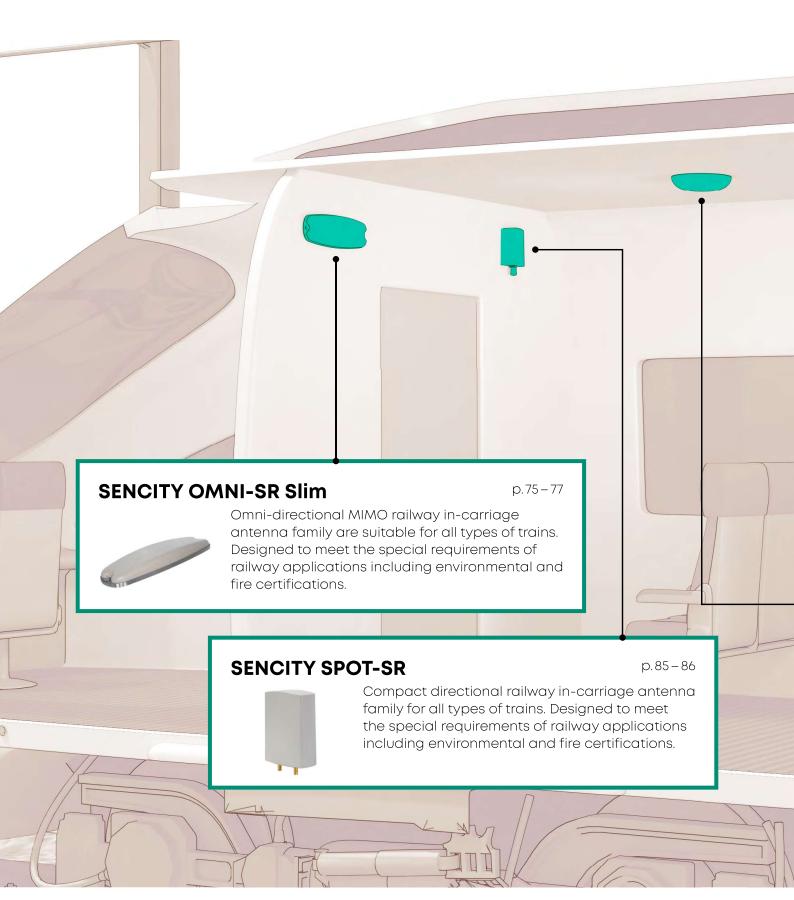
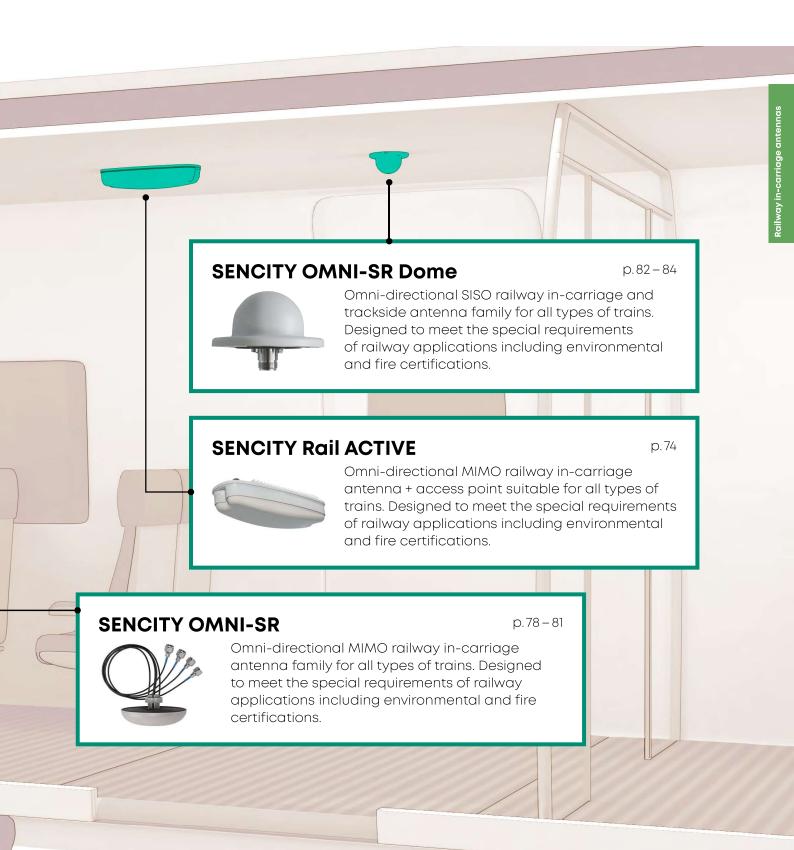


