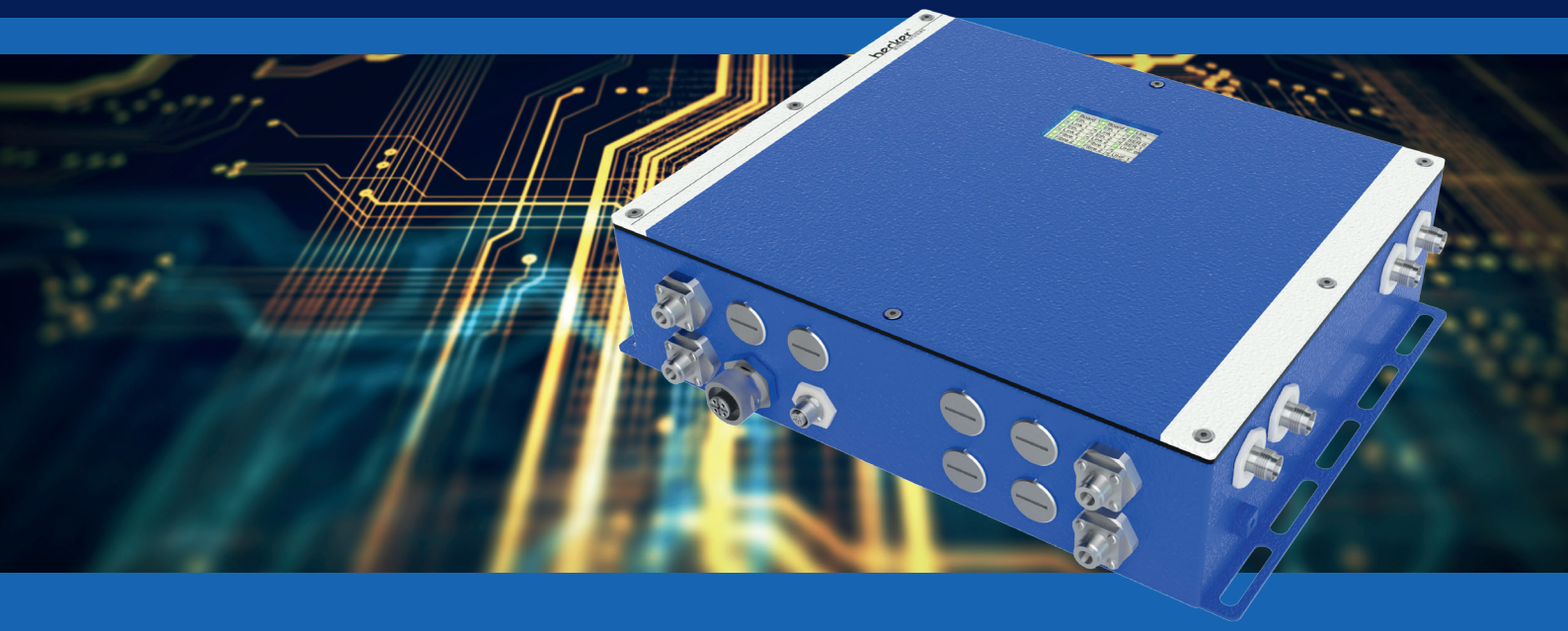
becker®
MINING SYSTEMS



WRAP260

Wireless Router Access Point with Tagging & Tracking

WRAP260 Wireless Router Access Point

The WRAP260 Routers integrate multiple WiFi access points with Tagging and Tracking functions in one system.

The routers are available as double access point with two Gbit fibre ethernet ports (base version). The high end version is a triple access point with four fibre ethernet ports.

