HIRSCHMANN

A **BELDEN** BRAND

PB 1055AG

Hirschmann™ Clear Space® and ESD Protection

Thanks to Clear Space® the new OpenBAT platform from Hirschmann™ can facilitate stable radio communications via Wireless LAN. The integrated ESD protection (ESD = electrostatic discharge) also increases the hardware life and minimizes installation space.

Clear Space® Guarantees High-availability Wireless LAN Connections even in Environments with high Frequency Density. OpenBAT Devices are able to Maintain this Level of Performance for their Entire Life-cycle by Virtue of their Integrated ESD Protection, Thereby Reducing the Total Cost of Ownership.

- Clear Space® guarantees stable wireless connections even under the most adverse conditions
- Integrated ESD protection for long hardware life
- Compact assembly without additional surge–protection equipment

Their combination of top data speeds, maximum reliability and the greatest possible flexibility makes these new OpenBAT platforms from Hirschmann™ the most powerful wireless LAN solution on the market, for the first time enabling industrial-standard access points and clients to be individually put together via the Internet. This is guaranteed by the patented Clear Space® technology and integrated ESD protection, which filter out any frequencies that might disrupt wireless communications and generally protect the robust hardware of the OpenBAT access points and clients against electrostatic discharges – without any additional equipment.

Applications

Thanks to Clear Space® and integrated ESD protection, the access points and clients of the OpenBAT platform facilitate versatile high-availability wireless LAN solutions.

In the factory, flexible and cost-effective video monitoring of processes and production equipment.

In the energy sector, remote network access from anywhere within a refinery or wind park. This makes it possible, for example, to improve the efficiency of service call-outs. In the power generation and distribution sector, OpenBAT facilitates wireless communications of outstanding quality over large distances, and enables mobile network connections to be set up alongside the conveyor belts in opencast mines.

In trains, the access points and clients can be used for applications to increase passenger comfort and convenience as well as to provide secure connections to the train control system, and in dockyards, OpenBAT also plays to its strengths providing stable wireless links to ships.

Your Benefits

Thanks to Clear Space®, OpenBAT offers you **stable wireless LAN** connections, because this technology reliably eliminates interfering frequencies. The integrated ESD protection withstands electrostatic discharges while increasing the **lifespan** of the hardware, so this feature also contributes to reducing your **total cost of ownership**. You also save on procurement, because there is no need for extra surge-protection equipment taking up additional space – so OpenBAT also frees up **more room** for your installations.

A new product to serve your needs.
Be certain.

Hirschmann™ OpenBAT with Clear Space® Technology and ESD Protection

Clear Space®

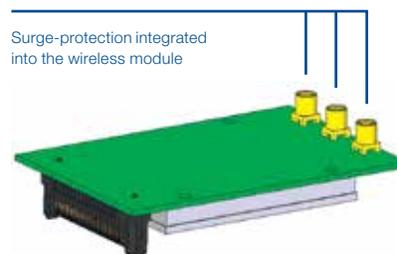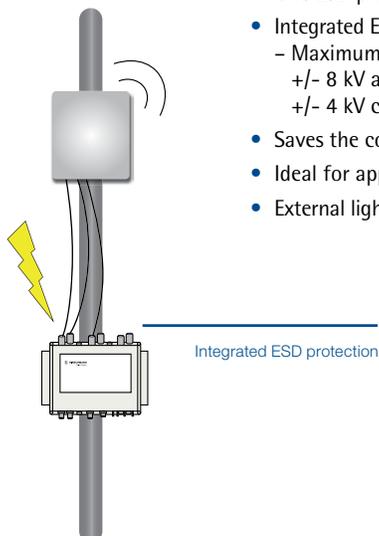**Elimination of interfering radio frequencies and all-round ESD protection.**

The access points and clients of the OpenBAT platform possess up to three wireless modules with Clear Space® technology and ESD protection. Each module has an integrated bandpass filter operating in both the 2.4 GHz and 5 GHz band and removes interfering radio frequencies. This markedly reduces the noise level and therefore largely prevents packet losses. The ESD protection, also present in each module, is able to withstand electrostatic discharges of up to 25 kV. These access points and clients are also remarkable for their very low power consumption (less than 10 W) and an extended temperature range of -40°C to +70°C. Moreover the devices are equipped with exceptionally robust antenna connectors and are therefore particularly resistant to vibrations.

