



Rev 1.2  
01.12.2010

# Precompliance test antenna series HyperLOG® 60xxx span 680MHz to 18GHz

A logger antenna for the complete frequency range from 680MHz to 18GHz

## Highlights:

- ◆ Optimal for usage with spectrum analysers for EMC measurement
- ◆ Top-quality high-tech TEFLON antenna support
- ◆ Excellent forward/backward ratio
- ◆ Freely alignable polarisation
- ◆ Excellent symmetry of radiation patterns
- ◆ Integrated 1/4" tripod socket
- ◆ Suitable for mobile use
- ◆ Made in Germany
- ◆ **10 years warranty**

## Calibration & standards:

- ◆ The log-periodic precompliance test antenna of the HyperLOG® 60xxx 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.

## Included with delivery:

- ◆ HyperLOG® 60xxx-Antenna
- ◆ **Typical calibration data with up to 1734 calibration points (10MHz steps)**
- ◆ Aluminum design carrycase with custom padding
- ◆ Sturdy, detachable pistol grip with "miniature tripod" mode
- ◆ Special Aaronia SMA toolset with over-torque protection

## References / examples of proof:

- ◆ BMW, München, Germany
- ◆ Hewlett Packard, Dornach, Germany
- ◆ Audi AG, Ingolstadt, Germany
- ◆ DLR, Köln, Germany
- ◆ University of Florida, USA
- ◆ IBM, Stuttgart, Germany



Made in Germany

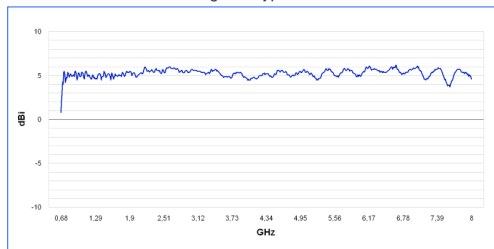


# Specifications

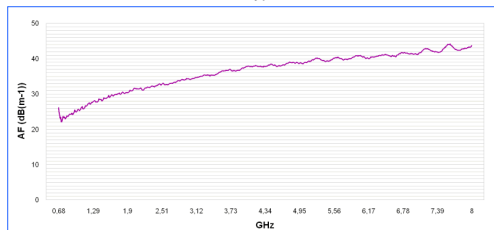
## HyperLOG® 6080:

- ◆ Design: Logarithmic-periodic
- ◆ Frequency range: **680MHz-8GHz**
- ◆ Max. transmission power: 100 W CW (400MHz)
- ◆ Nominal impedance: 50 Ohms
- ◆ VSWR (typ.): <1:2,5
- ◆ Gain (typ.): **5dBi**
- ◆ Antenna factor: **22-44dB/m**
- ◆ Calibration points: **733** (10MHz steps)
- ◆ RF connection: SMA socket (18GHz) or N socket using an adapter
- ◆ Dimensions (L/W/D): (340x200x25) mm
- ◆ Weight: 250gr
- ◆ **Warranty: 10 years**

Gain Diagram HyperLOG 6080



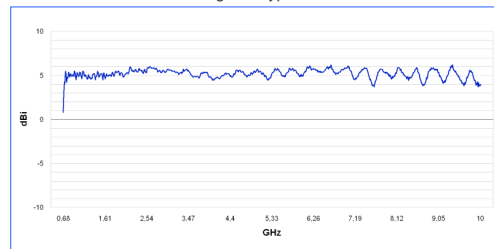
Antenna factor HyperLOG 6080



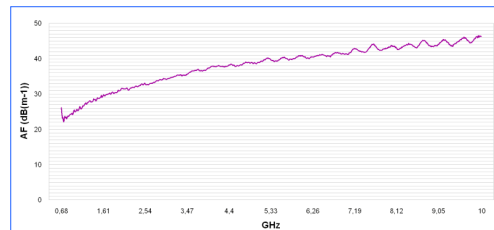
## HyperLOG® 60100:

