

## HyperLOG® 7000 LogPer broadband EMC antennas up to 6GHz



### REFERENCES / examples of professional users:

- AIRBUS, Hamburg
- EADS (European Aeronautic Defence & Space Company) GmbH, Unterschleißheim
- Max-Planck-Institut für Sonnensystemforschung, Lindau
- Anritsu GmbH, Düsseldorf
- ATI Research, USA
- Siemens AG, Wenden

### Highlights:

- Only a single broadband antenna for the complete frequency range up to 6GHz
- Optimal for usage with spectrum analysers for EMC measurement
- Incl. high-tech radom with modern, appealing design
- Freely alignable polarisation
- Calibration data can be saved to an IC on the antenna and also be read back (option)
- Excellent forward/backward ratio
- Excellent symmetry of radiation patterns
- Integrated 5/8" tripod socket
- Suitable for mobile use
- Suitable for outdoor installation
- Directional
- Robust design
- Splash water proof
- Small weight and dimensions
- Made in Germany
- **10 years warranty**

### Included with delivery:

- HyperLOG® 70xx antenna
- **Typical calibration data with up to 533 calibration points (10MHz steps!)**
- Aluminum design carrycase with custom padding
- Sturdy, detachable handle with "miniature tripod" mode
- Special Aaronia SMA toolset with over-torque protection

## Calibration & standards:

### - DKD ISO calibration certificates available from Aaronia:

Calibration is performed by comparison with reference standards or reference measurement devices which have been calibrated with the national German calibration service (DKD) and hence are calibrated according to the national reference standards which are used by the federal physical-technical administration (PTB) for maintaining accordance with the international units system (SI).

### - This calibration is performed in accordance with DIN EN ISO/IEC 17025 and ISO 9001 standards.

- The log-periodic antennas of the HyperLOG® 70xx series are suitable for interference field strength measurement. The specialized broadband characteristics allow measurements to be taken in the complete specified frequency range without switching.

### - These antennas are suitable for measurement according to the following standards and procedures:

CISPR, VDE, MIL, VG, EN 55011, EN 55013, EN 55015, EN 55022, MIL-Std-461.

## Specifications:

### HyperLOG® 7025:

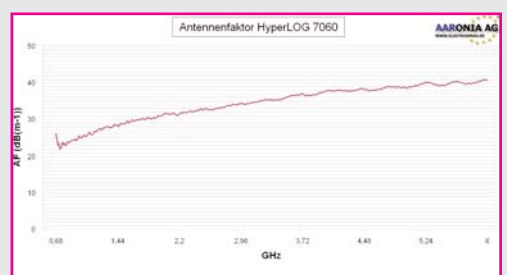
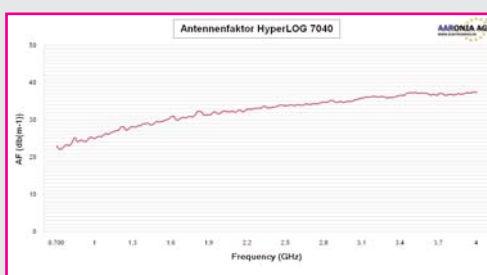
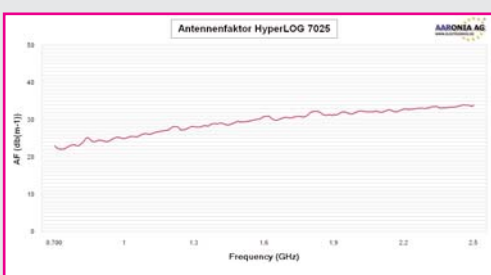
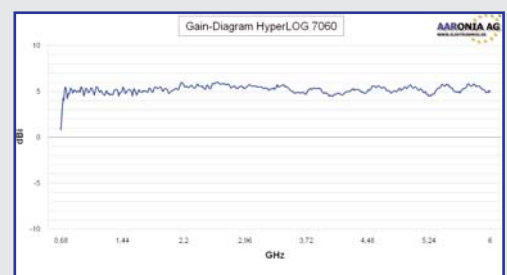
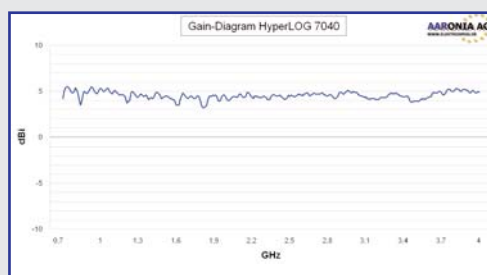
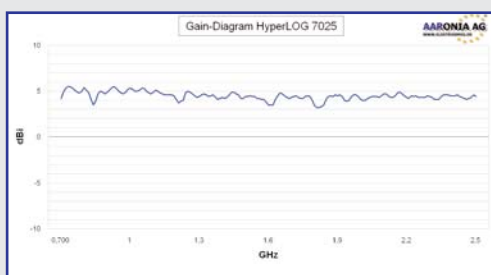
- Design: Logarithmic-periodic
- Frequency range: **700MHz-2,5GHz**
- Max. transmission power: 100 W CW (400 MHz)
- Nominal impedance: 50 Ohms
- VSWR (typ.): <1:2
- Gain (typ.): **4dBi**
- Antenna factor: **23-34dB/m**
- Return loss: Better than -10dB
- Calibration points: **183** (10MHz steps)
- RF connection: SMA socket (18GHz) or N socket using an adapter
- Polarisation: linear vertical/horizontal
- Tripod connection: 5/8"
- Dimensions (L/W/D): (340x200x25) mm
- Weight: **270gr**
- **Warranty: 10 years**