Benefits at a Glance

- OpenBAT platform is the most powerful and flexible wireless LAN solution on the market
- Clear Space® facilitates strong wireless connections even in environments with high frequency density
- Bandpass filters eliminate all interfering frequencies
- Minimal packet losses due to the reduced noise level
- Integrated ESD protection can withstand powerful electrostatic discharges
- Extremely long hardware lifespan, reducing the total cost of ownership
- Compact assembly without the need for any additional surge-protection equipment
- Extremely low power consumption
- Extended temperature range from -40°C to +70°C
- Robust antenna connectors with low signal attenuation
- Shakeproof mounting
- Hirschmann's Outdoor Installation Guide offers detailed information about the use of wireless LAN in outdoor installations
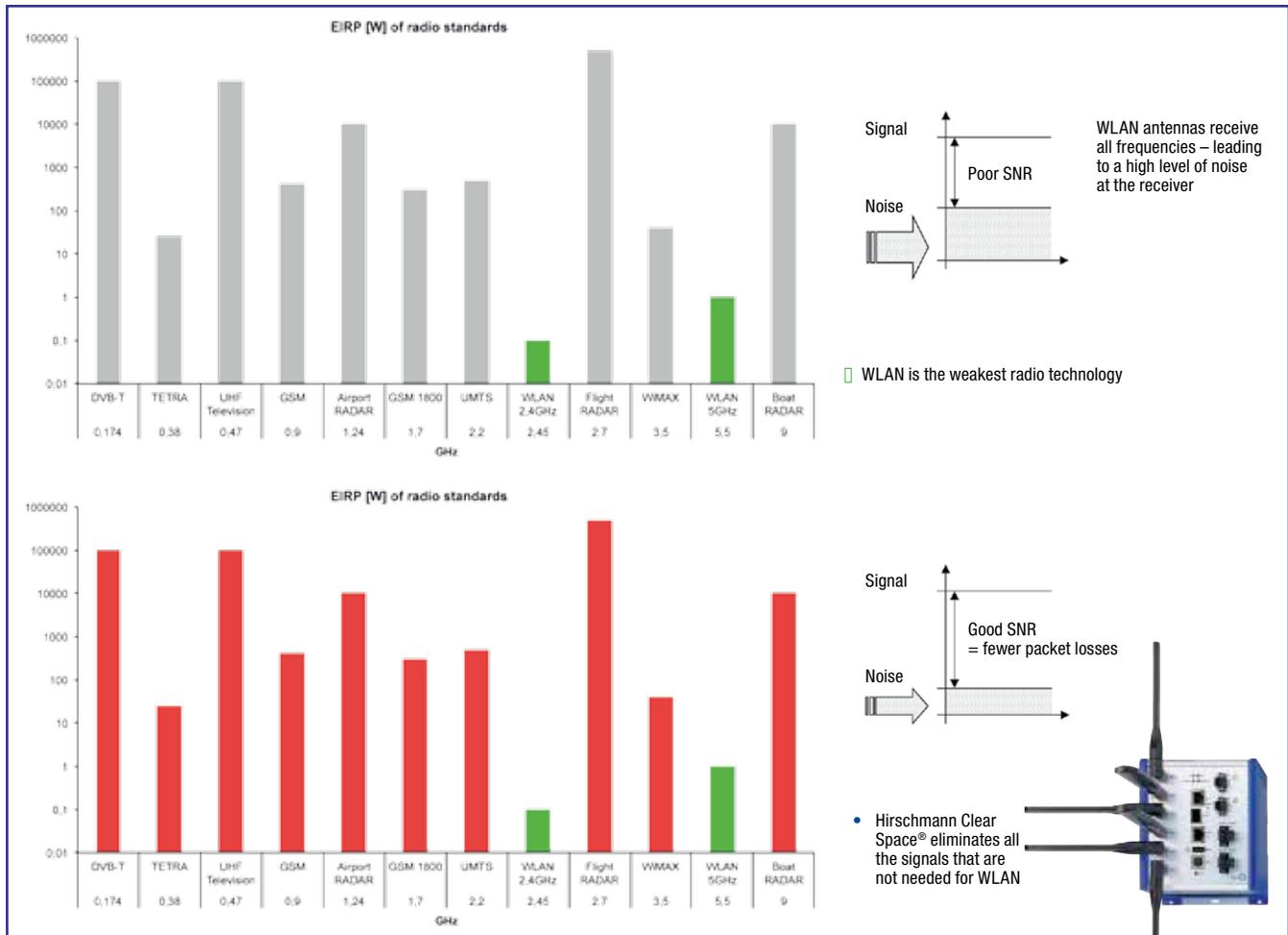
ESD Protection