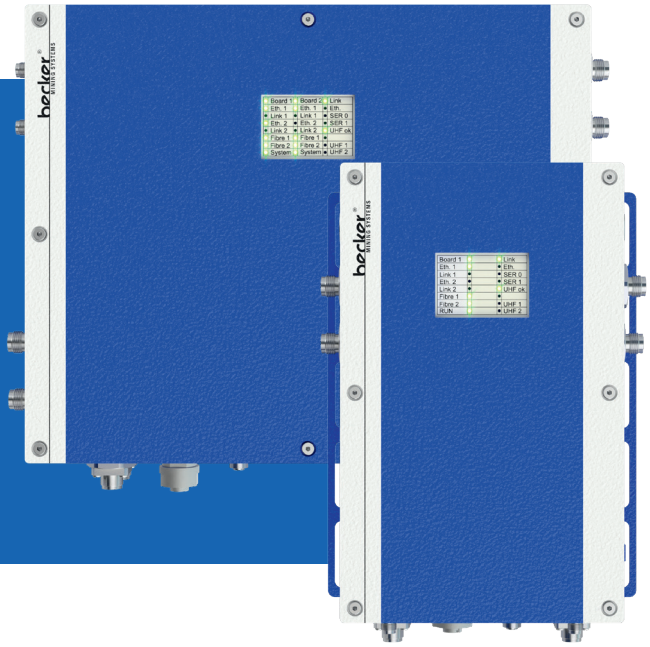
The devices have IP65 or IP67 ingres protection rating for rugged mining applications.

Router Management

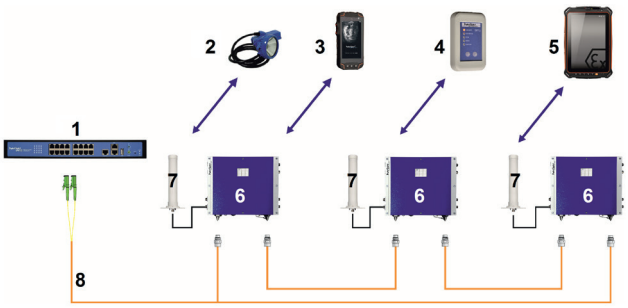
A local LED display shows status information about the different interfaces. The WRAP260 Routers can also be managed remotely via web interface or via PC software.

Big router networks can be managed with tools like CAPsMAN® or UNIMUS®.

- Intrinsically safe Communication System (ia)
- 3 indepent Access Points in one enclosure
- 3 x 300 Mbit/s WiFi
- 4 x 1 Gbit/s fibre Ethernet ports
- 2 Tag readers for Tagging & Tracking (option)
- RS485 Serial interface (option)



Application example



1 Server	5 IS910.M1 Tablet-PC
2 Cap lamp	6 WRAP260
3 IS520.1 Smartphone	7 WiFi antenna
4 TPT3* Personnel TAG	8 Fibre optic cable

Fibre optic device cables

BOS device cables are preassembled fibre optic cables that are designed for use with network devices. The cables are fitted with a connector with anti-kink protection and 2 fibres.

The device cables can also be set up as combination cables (device plug with anti-kink protection at one end and a Y-connector at the other end).

The terminal devices are fitted on the outside with appropriate device sockets. In this way you can set up a network connection without having to open any device.

The cable gland is connected to the cable shell and can be used as a cable pull up to a maximum force of 600 N.

Helical Antenna WHXA 200

The wireless LAN antenna WHXA 200 is designed for maximum communication distance between WRAP260 and client devices.

Gain, directionality and polarization of the WHXA200 antenna are specifically designed for optimal performance in underground enviroments.

UVLA Antenna

The UVLA is an omnidirectional UHF antenna for tagging and tracking purposes. It is robust, IP65 rated and offers a tracking distance of up to 100 m.

The waterproof die-cast enclosure with its galvanized steel baseplate ensures maximum durability in harsh environments.

Customized Services

We support our customers and partners from initial concept to final commissioning and are also at your side with our customized services. Local subsidiaries and distributors ensure fast service support.

Custom System Designs

Every mine is different, so should a system layout be: From energy supply to communication systems and transport solutions. We analyse all the available information and find the best possible solution.

Comprehensive Maintenance & Repair

Not only do we offer year on year support contracts, to keep your operation running - At Becker Mining you can always count on our workshop to overhaul and repair products. No matter how old your products.

