



SHELTER COMMUNICATION

Passive Shelter Antenna



The **passive shelter antenna** is a device that reproduces signals without its own power source. It receives, transmits, and transmits signals from the outside of the enclosure to the inside and vice versa.

When designing and building shelters, one of the key element is a communication with external world in emergency while inside the shelter. The passive antenna allows radio and mobile phone signals to pass through concrete walls and metal structures, thus enabling communication while in shelter.

Our passive antenna also allows you to use mobile data and access the internet. Instant messaging apps that use mobile data, such as WhatsApp and FaceTime, will work.



A passive antenna usually consists of two antennas. One is placed outside the shelter (delivered separately) and the other is inside. The antennas are connected to each other by a cable that does not require an external power source.

Tested and Approved Solution Made in Finland

The devices are tested for various points one of which a shock and vibration test, which describes the vibration caused by an outdoor explosion, which is transmitted through the concrete structures of the shelter to devices attached to the concrete structures.

The purpose of the demanding tests is to ensure that civil protection equipment will function in times of crisis.



- The device has passed various tests and have a certification related to use in civil defence shelters.
- Ensuring communication in the shelters for staying in touch with rescue authorities, send emergency messages, and receive instructions.
- Energy self-sufficiency doesn't require electricity and can work in situations when the power grid is not available.

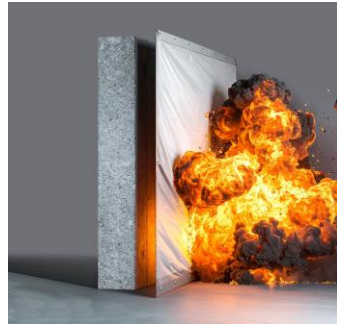
Passive Repeater Brings Coverage to Civil Defence Shelters & Hardened Facilities

The passive repeater provides coverage to the civil defence system even in peacetime. The passive repeater, installed in the civil defence system and designed and manufactured for use in times of crisis, is intended to be used during a sheltering situation.

With the help of a passive repeater, we maintain contact with those outside the civil protection shelter and receive necessary instructions from authorities, including on various situations in which the civil protection shelter can be used, such as filtering, blocking or bypassing, and their duration. It is therefore advisable to equip [civil defence shelters](#) with a passive antenna.

Model / Specifications	VSS-5G-SAS-1-SMAN
Electrical Specifications	Electrical Specifications
Gain	> 6 dBi / > 9 dBi / 6 dBi
VSWR	≤ 2.0
Polarization	65°
Horizontal Beamwidth	>12 g
Vertical Beamwidth	55°
Input Impedance	50Ω
Max. Power	100W
Lightning protection	DC Ground
Connector	SMA-Female, (1m cable length)
Mount Type	Wall Mount
Dimensions (indoor unit)	165x155x50mm
Weight	0.3 kg
Reflector Material	Copper
Radome Material	ABS
Radome Color	White
Relative Humidity	Up to 100%
Operating Temperature	-40°C to +60°C

The specification include only the indoor part of the antenna. Additional external antenna and connecting cable are required for operation of the systems.



About Atmas

Atmas Group is a Finland-based global supplier of products, technologies, project support services and complete solutions in the areas of civil defense shelters and protected spaces, facilities reinforcement against CBRN, blast, ballistic, forced entry and EMP threats, as well as security, safety and emergency response.

Atmas is trusted by customers and partners around the world providing a unique combination of solutions "under one roof", with a focus on advanced technologies, product customization, uncompromised service and comprehensive project support.

Atmas Group Oy

Hermannin rantatie 3A

00540 Helsinki

Finland

+358 449843373

info@atmasgroup.com

www.atmasgroup.com