### HyperLOG® 7040:

- Design: Logarithmic-periodic
- Frequency range: **700MHz-4GHz**
- Max. transmission power: 100 W CW (400 MHz)
- Nominal impedance: 50 Ohms
- VSWR (typ.): <1:2
- Gain (typ.): **4dBi**
- Antenna factor: **23-38dB/m**
- Return loss: Better than -10dB
- Calibration points: **333** (10MHz steps)
- RF connection: SMA socket (18GHz) or N socket using an adapter
- Polarisation: linear vertical/horizontal
- Tripod connection: 5/8"
- Dimensions (L/W/D): (340x200x25) mm
- Weight: **270gr**
- **Warranty: 10 years**

### HyperLOG® 7060:

- Design: Logarithmic-periodic
- Frequency range: **700MHz-6GHz**
- Max. transmission power: 100 W CW (400 MHz)
- Nominal impedance: 50 Ohms
- VSWR (typ.): <1:2
- Gain (typ.): **5dBi**
- Antenna factor: **26-41dB/m**
- Return loss: Better than -10dB
- Calibration points: **533** (10MHz steps)
- RF connection: SMA socket (18GHz) or N socket using an adapter
- Polarisation: linear vertical/horizontal
- Tripod connection: 5/8"
- Dimensions (L/W/D): (340x200x25) mm
- Weight: **250gr**
- **Warranty: 10 years**



## Description:



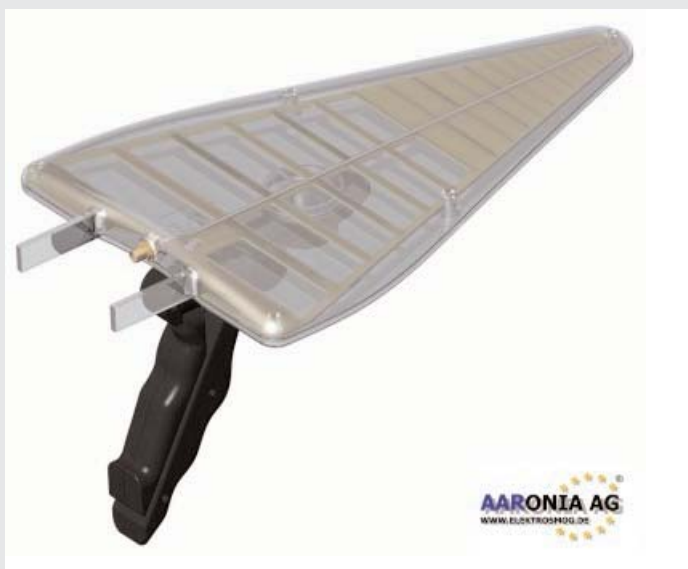
Elegant and practical: The HyperLOG® in velvet blue with high-tech directional measurement handle

Most of the professional broadband antennas available on the market today just have one disadvantage: They are extremely expensive.

In contrast, Aaronia offers a very cost-effective alternative with their HyperLOG® 7000 series, still meeting even the highest expectations. **They offer an exceptional mix of performance, functionality and design formerly unknown in this price category.** Together with the HyperLOG® antennas, any regular spectrum analyser instantly becomes a professional RF measurement device with directional characteristics. Hence, a true dream team for EMC measurement in the laboratory or for outdoor use.

Due to their small weight and the multi-functional handle, these antennas are the optimal supplement for portable EMC measurement devices for locating and evaluating any kind of signal source.

Due to their flexibility in polarisation, HyperLOG® antennas can also be used as handy WLAN or Wifi antennas. Point-to-point WLAN links or networks can be constructed easily using the full bandwidth up to 6GHz, achieving high throughput. Optimal for MMDS, ISM, CCTV and data/telephony transmissio



Also available in a "transparent" finish at an extra charge (polished by hand!)