Onsite technical assistance

Our technicians can support your team on-site or remotely to get things done right.

Emergency Support

We offer emergency onsite support for our customers. Depending on geographic and travel distance, on-site service can be as quick as 6 hours.

Technical Trainings & Workshops

With your Becker products you can count on technical trainings for all your staff. Depending on your needs we suggest regular workshop onsite and remote to keep technicians up to speed with your Becker products.

Contact Us

Becker Mining Systems accompanies and supports you from the first moment to find the best solution for your needs.

Send an inquiry and contact a sales representative today – we help you and your company to focus on the essentials.

sales@becker-mining.com

Technical Data

Intrinsic safety
ATEX: 20ATEX0012X
IECEx: IECExKDB20.0002

ЕАЭС RU C-DE.МГ07.В.00216/20
IECEx MSC 21.0002X

Mechanical Parameters		
Ambient Temperature Range	-20 °C to 40 °C	
Ingress Protection	Double Router: IP 65/IP 67	Triple Router: IP 65
Height x Width x Depth	Double Router: Approx. 310 x 230 x 106 mm	Triple Router: Approx. 310 x 420 x 106 mm
Weight	Double Router: Approx. 7,5 kg	Triple Router: Approx. 16 kg

Power Requirements		
Supply Voltage	13 V DC to 15 V DC	
Rated power	Double Router: ≤ 13 W	Triple Router: ≤ 19 W

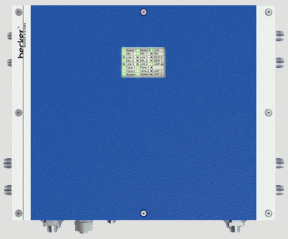
Fibre Optic		
Fiber-Optic interfaces	Double Router: 2	Triple Router: 4
Output Optical Power	-9 dBm to -3 dBm	
Input Optical Power Max	0 dBm	
Input Optical Sensitivity	-24 dBm	
Optical Characteristics	1310 nm single mode, 9/125 µm fibre	
Laser Class	Class 1, complies with EN 60825-1	
Range	Up to 20 km	
Data rates	Up to 1 Gbit/s	

Technical Data

WiFi	
Number of Channels	Max. 14 channels (country dependent)
WiFi Modes	Infrastructure/Bridging/WDS
Communication Standards	IEEE 802.11a/b/g/n, support for up to 2x2 MIMO
Transmit Power	Up to +18 dBm
Receive Sensitivity	Down to -94 dBm
Data Rates	Up to 300 Mbit/s per Access Point
Wireless Interfaces	Double Router: 2 Triple Router: 3
Diagnostics	Local diagnostics indication/Traffic monitor/Bandwidth testing
VLAN	802.1Q
Roaming	Seamless switched roaming
Routing Protocols	OSPF and RIP
Hybrid Wireless Mesh	802.1S

TAG-Reader	
ASK receiver centre frequency	433.92 MHz (±20 ppm)
ASK receiver sensitivity	-90 dBm
ASK receiver baud rate	40 Kbit/s
ASK receiver encoding	NZR PAM – Manchester coding

Technical Data

Designation	Ref	Illustration
WRAP260.1*** Double Router	On Request	
WRAP260.2*** Triple Router	On Request	
Cables Fibre optic device cables	On Request	
Antenna Helical Antenna WHXA 200	On Request	
Antenna UVLA Antenna	On Request	

Becker Mining Systems AG
Walter-Becker-Straße 1
66299 Friedrichsthal
Germany

Tel +49 6897 857-0
Fax +49 6897 857-188

info@becker-mining.com
www.becker-mining.com

Becker Mining Systems AG is a part of the Becker Mining Systems Group of Companies. Technical data are limit values. If the product is integrated into systems or operated in combination with other devices, its permissible operating values can deviate from these limit values. Subject to technical modifications without prior notice. Becker Mining is a trademark of Becker Mining Systems AG.
© 2023 Becker Mining Systems AG or one of its affiliates. Revision 1