- ◆ Design: Logarithmic-periodic
- ◆ Frequency range: **680MHz-10GHz**
- ◆ Max. transmission power: 100 W CW (400MHz)
- ◆ Nominal impedance: 50 Ohms
- ◆ VSWR (typ.): <1:2,5
- ◆ Gain (typ.): **5dBi**
- ◆ Antenna factor: **22-46dB/m**
- ◆ Calibration points: **933** (10MHz steps)
- ◆ RF connection: SMA socket (18GHz) or N socket using an adapter
- ◆ Dimensions (L/W/D): (340x200x25) mm
- ◆ Weight: 250gr
- ◆ **Warranty: 10 years**

Gain Diagram HyperLOG 60100



Antenna factor HyperLOG 60100



## Frequency Range Aaronia HyperLOG® EMC precision Measurement-Antennas

| Antenna Version | 380MHz | 400MHz | 680MHz | 700MHz | 2,5GHz | 4GHz | 6GHz | 8GHz | 10GHz | 18GHz | Total           | Examples for the utilizable frequency range  |
|-----------------|--------|--------|--------|--------|--------|------|------|------|-------|-------|-----------------|--|
| HyperLOG® 7025  | -      | -      | -      | ✓      | ✓      | -    | -    | -    | -     | -     | 700MHz - 2,5GHz | GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN  |
| HyperLOG® 7040  | -      | -      | -      | ✓      | ✓      | ✓    | -    | -    | -     | -     | 700MHz - 4GHz   | GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, WiFi, Radar, WiMAX, UWB (FB2-FB4)   |
| HyperLOG® 7060  | -      | -      | -      | ✓      | ✓      | ✓    | ✓    | -    | -     | -     | 700MHz - 6GHz   | GSM900, GPS, DECT, GSM1800, UMTS, Microwave, WLAN, WiFi, Radar, WiMAX, UWB (FB2-FB7)   |
| HyperLOG® 6080  | -      | -      | ✓      | ✓      | ✓      | ✓    | ✓    | ✓    | -     | -     | 680MHz - 8GHz   | GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi, Radar, WiMAX, 5,8GHz W-Lan, radio links, UWB (FB2-FB7)  |
| HyperLOG® 60100 | -      | -      | ✓      | ✓      | ✓      | ✓    | ✓    | ✓    | ✓     | -     | 680MHz - 10GHz  | GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi, Radar, WiMAX, 5-6GHz WLAN, radio links, weather radar, UWB (FB2-FB8)                            |
| HyperLOG® 60180 | -      | -      | ✓      | ✓      | ✓      | ✓    | ✓    | ✓    | ✓     | ✓     | 680MHz - 18GHz  | GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi, radar, WiMAX, 5-6GHz WLAN, radio links, weather radar, misc. satellite services, UWB (FB2-FB10) |
| HyperLOG® 4025  | -      | ✓      | ✓      | ✓      | ✓      | -    | -    | -    | -     | -     | 400MHz - 2,5GHz | 70cm amateur radio, GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi  |
| HyperLOG® 4040  | -      | ✓      | ✓      | ✓      | ✓      | ✓    | -    | -    | -     | -     | 400MHz - 4GHz   | 70cm amateur radio, GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi, radar, UWB (FB2-FB4)  |
| HyperLOG® 4060  | -      | ✓      | ✓      | ✓      | ✓      | ✓    | ✓    | -    | -     | -     | 400MHz - 6GHz   | 70cm amateur radio, GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi, WiMAX, Radar, 5-6GHz WLAN, UWB (FB2-FB7)                                    |
| HyperLOG® 3080  | ✓      | ✓      | ✓      | ✓      | ✓      | ✓    | ✓    | ✓    | -     | -     | 380MHz - 8GHz   | TETRA, 70cm amateur radio, GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi, WiMAX, Radar, 5-6GHz WLAN, radio links, UWB (FB2-FB7)                |
| HyperLOG® 30100 | ✓      | ✓      | ✓      | ✓      | ✓      | ✓    | ✓    | ✓    | ✓     | -     | 380MHz - 10GHz  | TETRA, 70cm amateur radio, GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi, WiMAX, Radar, 5-6GHz WLAN, radio links, weather radar, UWB (FB2-FB8) |
| HyperLOG® 30180 | ✓      | ✓      | ✓      | ✓      | ✓      | ✓    | ✓    | ✓    | ✓     | ✓     | 380MHz - 18GHz  | TETRA, 70cm amateur radio, GSM900, GPS, DECT, GSM1800, UMTS, microwave ovens, WLAN, WiFi, WiMAX, Radar, 5-6GHz WLAN, radio links, weather radar, UWB (FB2-FB8) |

\*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.