Railway in-carriage antennas

HUBER+SUHNER offers a comprehensive portfolio of antennas for installation inside trains, covering all Wi-Fi bands, as well as cellular services.





SENCITY Rail ACTIVE In-Carriage



Product name	SENCITY Rail ACTIVE In-Carriage antenna
Product ID.	1499.00.0015
Description	Omnidirectional railway in-carriage antenna with integrated Wi-Fi access point. Power and data via a single PoE+ cable. Can be used as an all-in-one Access Point in high capacity Railway passenger Wi-Fi systems
	Contains 2×3×3 MIMO Wi-Fi 5 radios connected to 6 antenna elements Embedded GNSS antenna with integrated low-noise amplifier
	· Supports up to 128 clients per radio
	· Flush wall/ceiling mounting and compact form factor
	· Certified for railway standards EN 50155, EN 45545-2 and NFPA-130
	 Compact form factor allows easy deployment of Wi-Fi systems on trains, no RF cables required
Item no.	85167405

Communication Services			
Supported Bands	Wi-Fi-5	Wi-Fi-5 802.11ac Wave 1, 3×3 MU-MIMO (5150 – 5825 MHz) 802.11n Wave 1 (2412 – 2472 MHz)	
Note	Integrated	d Wi-Fi Radio Modules: Compex© WLE900VX	
Electrical data			
Processor	QorlQ T10:	23 1200 MHz Dual-Core CPU	
Memory	1GB RAM /	128MB Flash storage	
Operating System	Linux OS C)penWrt	
Ethernet	1 × LAN M1:	2 X-code female 300mm pigtail, PoE+ Class 4 (802.3at)	
Mechanical data			
Dimensions (mm) (height × width × depth)	99 × 289 × 69 (including mounting points and cooling fins)		
Weight (kg)	1.20 (without packaging)		
Environmental data			
Environmental conditions	indoor		
IP rating	IP5X, IPX4		
RoHS 2011/65/EU	compliant		
Certifications	EN 50155, EN45545, NFPA-130, EN50121-3-2, RED – 2014/53/EU, FCC Title 47 CFR Part 15B		
Material data			
Radome colour	RAL 9003 (Signal White)		
Radome material	PC (Polycarbonate)		
Back plate / base plate material	Aluminum		

SENCITY Omni-SR Slim



Product name	SENCITY Omni-SR 6×6 MIMO antenna
Product ID.	1399.35.0020
Description	Omnidirectional 6×6 MIMO railway in-carriage antenna suitable for all types of trains. Designed to be used as the wireless interface in Wi-Fi communication systems such as Railway passenger Wi-Fi
	Compact omni-directional MIMO indoor antenna for Wi-Fi applications Supports 6×6 Wi-Fi MIMO in all Wi-Fi 6E bands Rugged design, meets EN 50155 railway standard Fire retardant according to EN 45545-2 and NFPA130 Contains six RF ports QMA (female) embedded on the rear side
Item no.	85150815

Technical Data	Band 1	Band 2	Band 3
Band name	Wi-Fi	Wi-Fi	Wi-Fi
Frequency	2400 – 2690 MHz	5150 – 5935 MHz	5935 – 7125 MHz
VSWR	2.0	2.0	2.0
Gain	4 dBi	4 dBi	4 dBi
Port Isolation	12 dB	20 dB	20 dB

