with 16 radio channels, AVANTGARDE MW further elevates its security performance through its innovative Random Shuffle algorithm. This mechanism triggers a fully synchronized channel change between TX and RX every 3–5 seconds, without generating unwanted alarms or causing interference with adjacent microwave links. The result is a superior level of protection that makes the system virtually impervious to any attempt to identify and replicate the transmission channel in an effort to bypass the barrier.

Signal degradation and temporary obstruction notification

AVANTGARDE MW incorporates two dedicated signal analysis algorithms, known as SEA and OBSTACLE. The first continuously monitors signal quality over the medium and long term, triggering when a progressive degradation is detected (for example, due to vegetation growth). The second identifies instantaneous changes in the environment, typical of a physical object—accidental or intentional—obstructing the microwave path. Both functions generate a warning notification, enabling timely and targeted maintenance interventions.

TX unit Off the Grid

To overcome installation constraints, the receiver is fully capable of interpreting all signals—tamper and fault—originating from the transmitter directly through the RF link, and then forwarding them to the system. This allows the TX unit to be installed in locations where cabling cannot be routed (e.g., when powered via a solar panel), without sacrificing full diagnostics for both transmitter and receiver.

KEY BENEFITS

- IP&PoE (available also in 12VDC)
- All TX signals available from RX unit
- Wi-Fi KIT for barrier configuration
- Complete remote control and diagnos
- Integrated with major VMS
- Certified Grade 4

SICURIT Perimeter Protection Systems – a dedicated division of SICURIT Alarmitalia S.p.A.
Via Gadames, 91 | 20151 Milan | T: +39 02 380701 | E: export@sicurit.it | W: www.sicurit-pps.it

SICURIT
PERIMETER PROTECTION SYSTEMS

Specifications

General	
Operating ranges	100m Planar Antenna
Type of detection	Volumetric | Microwave Technology
MW frequency	X-Band (10.525GHz)
Frequency channels	16 Crystal-Quartz random shuffle
Probability of detection (POD)	Greater than 98%
False alarm rates	Typically 1/unit/year
Communication	
Communication interfaces	Dry contacts, Ethernet (RJ45)
Communication protocols	TCP-IP/ModBusTCP (API available on request)
Ethernet (TX/RX)	TCP 10/100 Base T
Alarm data transmission	TCP/IP to A-Bridge & HyperPower SMS; ModBus
Alarm outputs	N.C. Relay Output in RX
Tamper outputs	N.C. Relay Output in TX and RX or both from RX
Auxiliary I/O	3IN/4OUT (programmable O.C.) in both TX and RX
Electrical	
Power supply	PoE or 12VDC ±15%; (110V/230V built-in Power Supply available)
Power consumption	TX 130mA; RX160mA
Environmental	
Operating temperatures	-35°C / +70°C
IP rating (housing)	IP65 (IMTMW-XD)
Configuration tool	Web-browser and Software (Windows® based)
Dimensions	Housing: 28x39x14cm; Tower: 27x16x125cm (Ground base 28x28cm)
Regulatory compliance	CE, Product classified Security Grade 4 - Environmental Class IV
Warranty	Comprehensive 3 years

Technology partners integrated via Sicurit platforms

GEUTEBRÜCK · milestone · Genetec · alhua TECHNOLOGY · HIKVISION
advancis · LENSEC · HyperPower · Modbus · SICURITSDK

Copyright©2026 – SICURIT Alarmitalia _ All rights reserved

SICURIT Perimeter Protection Systems – a dedicated division of SICURIT Alarmitalia S.p.A.
Via Gadames, 91 | 20151 Milan | T: +39 02 380701 | E: export@sicurit.it | W: www.sicurit-pps.it