# Description



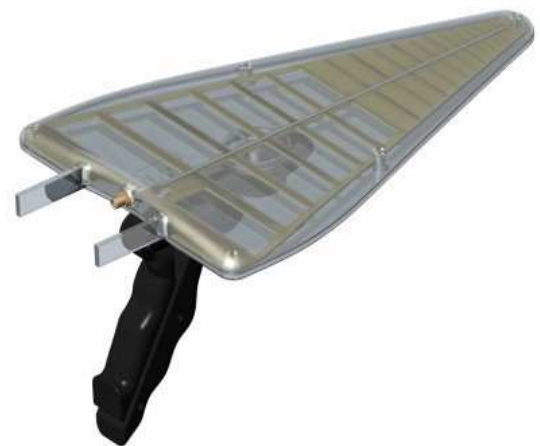
HyperLOG 70xx Antenna with pistol grip expanded as a miniature tripod

The HyperLOG® 60xxx logper 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.

With their log-periodic measurement antennas from the HyperLOG® 60xxx series, Aaronia finally offers a very cost-effective alternative, which at the same time meets the highest expectations. In conjunction with the HyperLOG® antennas, every regular spectrum analyser becomes a fully professional directional RF measurement device within a few moments. Thus, a perfect "dream team" for EMC measurement in the laboratory or for outdoor use is at your disposal.

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.



Also available in a "transparent" finish at extra charge



Lot of space for optionally accessories:  
The HyperLOG® transportcase

Included with delivery: A sturdy aluminum design carrycase with custom padding for the antenna, cables and accessories. Furthermore, every antenna of the HyperLOG® 60xxx series includes a detachable multi-functional pistol grip with "miniature-tripod" mode and an appropriate SMA toolset.

# Recommended accessories for Aaronia Antennas

## Heavy Plastic Carrycase PRO

Schock resistant, heavy version with padding. Offers spaces for a HyperLOG 70xx or 60xxx antenna and 2 SPECTRAN units with all accessories. A must for the professional user or outdoor usage!

Order/Art.-No.: 243



interior view

exterior view

## 1m / 5m / 10m SMA-Cable

High quality special SMA cable for connecting any HyperLOG®-Antenna or BicoLOG®-Antenna with various test equipment like our RF Spectrum-Analyzer. You can choose between 3 different cables:

- 1m standard SMA cable (RG316U)
- 5m LowLoss SMA cable (especially low damping)
- 10m LowLoss SMA cable (especially low damping)

All versions: SMA plug (male) / SMA plug (male)

Order/Art.-No.: 771 (1m Cable), 772 (5m Cable), 773 (10m Cable)



SMA Cable (1-10m)

## SMA to N Adapter

This special high quality adapter allows operation of all HyperLOG®-Antenna with any standard spectrum-analyzer with N connector. Also this adapter is needed to connect BicoLOG® antennas to a SPECTRAN Spectrum Analyzer.

Especially massive, chrome-plated design. This adapter is usable for very high frequencies up to at least 18GHz. Physical dimensions are just 30x20mm. Nominal impedance 50 Ohms. Layout: SMA socket (female) / N plug (male).

Order/Art.-No.: 770

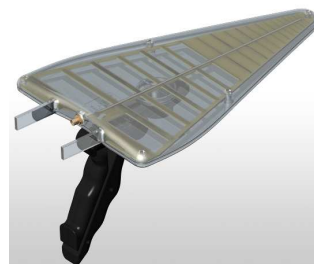


SMA to N Adapter

## Option Transparent

Beautiful, transparent case for HyperLOG® antenna series 30xxx, 40xx, 60xxx and 70xx. Hand-polished.