- Surge-protection integrated into the wireless module
- One ESD protection per path (802.11n has three paths each with 150 Mbit/s)
- Integrated ESD protection compliant with EN61000-4-2 protects against the following discharges:
  – Maximum discharge level:
    +/- 8 kV air discharges
    +/- 4 kV contact discharges
- Saves the cost of up to six BAT ANT protectors
- Ideal for applications in public transport, mining, water treatment, etc.
- External lightning arrestors needed only where there is a high probability of direct lightning strikes

Integrated ESD protection

Surge-protection integrated into the wireless module

Clear Space® Technology

EIRP [W] of radio standards

Signal	
	Poor SNR
Noise	

WLAN antennas receive all frequencies – leading to a high level of noise at the receiver

☐ WLAN is the weakest radio technology

EIRP [W] of radio standards

Signal	
	Good SNR = fewer packet losses
Noise	

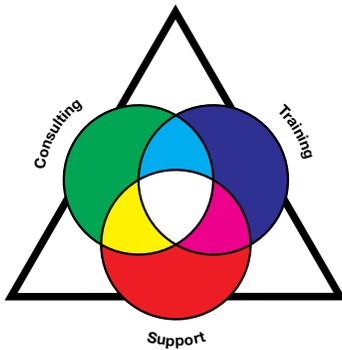- Hirschmann Clear Space® eliminates all the signals that are not needed for WLAN

BAT Surge Protection

eliminates the residual pulse from an external lightning arrestor. Hirschmann offers appropriate accessories for outdoor installations in which antennas, access points and clients are exposed to lightning strikes. You will also find more details of this in our Outdoor Installation Guide at:

e-catalog.beldensolutions.com

Accessories for Problem-free Use of OpenBAT in an Outdoor Environment		
Type	BAT-ANT-Protector m-f	BAT-LAN-Protector IP68
Description	Surge protection for antennas N plug to N socket, frequency range 2 GHz to 6 GHz; attenuation up to 0.2 dB	Overvoltage protector for LAN cables, IP68 housings, RJ45 sockets
Order No.	943 903-373	943 903-374

The Belden® Competence Center

As the complexity of communication and connectivity solutions has increased, so have the requirements for design, implementation and maintenance of these solutions. For users, acquiring and verifying the latest expert knowledge play a decisive role in this. As a reliable partner for end-to-end solutions, Belden offers expert consulting, design, technical support, as well as technology and product training courses from a single source: Belden Competence Center. In addition, we offer you the right qualification for every area of expertise through the world's first certification program for industrial networks. Up-to-date manufacturer's expertise, an international service network and access to external specialists guarantee you the best possible support for products from Belden®, GarrettCom®, Hirschmann™ and Lumberg Automation™.

Irrespective of the technology you use, you can rely on our full support – from the implementation to the optimization of every aspect of daily operations.

About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us at **www.beldensolutions.com** and follow us on **Twitter@BeldenInc.**