SENCITY®LINK

Application Note

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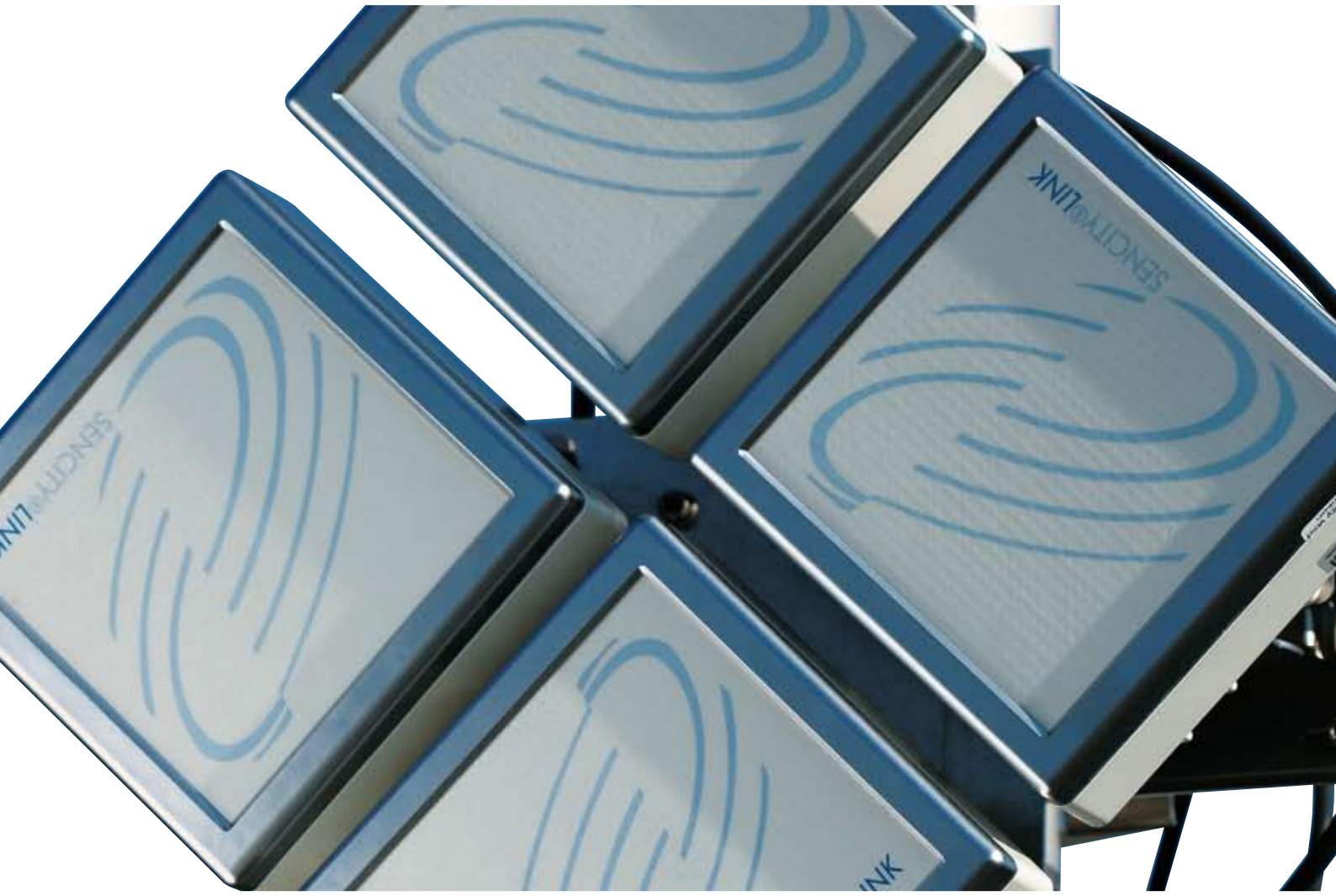
Excellence in Connectivity Solutions

Operating up to four parallel SL60 links

SENCITY®LINK operates as a point-to-point wireless Ethernet bridge with a data rate of 100 Mbps full duplex. The link can overcome distances of up to 800m. Measuring only 16cm x 16cm, its compact size is attained by extensively integrating the active and passive components.The wireless Ethernet bridge operates as a data link in the 60 GHz unlicensed band.



