



HIRSCHMANN

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Product Bulletin

PB 1070HE

OpenBAT from Hirschmann™

Individually configurable via Internet, the robust access points in the new OpenBAT family guarantee stable WLAN connections, even in the most demanding industrial applications. They can therefore be used as part of communications solutions that were previously the exclusive domain of cable-based networks.



With Clear Space®, ESD protection and the option of integrated high-voltage power supply, the OpenBAT family sets new standards in lifetime operational performance. This also leads to a significant reduction in the total cost of ownership.

- A unique platform concept that permits tailor-made solutions with an optimum price-performance ratio
- Innovative wireless technology that guarantees maximum WLAN availability
- Integrated ESD protection combined with robust hardware ensures high reliability and an extremely long operational lifetime for the access points

The new OpenBAT family comprises of the BAT-R (IP30) and BAT-F (IP65/67) series of WLAN access points, which are fully compatible with the previous BAT54 and BAT300 models from Hirschmann™. Both OpenBAT series have entirely new hardware and operate with HiLCOS. HiLCOS is the most powerful operating system in the automation industry, while providing support for IPv4/6 routing. All OpenBAT devices comply with the IEEE 802.11n WLAN standard – enabling data rates of up to 450 Mbit/s in both the 5 GHz and 2.4 GHz bands by using MIMO antenna technology. This means that the access points – also employable as clients, routers or bridges – can be used to quickly set up meshed networks, wireless distribution systems and point-to-point connections. Also possible are WAN and VPN applications.

Applications

Looking to offer more than 20 industry and country specific certifications, the new family of OpenBAT access points is an ideal solution for WLAN applications. Featuring high-availability data communication and outstanding cost

effectiveness, the OpenBAT access points are ideally suited for rail transport applications. For example, employments for on-board communication as well as along the tracks and in stations; or in harbors, where they guarantee stable connections in environments with other high-power transmitters using different radio technologies. The same also applies to the electrical power industry, whether in power transmission and distribution or in electricity generation from renewable energy sources. Additional areas of employment include oil and gas applications, mechanical engineering, and in the radio broadcasting sector.

Your Benefits

The access points in the OpenBAT family offer an optimum degree of flexibility, while maximizing cost effectiveness. Their modular design permits the configuration of up to 8,000 versions, differing in terms of functions, protocols, WLAN and Ethernet ports, interfaces, power supply, installation concept and certifications. It will also look to offer dedicated versions per country approval like for USA/Canada, Europe, China, Australia, Singapore and many others. This enables you to obtain an access point tailored to your precise individual requirements. Clear Space® technology is included in all versions, which reliably eliminates competing radio frequencies. This guarantees stable WLAN connections at all times. The robust hardware and integrated ESD protection (capable of withstanding electrostatic discharges of up to 25 kV), make the OpenBAT family a model for dependability.

**A new product to serve your needs.
Be certain.**



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OpenBAT Family from Hirschmann™

The access points and clients in the new OpenBAT family can be mounted on DIN rails (BAT-R) or installed on walls or masts in indoor and outdoor (BAT-F) areas. Available with or without conformal coating, the devices have an operating temperature range of 0°C to +60°C or -40°C to +70°C. All versions support the IEEE 802.11n transmission standard and have Public Spot and VPN Gateway as options.

Each access point has one or two wireless modules and Gigabit Ethernet ports with tried and tested M12 connection technology (IP67 version), one of which is configurable as a combo port (fiber optic/twisted pair). A serial M12-RS232 interface and a USB port are also provided. For redundant power supply using potential-free relay contacts, a choice of freely combinable PoE power packs for IEEE 802.3af, 24/48 V DC, 60/120/250 V DC or 110/230 V AC is available.

