

Integrated Radio Masts

Fully camouflaged
Outdoor-Wi-Fi APs in
GRP-lamp poles



Wi-Fi for Cities, Parks, Camping, ...

Outdoor Wi-Fi access network, even of large scale, can easily be set up based on our Integrated Radio Masts.

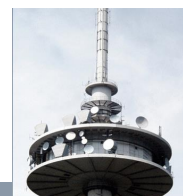
All system components are mounted inside of a standard GRP-lamp pole and are invisible from outside.

Advantages:

- Camouflaged as street lamp, traffic light, road sign, billboard, etc.
- Weather and vandalism proofed
- Any RAL-colour available
- Heights between 4 and 12 meters



Experts in wireless broadband

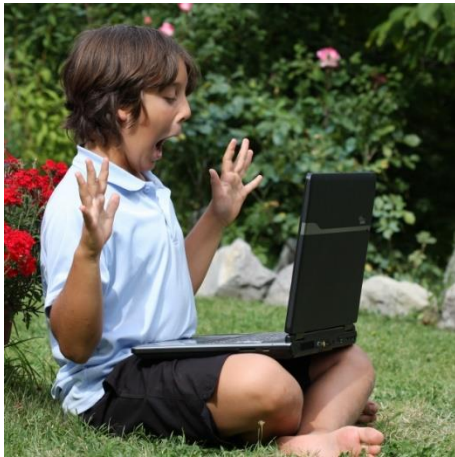


Integrated Radio Masts

The masts are built with Glass-fibre reinforced plastic (GRP). Several mast length of 4 to 12 m including multiple applications for mounting on top (street lights, video surveillance etc.) are available. The system supports a wide frequency range from 400 MHz to 6 GHz and numerous available radio standards incl. Wi-Fi and WiMAX.

Glass-fibre reinforced plastic (GRP) is a composite material from glass and synthetic plastics. It provides an ultra-high life-time and remains free of corrosion. It also is not impacted by weather conditions and is extremely robust.

The Integrated Radio Mast consists of the mast, special designed antennas, and cabling.



By adding the "Active Enabling Kit" the mast becomes a complete Outdoor-AP.

Modular Design

- Integrated Radio Mast including antennas and cables
- "Active Enabling Kit": System technology for access and interconnection
- Optional: External controller, Hotspot Control Set

City-Wi-Fi

City-WiFi networks and wireless networks in outdoor areas can be set up quickly and elegantly with the help of the Integrated Radio Mast, which fully integrates antennas and system components in a lamp pole.

Camping areas

For camping sites the Integrated Radio Mast is the ideal solution, since it unobtrusively provides a full wireless coverage - along with the lighting of the area. In combination with our proven online and offline payment system for internet access we are delivering these networks turnkey.

Logistics

GRP lamp posts are ideal for company's outside area, port facilities and logistics parks due to their robustness and flexibility. With our Integrated Radio Masts the internal corporate IT network can easily be extended to the outside. APs of almost any vendor might be integrated in the masts, which helps to keep the IT-network homogeneous.

Point-to-point connections between the masts extends the network also to apart masts.

Metro-zone

Several antennas inside the masts allow a wide variety of network structures. In particular it enables to separate the infrastructure network from the access network itself - without additional cabling. The access network can be extended to a metro-zone with uninterrupted cell-handover between the poles.

Active Enabling Kit

The "Active Enabling Kit" makes the Integrated Radio Masts a complete wireless AP for outdoor use. Other configurations than the following are possible at any time.

Radio modules (in total 3)

Chipset: Atheros AR9220
 Standards: IEEE802.11a,b,g,n
 Security: Hardware-based 64/128 bit WEP, TKIP and AES-CCM, WPA, WPA2, 802.1x
 Certificates: FCC, EC
 Frequencies: 802.11b/g/n 2.192 – 2.507 (5 MHz step); 802.11a/n 4.920 – 6.100 (5 MHz step)
 Power:
 802.11a/n: 25dBm@6Mbps; 21dBm@54Mbps,17dBm@150Mbps
 IEEE 802.11b/g/n: 25dBm @ 6Mbps; 22dBm@54Mbps,20dBm@150Mbps
 Range temp.: -40°C up to +70°C

Wireless Router

CPU: Atheros AR7161 680 MHz
 RAM: 128 MB DDR SDRAM onboard memory
 Memory: 64 MB onboard NAND memory und microSD interface
 Ethernet interface: 3 x 10/100 Mbit/s Ethernet ports
 Mini PCI interface: 3 x Mini PCI Type IIIA/IIIB slots
 Serial interface: DB9 RS232C
 Voltage supply: 10 - 28V DC or PoE (Power over Ethernet)
 Power consumption: 25 W max.
 Range temp: -30°C up to +60°C

Hotspot Control Set

- Hotspot-system
- Mesh- or Self Backhauling
- Monitoring and NMS
- Authentication via Radius
- User-management, Billing
- Firewall, VPN, QoS



Antennas and system technology can be easily reached by maintenance hatches.

Integrated Radio Mast

Antennas: 1 x Omni 6,6 dBi
 2 x 60° 14 dBi
 Height/length: 4 bis 12 Meter
 Spigot: Ø 76 mm
 Top load: 20 kg max.
 Mast heel: Ø 148 bis 328 mm
 Conicity: Slope 18 mm / m
 Colour default: RAL7035 light grey (all RAL-colours available)
 Certificated: EN 40-7:2002

The masts can be entrenched, bolted, or be provided on foundation.

Mast Supplements

- Lights (incl. LED) and light sources
- Brackets for plenum boxes and tilting joints

We select the system technology exactly according to your requirements.

Amusement parks & fairs

At many local limited areas like amusements parks, malls, or fairs visitors looking for local information. Although there is typically a system of signs and information tables but visitors expect nowadays more support.

Apps with access to the exact location with a precision down to 2 m provide tailored offers and information. Also social networks are brought directly to the customer. Showing the actual local position for friends and family as well as telling them, where right now a special promotion is happen is bringing real benefits to the customer.

Local Wi-Fi networks are a perfect medium to bring local information directly to the customer.

bips.infotain provides the service for the Wi-Fi network directly to the smartphone of the customer.



Also offered by us

- Design and implementation of Wi-Fi networks
- Site Surveys
- Location based services and apps for limited areas, incl. In- & Outdoor Navigation

About brown-iposs

Founded in 2006 brown-iposs possess know-how of many years in the area of planning, optimising, engineering, and operating mobile broadband networks. In-depth experience with carriers and providers gives a portfolio of consultancy, well-proven software, and specially developed products. In its own WiFi-testing network bips.net new products, technologies, and services are evaluated permanently.

Brown-iposs has executed many projects for about 50 customers all over the world with LTE, UMTS, GSM, WiMAX, WiFi, Microwave link systems and proprietary radio systems.

brown-iposs is supporting you also in non-standard technologies.

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