

# Data sheet SmartLabel & AccessPoint

## SmartLabel

Dimension (mm)	80 x 36 x 16
Display technology	Full graphic E-ink
Active display area (mm)	48.6 x 23.8
Pixel colors	black, white & red ● ○ ●
Viewing angle	nearly 180°
Operating frequency	2.400-2.480 GHz, maximum EIRP ≤ 10 mW
UV Light Resistance	color change of housing materials
Humidity	Relative humidity 80-95% during 48 hours
Flammability UL94-HB	slow burning of back cover and front cover material (PA 757, Standard HB) slow burning of transparent front lense material (PMMA, Standard HB)
Resistance against barometric pressure differences	No loss of function due to pressure differences caused by air transport
Storage temperature	From -20 C° to 60 C° for max. 24h
Operating temperature	From 10°C to 40°C
Humidity	relative humidity of up to 80% (not-condensing)
Mechanical resistance	0.8-1m drop test onto a concrete floor without loss of function
Battery*	Lithium manganese dioxide button cell battery Lifetime estimation <ul style="list-style-type: none"> <li>▪ Supermarket: 5 years</li> <li>▪ Point of Use: 3 years</li> </ul>
Compliance	CE, ROHS, FCC/IC
Recycling	Housing is completely recyclable

\*if SmartLabels are stored for more than 0.5 – 1 year the estimated battery lifetime of 5 years cannot likely be reached. In addition, more than 20 updates per day can lead to a battery damage.

## AccessPoint

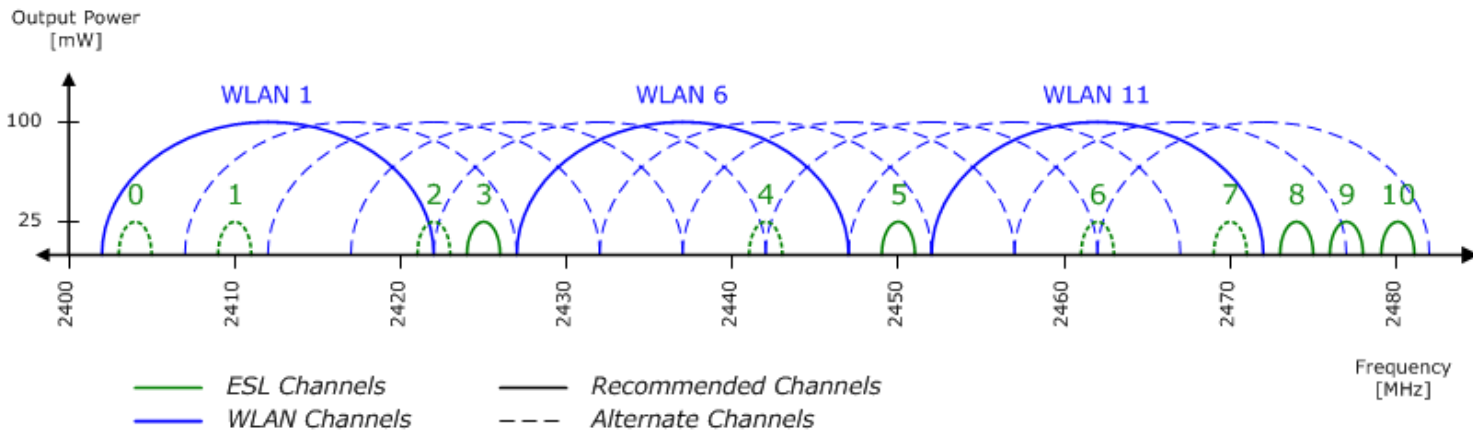
The Access Point is the communication center that transmits the information to the SmartLabel. The self-organizing network allows automatic label roaming without manual handling. The high transmission rate and the intelligent task scheduling enables fast and secure updates on SmartLabel.

Network interface	10/100 Mbit Ethernet RJ-45
Power Supply	5V DC / 3A external power supply or PoE
Power consumption	5 W (typical)
Dimensions (mm)	196 x 135 x 45
Weight	350g with antenna
Antenna	DA-24-01, 5 dBi antenna
Transmission rate	2.4 GHz wireless technology
Transmission range	~20 meters indoors (about 1250 m <sup>2</sup> )
Wireless channels	11 non-overlapping channels available (2400 to 2480 MHz)
Status LED	Multi-colored, shows current operating state
Encryption	128-bit AES with secure key exchange
Labels supported	Up to 10'000 labels per Access Point
Operating temperature	0°C – 40°C
Mounting	Mounting kit available
Compliance	CE; ROHS



## AccessPoint ESL Channels

There are 11 non overlapping ESL channels reserved for the communication with the SmartLabels. Five of these ESL channels **do not interfere** with typical WLAN installations and should therefore be favored. These are the **ESL channels 3, 5, 8, 9 and 10** and they should be selected if there is a WLAN installation on the WLAN channels 1, 6 and 11.



### Specifications:

- Proprietary radio and transmission protocol 2.4 GHz ISM Band
- 1 MHz bandwidth
- Output power: 25mW / ~14dBm
- Channel frequencies [MHz]: 2404, 2410, 2422, 2425, 2442, 2450, 2462, 2470, 2474, 2477, 2480