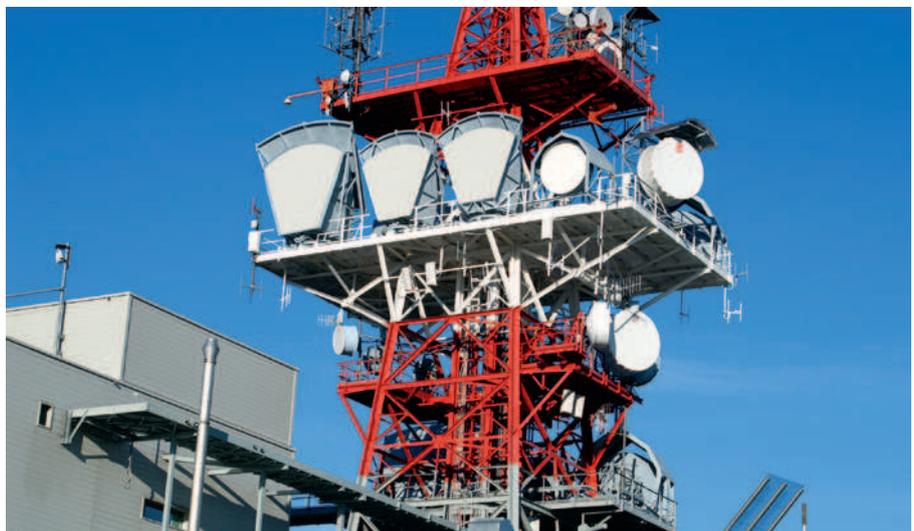
Benefits at a Glance

- A platform concept with more than 8,000 variations – boasts maximum flexibility and cost effectiveness
- Clear Space® guarantees stable wireless connections
- ESD protection and robust hardware ensure access points with high reliability and long operational lifetimes
- High- and low-voltage power supply for AC/DC, plus PoE power pack
- More than 20 industry and country-specific certifications
- HiLCOS operating system with extensive management, redundancy and security functions, as well as IPv4/6 routing
- Data rates of up to 450 Mbit/s in both 5 GHz and 2.4 GHz bands (IEEE 802.11n)
- Interference-proof MIMO antenna technology
- Mountable on DIN rails (BAT-R) or on walls or masts indoors or outdoors (BAT-F)
- Versions with an extended operating temperature range (-40°C to +70°C) and conformal coating
- Tried-and-tested M12 connection technology
- Ideal for use with all Industrial Ethernet switches and routers from Hirschmann™

HiLCOS

The Hirschmann™ BAT Operating System

With HiLCOS, the access points in the OpenBAT family boast the most powerful WLAN operating system in the automation area.





Configurator



OpenBAT Configurations

BAT-R DIN Rail Mountable/BAT-F IP65/67 Housing

B A T - R - E U W 9 9 A W W 9 9 A O 7 T 1 T 9 9 9 H 9 X X . X X . X X X X

Design/Models

BAT-R = DIN rail mountable
BAT-F = IP65/67 housing

Country-Approval*

Other country certifications in preparation.
 Please refer to the online configurator at: www.hirschmann.com

EU = Europe (CE)
US = USA/Canada (FCC/IC) for antennas up to 9 dBi
AU = Australia (C-Tick)

Slot 1

W = WLAN module

Slot 2

W = WLAN module **9** = Not mounted

Slot 3

9 = Not mounted

Client/AP

A = Access Point **C** = Client

Voltage Range 1

C = 18 to 60 V DC **K** = 48 to 320 V DC, 90 to 265 V AC
W = 24 V DC, PoE **P** = PoE

Voltage Range 2

C = 18 to 60 V DC **W** = 24 V DC, PoE
K = 48 to 320 V DC, 90 to 265 V AC **P** = PoE
9 = Not assembled

Approvals 1

F = ANSI/ISA 61010-1 + Class 1 Div2 **K** = Train (EN 50155)
G = ATEX Zone 2 **M** = Vehicles, E1
I = Substation (EN 61850) **9** = No additional approval

Approvals 2

M = Vehicles, E1 **9** = No additional approval
H = USA/Canada (FCC/IC) for antennas higher than 9 dBi

Montage

A = Operator access area indoors **D** = Outdoors
B = Service access area indoors

Gigabit Ethernet 1

O7 = Combo Gigabit Ethernet (BAT-R) **O5** = Combo Gigabit M12/SFP (BAT-F)

Gigabit Ethernet 2

T1 = Twisted Pair/RJ45 (BAT-R) **99** = Not assembled
T6 = Twisted Pair/M12 x-coded (BAT-F)

Temperature Range

S = 0°C to +60°C **E** = -40°C to +70°C, inclusive Conformal Coating
T = -40°C to +70°C

SW-options 1

A = VPN-5 **C** = VPN-100
B = VPN-50 **9** = None

SW-options 2

9 = None

SW-options 3

D = Public Spot **9** = None

Configuration

H = Standard

Implementation

Z = With accessories (antenna, serial cable, etc.) **9** = Without accessories

Software Release

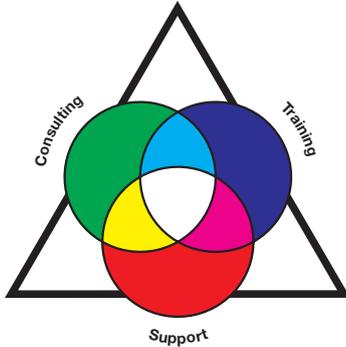
XX.XX.XXXX = SW Release XX.XX.XXXX 08.60.1234 = SW Release 8.6

NOTE: The last three part number categories (**Configuration**, **Implementation** and **Software Release**) are optional.
 *Country-Approval: shows only a partial extract of the existing approvals



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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.

Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who are able to add value to your business. When it comes to signal transmissions, Belden is the number one solutions provider. We understand your business and want to know your specific challenges and targets to see how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our four leading brands, Belden®, GarrettCom®, Hirschmann™ and Lumberg Automation™, we are able to offer the solution you need. Today it may be a single cable, a switch or a connector, thus solving a specific issue; tomorrow it can be a complex range of integrated applications, systems and solutions.

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](https://twitter.com/BeldenInc).