Electrical data	
Impedance	50 Ohms
Number of Ports	6
Composite power max.	30 – 40 Watts (see datasheet for specific bands)
Polarisation	Vertical

Mechanical data	
Dimensions (height × width × depth)	31 × 91.8 × 281.8 mm
Weight	0.32 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IPX5
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data	
Radome colour	RAL 7044 (grey)
Radome material	PC (Polycarbonate)
Back plate / base plate material	Aluminum

SENCITY Omni-SR Slim



Product name	SENCITY Omni-SR 3×3 MIMO antenna
Product ID.	1399.35.0002
Description	Omnidirectional 3×3 MIMO railway in-carriage antenna suitable for all types of trains. Designed to be used as the wireless interface in Wi-Fi communication systems such as Railway passenger Wi-Fi
	Compact omni-directional MIMO indoor antenna for Wi-Fi applications Supports 3×3 Wi-Fi MIMO in all Wi-Fi 6E bands Rugged design, meets EN 50155 railway standard Fire retardant according to EN 45545-2 and NFPA130 Contains three RF ports QMA (female) embedded on the rear side
Item no.	84123697

Technical Data	Band 1	Band 2	Band 3
Band name	Wi-Fi	Wi-Fi	Wi-Fi
Frequency	2400 – 2690 MHz	5150 – 5935 MHz	5935 – 7125 MHz
VSWR	1.5	1.5	1.8
Gain	4 dBi	6 dBi	6 dBi
Port Isolation	20 dB	20 dB	20 dB

Electrical data		
Impedance	50 Ohms	
Number of Ports	3	
Composite power max.	30 – 40 Watts (see datasheet for specific bands)	
Polarisation	Vertical	

Mechanical data	
Dimensions (height × width × depth)	31 × 91.8 × 281.8 mm
Weight	0.32 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IPX5
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data		
Radome colour	RAL 7044 (grey)	
Radome material	PC (Polycarbonate)	
Back plate / base plate material	Aluminum	

SENCITY Omni-SR Slim



Product name	SENCITY Omni-SR 3×3 MIMO antenna
Product ID.	1399.35.0008
Description	Omnidirectional 3×3 MIMO railway in-carriage antenna suitable for all types of trains. Designed to be used as the wireless interface in Wi-Fi communication systems such as Railway passenger Wi-Fi
	Compact omni-directional MIMO indoor antenna for Wi-Fi applications Supports 3×3 Wi-Fi MIMO in all Wi-Fi 6E bands Rugged design, meets EN 50155 railway standard Fire retardant according to EN 45545-2 and NFPA130 Contains three RF ports QMA (female) embedded on the rear side
Item no.	85089336

Technical Data	Band 1	Band 2	Band 3
Band name	Wi-Fi	Wi-Fi	Wi-Fi
Frequency	2400 – 2690 MHz	5150 – 5935 MHz	5935 – 7125 MHz
VSWR	1.5	1.5	1.8
Gain	4 dBi	6 dBi	6 dBi
Port Isolation	20 dB	20 dB	20 dB

Electrical data		
Impedance	50 Ohms	
Number of Ports	3	
Composite power max.	30 – 40 Watts (see datasheet for specific bands)	
Polarisation	Vertical	

Mechanical data	
Dimensions (height × width × depth)	31 × 91.8 × 281.8 mm
Weight	0.32 kg

Environmental data		
Environmental conditions	Indoor / outdoor	
IP rating	IPX5	
RoHS 2011/65/EU	compliant	
Certifications	EN 50155, EN45545, NFPA 130	

Material data	
Radome colour	RAL 9010 (white)
Radome material	PC (Polycarbonate)
Back plate / base plate material	Aluminum