EMC antennas from Aaronia AG are totally different to the regular antennas available on the market:

Many commercially available antennas are based on PCBs and other unprofessional designs and do not really represent professional measurement technology. In addition to the simple technical construction, one more important omission is very common: these antennas come "naked", without Radom frame, as a raw PCB. Due to this construction, mismeasurements and invisible damage caused by environmental influence (oxidation, fissures, etc.) can occur.



Simply amazing: The multi-function handle can be turned into a rotatable, practical miniature tripod with very good stability quickly and easily

In contrast, HyperLOG® antennas come STANDARD with a specially constructed, high tech Radom housing. This housing has been constructed after intense research with the most modern computer technology in such a way that its shape, material and special coating have virtually no influence on measurements, not even in case of dew or other kinds of humidity collecting on the surface. Another important factor for Aaronia was the development of a Radom with the lowest possible damping factor achievable. This turned out to be quite an adventure for our development team, particularly in the high GHz ranges. Fortunately, this adventure has been mastered resulting in a beautiful, elegant design, to the complete satisfaction of the development team. Our first test measurements even by far surpassed our guidelines!

The resulting antenna had the best possible protection against mechanical stress and environmental influence without sacrificing any of its performance.

A further distinctive feature of the HyperLOG®'s Radom is the integrated 5/8" screw thread for accepting the included (directional measurement) handle. As it conforms to the standard due to its size of 5/8", the antenna could also be mounted to any other suitable tripod. Hence, polarisation and bearing of the antenna can be adjusted optimally and reliably.

Inside the Radom, you can find our sophisticated antenna itself, covered with a highly conductive GOLD COATING. This high-grade coating and the antenna's special design warrant excellent linearity over the entire frequency range, and an exceptional receiving or transmitting performance.

Each antenna is calibrated precisely in the Aaronia laboratories before dispatch. It is even possible to permanently store calibration data in a special IC on the antenna. These can later be recalled for dynamic antenna adjustment, for example, with an Aaronia spectrum analyser.



Included with delivery: A sturdy aluminum design carrycase with custom padding for the antenna, cables and accessories. Furthermore, every antenna of the HyperLOG® 7000 series includes a detachable multi-functional handle with "miniature-tripod" mode, and an appropriate SMA tool-set.



The Dream team for EMC measurement in the laboratory or in harsh outdoor environments: spectrum analyser and HyperLOG® directional antenna.

#### Frequency Ranges Aaronia HyperLOG® Log Periodic EMC Antennas:

Antenna-Version	380MHz	400MHz	600MHz	700MHz	2,5GHz	4GHz	6GHz	8GHz	10GHz	18GHz	Total range	Elements	VSWR*	Examples for the utilizable frequency range
HyperLOG® 7025	No	No	No	Yes	Yes	No	No	No	No	No	700MHz-2,5GHz	40	<1:1,5	Cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN
HyperLOG® 7040	No	No	No	Yes	Yes	Yes	No	No	No	No	700MHz-4GHz	40	<1:1,5	Cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar
HyperLOG® 7060	No	No	No	Yes	Yes	Yes	Yes	No	No	No	700MHz-6GHz	40	<1:2,0	Cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar, 5-6GHz W-Lan
HyperLOG® 6080	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	680MHz-8GHz	104	<1:2,0	Cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar, 5-6GHz W-Lan
HyperLOG® 60100	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	680MHz-10GHz	104	<1:2,0	Cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar, 5-6GHz W-Lan, Weather Radar
HyperLOG® 60180	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	680MHz-18GHz	104	<1:2,5	Cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar, 5-6GHz W-Lan, Weather Radar, satellite services
HyperLOG® 4025	No	Yes	Yes	Yes	Yes	No	No	No	No	No	400MHz-2,5GHz	50	<1:1,5	70cm amateur radio, cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN
HyperLOG® 4040	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	400MHz-4GHz	50	<1:1,5	70cm amateur radio, cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar
HyperLOG® 4060	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	400MHz-6GHz	50	<1:2,0	70cm amateur radio, cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar, 5-6GHz W-Lan
HyperLOG® 3080	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	380MHz-8GHz	124	<1:2,0	TETRA, 70cm amateur radio, cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar, 5-6GHz W-Lan
HyperLOG® 30100	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	380MHz-10GHz	124	<1:2,0	TETRA, 70cm amateur radio, cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar, 5-6GHz W-Lan, Weather Radar
HyperLOG® 30180 <small>With ISO-Certification!</small>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	380MHz-18GHz	124	<1:2,5	TETRA, 70cm amateur radio, cellphone, GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, Radar, 5-6GHz W-Lan, Weather Radar, satellite services

\*typical / The logarithmic periodic antennas of the HyperLOG® series are suited for measuring the strength of interfering fields. The special wideband characteristics allow for readings in the entire specified frequency range without switching. The antennas are suited for readings according to the following norms and procedures: CISPR, VDE, MIL, VG, EN 55011, EN 55013, EN 55015, EN 55022, MIL-Std-461.

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