Order/Art.-No.: Antenna Order-No. + T



transparent finish

# References

## User of Aeronia Antennas and Spectrum Analyzers (Examples)

### Government, Military, aeronautic, astronautic

- ◆ NATO, Belgien
- ◆ Boeing, USA
- ◆ Airbus, Hamburg
- ◆ Bund (Bundeswehr), Leer
- ◆ Bundeswehr (Technische Aufklärung), Hof
- ◆ Lufthansa, Hamburg
- ◆ DLR (Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart)
- ◆ Eurocontrol (Flugüberwachung), Belgien
- ◆ Australian Government Department of Defence, Australien
- ◆ EADS (European Aeronautic Defence & Space Company) GmbH, Ulm
- ◆ Institut für Luft- und Raumfahrtmedizin, Köln
- ◆ Deutscher Wetterdienst, Tauche
- ◆ Polizeipräsidium, Bonn
- ◆ Landesamt für Umweltschutz Sachsen-Anhalt, Halle
- ◆ Zentrale Polizeitechnische Dienste, NRW
- ◆ Bundesamt für Verfassungsschutz, Köln
- ◆ BEV (Bundesamt für Eich- und Vermessungswesen)

### Research/Development, Science and Universitys

- ◆ Deutsches Forschungszentrum für Künstliche Intelligenz, Kaiserslautern
- ◆ Universität Freiburg
- ◆ Indonesien Institute of Science, Indonesien
- ◆ Max-Planck-Institut für Polymerforschung, Mainz
- ◆ Los Alamos National Laboratory, USA
- ◆ University of Bahrain, Bahrain
- ◆ University of Florida, USA
- ◆ Universität Erlangen, Erlangen
- ◆ Universität Hannover, Hannover
- ◆ University of Newcastle, Großbritannien
- ◆ Universität Strasbourg, Frankreich
- ◆ Universität Frankfurt, Frankfurt
- ◆ Uni München – Fakultät für Physik, Garching
- ◆ Technische Universität Hamburg, Hamburg
- ◆ Max-Planck Institut für Radioastronomie, Bad Münstereifel
- ◆ Max-Planck-Institut für Quantenoptik, Garching
- ◆ Max-Planck-Institut für Kernphysik, Heidelberg
- ◆ Max-Planck-Institut für Eisenforschung, Düsseldorf
- ◆ Forschungszentrum Karlsruhe, Karlsruhe

### Industry

- ◆ Shell Oil Company, USA
- ◆ ATI, USA
- ◆ Fedex, USA
- ◆ Walt Disney, Kalifornien, USA
- ◆ Agilent Technologies Co. Ltd., China
- ◆ Motorola, Brasilien
- ◆ IBM, Schweiz
- ◆ Audi AG, Neckarsulm
- ◆ BMW, München
- ◆ Daimler Chrysler AG, Bremen
- ◆ BASF, Ludwigshafen
- ◆ Deutsche Bahn, Berlin
- ◆ Deutsche Telekom, Weiden
- ◆ Siemens AG, Erlangen
- ◆ Rohde & Schwarz, München
- ◆ Infineon, Österreich
- ◆ Philips Technologie GmbH, Aachen
- ◆ ThyssenKrupp, Stuttgart
- ◆ EnBW, Stuttgart
- ◆ RTL Television, Köln
- ◆ Pro Sieben – SAT 1, Unterföhring
- ◆ Channel 6, Großbritannien
- ◆ WDR, Köln
- ◆ NDR, Hamburg
- ◆ SWR, Baden-Baden
- ◆ Bayerischer Rundfunk, München
- ◆ Carl-Zeiss-Jena GmbH, Jena
- ◆ Anritsu GmbH, Düsseldorf
- ◆ Hewlett Packard, Dornach
- ◆ Robert Bosch GmbH, Plochingen
- ◆ Mercedes Benz, Österreich
- ◆ EnBW Kernkraftwerk GmbH, Neckarwestheim
- ◆ AMD, Dresden
- ◆ Infineon Technologies, Regensburg
- ◆ Intel GmbH, Feldkirchen
- ◆ Philips Semiconductors, Nürnberg
- ◆ Hyundai Europe, Rüsselsheim
- ◆ Saarschmiede GmbH, Völklingen
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