SENCITY Omni-SR



Product name	SENCITY Omni-SR 4×4 MIMO antenna
Product ID.	1399.17.0240
Description	Omnidirectional 4×4 MIMO railway in-carriage antenna suitable for all types of trains. Designed to be used as the wireless interface in Wi-Fi or Cellular Mid-Band communication systems
	Supports 4×4 WiFi MIMO in Wi-Fi 4 / Wi-Fi 6 bands & 4×4 Cellular MIMO in 2.3 / 2.6 / 3.5 GHz bands Rugged design, meets EN 50155 railway standard Fire retardant according to EN 45545-2 and NFPA-130 Single hole mounting Cable length 0.5m
Item no.	85078396

Technical Data	Band 1	Band 2	Band 3	Band 4
Band name	Wi-Fi	Wi-Fi	Cellular / Wi-Fi	Wi-Fi
Frequency	2300 – 2500 MHz	2500 – 2690 MHz	3400 – 3800 MHz	4900 – 5975 MHz
VSWR	1.7	1.8	1.8	1.5
Gain	3.5 dBi	3.5 dBi	5 dBi	4.5 dBi
Port Isolation	15 dB	16 dB	25 dB	30 dB

Electrical data	
Impedance	50 Ohms
Number of Ports	4
Composite power max.	10 Watts
Polarisation	Vertical

Mechanical data	
Dimensions (height × diameter)	33.2 × 145
Weight	0.9 kg

Environmental data		
Environmental conditions	Indoor / outdoor	
IP rating	IP6X, IPX4, IPX8, IPX9	
RoHS 2011/65/EU	compliant	
Certifications	EN 50155, EN45545, NFPA 130	

Material data		
Radome colour	RAL 7044 (grey)	
Radome material	PC (Polycarbonate)	
Back plate / base plate material	Aluminum	

SENCITY Omni-SR



Product name	SENCITY Omni-SR 4×4 MIMO antenna
Product ID.	1399.17.0246
Description	Omnidirectional 4×4 MIMO railway in-carriage antenna suitable for all types of trains. Designed to be used as the wireless interface in Wi-Fi or Cellular Mid-Band communication systems
	Supports 4×4 WiFi MIMO in Wi-Fi 4 / Wi-Fi 6 bands & 4×4 Cellular MIMO in 2.3 / 2.6 / 3.5 GHz bands Rugged design, meets EN 50155 railway standard Fire retardant according to EN 45545-2 and NFPA-130 Single hole mounting Cable length 1.5m
Item no.	85087896

Technical Data	Band 1	Band 2	Band 3	Band 4
Band name	Wi-Fi	Wi-Fi	Cellular / Wi-Fi	Wi-Fi
Frequency	2300 – 2500 MHz	2500 – 2690 MHz	3400 – 3800 MHz	4900 – 5975 MHz
VSWR	1.7	1.8	1.8	1.5
Gain	1 dBi	1.5 dBi	3 dBi	3.5 dBi
Port Isolation	15 dB	15 dB	30 dB	35 dB

Electrical data		
Impedance	50 Ohms	
Number of Ports	4	
Composite power max.	10 Watts	
Polarisation	Vertical	

Mechanical data	
Dimensions (height × diameter)	33.2 × 145
Weight	0.92 kg

Environmental data		
Environmental conditions	Indoor / outdoor	
IP rating	IP6X, IPX4, IPX8, IPX9	
RoHS 2011/65/EU	compliant	
Certifications	EN 50155, EN45545, NFPA 130	

Material data		
Radome colour	RAL 7044 (grey)	
Radome material	PC (Polycarbonate)	
Back plate / base plate material	Aluminum	

SENCITY Omni-SR



Product name	SENCITY Omni-SR 4×4 MIMO antenna
Product ID.	1399.35.0010
Description	Omnidirectional 4×4 MIMO railway in-carriage antenna suitable for all types of trains. Designed to be used as the wireless interface in Wi-Fi or Cellular Mid-Band communication systems such as Railway in-carriage
	Supports 4×4 WiFi MIMO in Wi-Fi 4 / Wi-Fi 6 bands & 4×4 Cellular MIMO in 2.3 / 2.6 / 3.5 GHz bands Rugged design, meets EN 50155 railway standard Fire retardant according to EN 45545-2 and NFPA-130 Single hole mounting Cable length 1.5m
Item no.	85097487

