Safety instructions

Thunderstorms and overload

The inputs of the GA3005 are triple-protected against static charge. For coarse protection a fast 60V Gas Arrestor (max. 1kA 8/20µs) is used, followed by an 8KV ESD protector according to IEC 61000-4 -2 Level 2 / max. 30ns and another 4KV fine protection.

Disclaimer please note

The integrated over-voltage protection circuit will not protect your equipment from a lightning strike in the event of a direct hit to the house or the local vicinity. Irrespective of the radiation element lengths, high voltages can permanently damage the antenna electronics and/or connected devices. For this reason, liability for these devices is excluded. Other types of damage caused by overloads or by direct HF-exposure (transmitting antennas) are also excluded from the warranty. In case of absence from home, the potential danger and subsequent damage of transmitting (ham radio stations), and thunderstorms etc., can be avoided by disconnecting the antenna cable.

In the vicinity of strong transmitters, please also note

In very rare cases, in the immediate vicinity (distance of a few hundred meters) to very strong transmitters, overload effects can occur, which can overload the antenna electronics and / or the connected receiver in terms of level. This is possible with an output level of somewhat more than -20dBm. Weak useful signals can then be suppressed or phantom signals can be generated. Since the GA3005 receives up to max. 3000MHz, signals outside the shortwave range can also lead to such negative effects.

TECHNICAL DATA

Antenna:

Power supply: 5.5 - 12V DC (max. 120mA) via remote power supply
USB supply with 5V possible with slightly reduced IP values

Connector: BNC / 50 ohms
Radiator Connector: M6-screws (stainless steel)
Frequency Range: 9kHz - 3000MHz (+/- 3dB)

IP3: > typ. +30dBm (@7.00 & 7.20MHz) also in the range 200-3000MHz
IP2: > typ. +50dBm (@7.00 & 7.20MHz)

Size / weight: 98 x 90 x 38mm / 0.12kg

Power inserter CPI3000UNI:

Power supply: max 15VDC/max. 400mA current-limited and protected against polarity reversal
Connectors: 2.1mm DC-power socket (positive inner);
Alternatively via optional USB > DC power plug PartNo: 00163-1
HF: BNC
Size/ weight: 86 x 70 x 29 mm / 0.09 kg

Scope of delivery:

GigActiv GA3005
Power Inserter CPI3000UNI (optional CPI3000DP)
100mm Radiator M6 (black)

Issue 03/2023

GigActiv GA3005

Extreme Wideband Active Antenna 9kHz - 3000MHz

Operating Manual Version V1.3

ATTENTION:
This is a receiving antenna!
Never connect it to a transmitter!
This will destroy the antenna electronics and void the warranty.
Do not operate next to a transmitting antenna!

Manufactured by Rudolf Ille Nachrichtentechnik • www.nti-online.de
Distributed by
Bonito - Dennis Walter • Gerichtsweg 3 • D-29320 Hermannsburg •www.bonito.net

Mode of operation

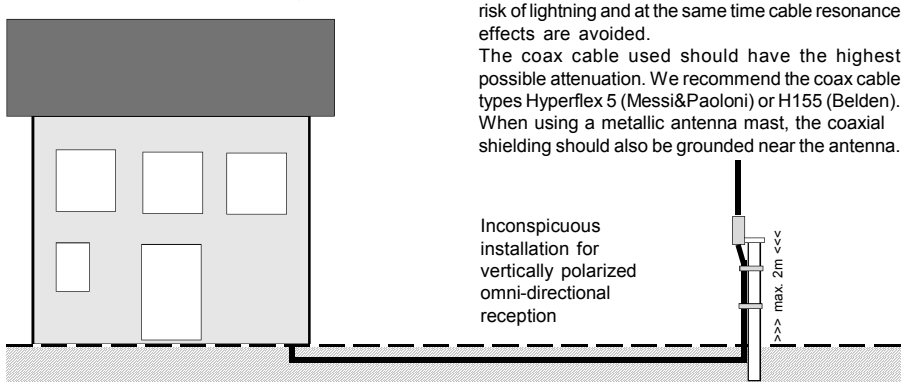
The GigActiv 3005 is an extremely wideband active antenna with max. 3000MHz upper cut-off frequency, which responds to the electrical component (E-field) of the electromagnetic field.

It has a uniform wideband frequency response in combination with vertically polarised omnidirectional reception characteristics. This makes it particularly interesting for owners of wideband receivers and SDRs.

Power can be supplied either via a mains adapter or via USB (e.g. USB power bank) with slightly restricted IP values. Thus, it is also ideally suited for portable use.

Example of outdoor-installation

The installation of the antenna should ideally take place outdoors, away from domestic electromagnetic noise. Therefore, the antenna should be sited typically 5 to 10 meters distant from any building



Contrary to widely held opinion, the highest possible installation location is not always the best. Better near the ground, mount on a mast that is 2m high. This means that the antenna is less exposed to the risk of lightning and at the same time cable resonance effects are avoided.
The coax cable used should have the highest possible attenuation. We recommend the coax cable types Hyperflex 5 (Messi&Paoloni) or H155 (Belden). When using a metallic antenna mast, the coaxial shielding should also be grounded near the antenna.

Coaxial power inserter

The antenna electronics are powered via the connected coaxial cable of the power inserter. Power is supplied by the power inserter (CPI3000UNI) which can be fed by an external power supply. Whenever possible, do not use a switch mode power supply; it is always preferable to use a transformer-based power supply.

Power can also be supplied via USB with the optional USB to DC power plug part no: 00163-1.
A self resetting fuse will limit the power input to 400mA in case of a short circuit.

The power inserter has two LED-status indicators:

Green (PWR): Operating voltage display
Red (!): Short-circuit ir overload indicator

Attention:

If the red LED illuminates, disconnect the antenna and power cables from the power inserter and investigate the cause of the short circuit or overload!