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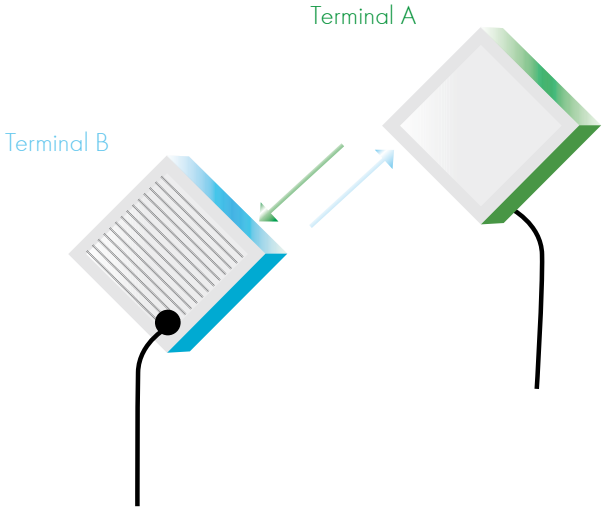
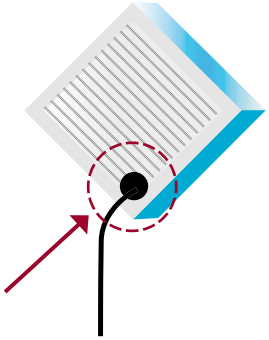
Frequency utilization of SL60

SENCITY®LINK 60 is a full duplex system, which uses the frequency division duplex (FDD) method. Frequency duplex means that the radio transmitter and receiver operates at different frequencies. Therefore each SL60 link consists of an A and a B terminal. The A and B terminals are differentiated by their receiver (respectively their transmitter) frequencies. One is transmitting data at a predefined frequency, while the other is receiving data at the same frequency (and vice versa)



Polarization aspects of SL60

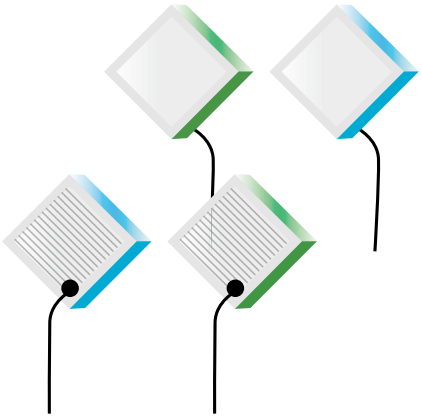
One of the passive components of the system.
The antenna – has an important impact on how one has to install the SENCITY®LINK system.
The cable connection point at the terminal defines the direction of the polarization. Since the used antenna is linearly polarized, the two terminals belonging to one link have to be polarized the same way.



Operation of two parallel links

The operation of two links in parallel is as easy as this: Use frequency diversity.

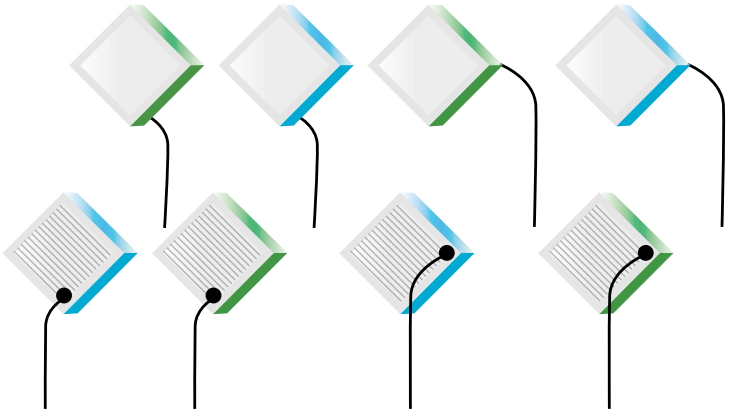
On the second link switch the terminal A with the terminal B.



Operation of four parallel links

To operate four parallel links, one has to use frequency diversity in a first step. In a second step polarization diversity has to be applied.

1. Make two link pairs: Link pair one/two and link pair three/four.
2. Apply frequency diversity to the links one/two.
3. Apply frequency diversity to the links three/four.
4. Apply polarization diversity to the links three/four: Rotate each unit of the link pair three/four at 45 degrees.



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