Technical Data	Band 1	Band 2	Band 3	Band 4
Band name	Wi-Fi	Wi-Fi	Cellular / Wi-Fi	Wi-Fi
Frequency	2300 – 2500 MHz	2500 – 2690 MHz	3400 – 3800 MHz	4900 – 5975 MHz
VSWR	1.7	1.8	2.0	1.5
Gain	1 dBi	1.5 dBi	3 dBi	3.5 dBi
Port Isolation	15 dB	15 dB	30 dB	35 dB

Electrical data		
Impedance	50 Ohms	
Number of Ports	4	
Composite power max.	10 Watts	
Polarisation	Vertical	

Mechanical data	
Dimensions (height × diameter)	33.2 × 145
Weight	0.64 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IP6X, IPX4, IPX8, IPX9
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data	
Radome colour	RAL 7044 (grey)
Radome material	PC (Polycarbonate)
Back plate / base plate material	Aluminum

SENCITY Omni-SR



Product name	SENCITY Omni-SR 4×4 MIMO antenna
Product ID.	1399.17.0264
Description	Omnidirectional 2×2 MIMO railway in-carriage antenna suitable for all types of trains. Designed to be used as the wireless interface in Wi-Fi or Cellular communication systems such as Railway in-carriage
	Supports 2×2 WiFi MIMO in all Wi-Fi 6E bands or 2×2 Cellular MIMO in 800 / 900 /1800 / 2100 / 2600 MHz bands Rugged design, meets EN 50155 railway standard Fire retardant according to EN 45545-2 and NFPA-130 Single hole mounting Cable length 0.5m
Item no.	85127817

Technical Data	Band 1	Band 2	Band 3
Band name	Cellular / Wi-Fi	Cellular / Wi-Fi	Cellular / Wi-Fi
Frequency	790 – 900 MHz	900 – 960 MHz	1710 – 1750 MHz
VSWR	2.0	2.3	2.3
Gain	4 dBi	4 dBi	4 dBi
Port Isolation	15 dB	15 dB	30 dB
	Band 4	Band 5	Band 6
Band name	Cellular / Wi-Fi	Cellular / Wi-Fi	Cellular / Wi-Fi
Frequency	1750 – 2700 MHz	4900 – 6425 MHz	6425 – 7125 MHz
VSWR	1.8	1.5	2.2
Gain	6 dBi	6 dBi	6 dBi

Electrical data	
Impedance	50 Ohms
Number of Ports	2
Composite power max.	10 Watts
Polarisation	Vertical

Mechanical data	
Dimensions (height × diameter)	33.2 × 145
Weight	0.9 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IP6X, IPX4, IPX8, IPX9
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data	
Radome colour	RAL 7044 (grey)
Radome material	PC (Polycarbonate)
Back plate / base plate material	Aluminum

SENCITY Omni-SR Dome



Product name	SENCITY Omni-SR Dome antenna
Product ID.	1399.17.0106
Description	Omnidirectional SISO railway in-carriage antenna suitable for all types of trains. Designed to be used as the wireless interface in in-carriage data communication systems
	Compact Omnidirectional in-carriage antenna for all Wi-Fi 6E bands (2.4 GHz / 5GHz / 6 GHz) Rugged design, meets EN 50155 Railway Standard
	and IP65 rating • Fire retardant according to EN 45545-2 and NFPA-130 • Protection against lightning • Integrated N female interface
Item no.	84039156

Technical Data	Band 1	Band 2	Band 3
Band name	Cellular / Wi-Fi	Cellular / Wi-Fi	Cellular / Wi-Fi
Frequency	2400 – 2500 MHz	2500 – 2700 MHz	3400 – 3800 MHz
VSWR	1.8	2.0	2.0
Gain	6 dBi	6 dBi	6 dBi
	Band 4	Band 5	
Band name	Cellular / Wi-Fi	Cellular / Wi-Fi	
Frequency	4900 – 5925 MHz	5925 – 7125 MHz	
VSWR	1.8	1.9	

Electrical data	
Impedance	50 Ohms
Number of Ports	1
Composite power max.	300 - 350 Watts
Polarisation	Vertical

Mechanical data	
Dimensions (height × diameter)	43 × 86 mm
Weight	0.3 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IP6X, IPX5
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data		
Radome colour	RAL 7035 (light grey)	
Radome material	PC (Polycarbonate)	
Back plate / base plate material	Aluminum	

SENCITY Omni-SR Dome



Product name	SENCITY Omni-SR Dome antenna
Product ID.	1399.17.0108
Description	Omnidirectional SISO railway outdoor antenna for all types of trains. Designed to be used as the wireless interface in Wi-Fi or C-Band communication systems.
	 Compact Omnidirectional outdoor antenna for Wi-Fi 6E bands (2.4 GHz / 5GHz / 6 GHz) & industrial 5G (3.5 GHz)
	 Rugged design, meets EN 50155 Railway Standard and IP68 rating
	· Fire retardant according to EN 45545-2 and NFPA-130
	· Protection against lightning
	·Integrated N female interface
Item no.	84040934

Technical Data	Band 1	Band 2	Band 3
Band name	Cellular / Wi-Fi	Cellular / Wi-Fi	Cellular / Wi-Fi
Frequency	2400 – 2500 MHz	2500 – 2700 MHz	3400 – 3800 MHz
VSWR	1.8	2.0	2.0
Gain	6 dBi	6 dBi	6 dBi
	Band 4	Band 5	
Band name	Band 4 Cellular / Wi-Fi	Band 5 Cellular / Wi-Fi	
Band name Frequency			
-	Cellular / Wi-Fi	Cellular / Wi-Fi	

Electrical data	
Impedance	50 Ohms
Number of Ports	1
Composite power max.	300 - 350 Watts
Polarisation	Vertical

Mechanical data	
Dimensions (height × diameter)	50.6 × 86 mm
Weight	0.3 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IP6X, IPX7, IPX8
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data		
Radome colour	RAL 7043 (dark grey)	
Radome material	ASA (acrylic ester-styrene-acrylonitrile)	
Back plate / base plate material	Stainless Steel	

SENCITY Omni-SR Dome



Product name	SENCITY Omni-SR Dome antenna	
Product ID.	1399.17.0111	
Description	Omnidirectional SISO railway outdoor antenna for all types of trains. Designed to be used as the wireless interface in Wi-Fi or C-Band communication systems.	
	· Compact Omnidirectional outdoor antenna for Wi-Fi 6E bands (2.4 GHz / 5GHz / 6 GHz) & industrial 5G (3.5 GHz)	
	Rugged design, meets EN 50155 Railway Standard and IP68 rating	
	· Fire retardant according to EN 45545-2 and NFPA-130	
	· Protection against lightning	
	·Integrated N female interface	
Item no.	84043908	

Technical Data	Band 1	Band 2	Band 3
Band name	Cellular / Wi-Fi	Cellular / Wi-Fi	Cellular / Wi-Fi
Frequency	2400 – 2500 MHz	2500 – 2700 MHz	3400 – 3800 MHz
VSWR	1.8	2.0	2.0
Gain	6 dBi	6 dBi	6 dBi
	Band 4	Band 5	
Band name	Cellular / Wi-Fi	Cellular / Wi-Fi	
Frequency	4900 – 5925 MHz	5925 – 7125 MHz	
VSWR	1.8	1.9	
Gain	8 dBi	8 dBi	

Electrical data	
Impedance	50 Ohms
Number of Ports	1
Composite power max.	300 - 350 Watts
Polarisation	Vertical

Mechanical data	
Dimensions (height × diameter)	50.6 × 86 mm
Weight	0.3 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IP6X, IPX7, IPX8
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data		
Radome colour	RAL 7043 (dark grey)	
Radome material	ASA (acrylic ester-styrene-acrylonitrile)	
Back plate / base plate material	Stainless Steel	

SENCITY Spot-SR



Product name	SENCITY Spot-SR 2×2 Wi-Fi MIMO antenna
Product ID.	1356.17.0089
Description	Compact directional high gain Wi-Fi antenna designed to meet harsh industrial requirements. Designed to be used as the wireless interface for Wi-Fi 5 GHz directional systems such as Railway Trackside
	Compact Industrial antenna for Wi-Fi bands between 4900 and 5935 MHz Gain of 14 dBi with dual slant +/-45° polarization Half power beamwidth of 30° (vertical) and 40° (Horizontal) Wall and Mast mounting brackets included Integrated N female interfaces
Item no.	85174126

Technical Data	Band 1	Band 2	Band 3
Band name	Wi-Fi	Wi-Fi	Wi-Fi
Frequency	4900 – 5150 MHz	5150 – 5470 MHz	5470 – 5935 MHz
VSWR	2.0	1.6	1.6
Gain	11.5 dBi	12.5 dBi	13 dBi
Isolation	19	20	21

Electrical data	
Impedance	50 Ohms
Number of Ports	2
Composite power max.	30 Watts
Polarisation	Dual slant (-45 degrees and + 45 degrees)

Mechanical data	
Dimensions (height × width × depth)	101 × 81 × 36mm
Weight	0.11 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IP6X, IPX6, IPX7
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data	
Radome colour	RAL 7044 (grey)
Radome material	PC (Polycarbonate)

SENCITY Spot-SR



Product name	SENCITY Spot-SR 2×2 Wi-Fi MIMO antenna
Product ID.	1356.35.0089
Description	Compact directional high gain Wi-Fi antenna designed to meet harsh industrial requirements. Designed to be used as the wireless interface for Wi-Fi 5 GHz directional systems such as Railway Trackside
	Compact Industrial antenna for Wi-Fi bands between 4900 and 5935 MHz Gain of 14 dBi with dual slant +/-45° polarization Half power beamwidth of 30° (vertical) and 40° (Horizontal) Well and Most pounting brackets included
	Wall and Mast mounting brackets included Integrated QMA female interface
Item no.	85150814

Technical Data	Band 1	Band 2	Band 3
Band name	Wi-Fi	Wi-Fi	Wi-Fi
Frequency	4900 – 5150 MHz	5150 – 5470 MHz	5470 – 5935 MHz
VSWR	2.0	1.6	1.6
Gain	11.5 dBi	12.5 dBi	13 dBi
Isolation	19	20	21

Electrical data	
Impedance	50 Ohms
Number of Ports	2
Composite power max.	30 Watts
Polarisation	Dual slant (-45 degrees and + 45 degrees)

Mechanical data	
Dimensions (height × width × depth)	101 × 81 × 36mm
Weight	0.11 kg

Environmental data	
Environmental conditions	Indoor / outdoor
IP rating	IP6X, IPX6, IPX7
RoHS 2011/65/EU	compliant
Certifications	EN 50155, EN45545, NFPA 130

Material data	
Radome colour	RAL 7044 (grey)
Radome material	PC (Polycarbonate)

HUBER+SUHNER AG Wireless connectivity Degersheimerstrasse 14 9100 Herisau Switzerland Phone +41 71 353 41 11 hubersuhner.com

HUBER+SUHNER is certified to ISO 9001, ISO 14001, ISO 45001, EN/AS 9100, IATF 16949 and ISO/TS 22163-IRIS.

Waiver

The facts and figures provided herein are for information only and do not represent any warranty of any kind.