



Pushing Performance



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## HARTING Ha-VIS RFID System Components

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Real-time information and the close synchronization of computer data and real processes play a critical role in process management and process optimization. Ensuring that information precisely maps and concurs with reality is the only way to control processes optimally and reap savings potentials accordingly.

One important prerequisite for guaranteeing that data and processes are synchronized is an intelligent infrastructure that makes data transparent and available throughout a company in order to achieve the maximum savings potentials.

RFID offers you the full potential to create intelligent infrastructures: benefit from the simultaneous identification of up to several hundred objects – without the need for the direct line of sight as required by barcode solutions. The collected data are immediately ready for further processing throughout the company.

Moreover, a transponder can be used to store information directly on the product at the same time it is identified. This means that these data are also always available wherever the product may happen to be located.

HARTING offers smart infrastructure solutions based on optimally coordinated components from a single source. These solutions enable the reliable control and steering of production and business processes, thereby resulting in lower costs.

The HARTING RFID Reader and components have been designed for harsh industrial applications. Deployed in the transportation, machinery and energy markets, HARTING RFID components guarantee secure and reliable information processing – also under the most challenging environmental conditions.



### HARTING Smart Infrastructure Solutions

Real time information and the close synchronization of the virtual data world and the real process world play a crucial role in process management and process optimization. Information constitutes the basis of decisions.

Missing information is detrimental here, while information that is present in the company but that remains hidden due to incompatible and impermeable infrastructures is even more damaging as this costs money without being able to return the full benefits.



#### Material tracking Ha-VIS RFID SL 89 (MT)

- > 4-m range
- Functions when integrated into metal
- Low space requirements



#### Networking of the automation application Ha-VIS FTS 3100-A

- Ethernet Switch with Fast Track Switching technology
- Determinism with Standard Ethernet
- Preference given to automation data



#### Flexible use in the industrial environment Ha-VIS RF-R500 RFID reader

- Use in switch cabinet on DIN rail
- Installation directly on cross arms thanks to rugged aluminum housing
- Up to IP 64 with protection cap, otherwise IP 53



#### Rugged Ha-VIS RF-ANT-LR10 UHF RFID antenna with very short read range

- Protection class IP 67
- Optimized for near-field applications
- Identification of tools in machines or ensuring the correct positioning of objects, for example



#### Tool management / maintenance Ha-VIS RFID VT 89 (HT)

- > 2,5 m range on metal in connection with highly compact footprint
- Variable installation possibilities
- Especially resistant to heat, chemicals, such as during autoclaving



#### Ha-VIS RFID CS/CF 89 (NT)

- Also readable in damp environments
- Rugged housing
- EPC C1 Gen2 compatibility
- Protection class IP 69K
- Expanded memory



**RFID out of the Box-Lösung  
Complete RFID system**

- incl. RFID reader, switch, protection against overvoltage, and power supply
- Protection class IP65
- Customer specific configurations possible
- Robust housing



**Measuring device administration for calibration**

- >4m range
- Function in metal guaranteed
- Compact space requirements



**Finished part monitoring in building management**

Monitoring of static characteristics in prefabricated building parts using RFID technology



**Automatic process mapping using RFID reader  
Ha-VIS RF-R500**

- Read range to 16 m
- 4 antennas can be connected
- Up to IP 64 with protection cap



**Localization of transport means for automatic booking processes**

Ha-VIS RFID CT 89 (NT)

- >4,5 m range
- Function in and on precast concrete units
- Development for the construction trade



**Incoming goods inspection via RFID gate**

Extremely rugged outdoor antenna for Ha-VIS RF-ANT-WR80-30 for gate applications

- Ruggedized housing
- 30°/70° aperture angle
- Protection class IP 65



**Maintenance management**

Cyclic maintenance of safety-related equipment is automated with modern RFID transponders



**Container management**

Selective identification of containers with Ha-VIS RFID antennas, especially in harsh industrial environments. Ha-VIS RF-ANT-WR30

- High read range
- Flat, compact design
- Protection class IP 65

# RFID Products & Accessories

## Ha-VIS UHF long range RFID Reader RF-R500

### Features

- Suitable for harsh industrial environments
- Very high read range of up to 16 m
- Power over Ethernet capability (PoE) (RF-R500-p)
- 4 antennas can be connected
- Up to 4 W transmitter power (RF-R500-p), otherwise 2 W (RF-R500-c)
- Up to IP 64 with protection cap (optional)
- Interfaces (Ethernet, USB, RS 232, RS 485)
- Fast readout of >150 transponders
- 860 - 960 MHz
- Profibus / Profinet: optional via gateway
- PLC connection – templates of function blocks on request
- Web interface

### Identification

Identification	Part. no.
RF-R500-c-EU	20 91 104 1103
RF-R500-c-US	20 91 104 1104
RF-R500-p-EU	20 91 104 1101
RF-R500-p-US	20 91 104 1102



## Ha-VIS UHF mid range Reader RF-R200

### Features

- External antenna (max. read range up to 2m)
- Internal antenna (max. read range up to 30cm)
- 500mW transmission power
- Power over Ethernet
- SMA connector
- Automatic reporting of tags (notification mode)

### Identification

Identification	Part. no.
Ha-VIS RF-R200 (expected availability 2nd Q. 2013)	20 91 106 1101

### Accessories

DIN rail mounting kit RF-R200	20 93 102 0202
Mounting Kit RF-R200	20 93 102 0203
Desktop power supply for RF-R200 (EU)	20 93 310 0203



## Ha-VIS RFID Box

### Features

- Completely installed RFID system in cabinet
- Tested and ready for connection
- Modular system
- Customer specific configurations possible
- 2 mm VA steel
- Railway norms
- Protection class IP65

### Identification

Identification	Part. no.
Ha-VIS RFID Box (RF-R500-p-EU, eCon 2050-A)	20 91 421 1001
Ha-VIS RFID Box (RF-R500-c-EU, eCon 2050-A)	20 91 411 1001

(both variants expected availability Q1 / 2013)



## Ha-VIS UHF mobile Reader RF-M3000

### Features

- Read range up to 2 m
- IP 65 protection
- Several drops on concrete from 1.8 m (handheld switched on incl. WiFi, Barcode scanner, imager)
- WiFi
- 1 GB Flash
- 3.6" TFT Display

### Identification

Identification	Part. no.
RFID Handheld RF-M3000	20 91 211 1011
RFID Handheld RF-M3001 1D Laser Scanner	20 91 211 1111
RFID Handheld RF-M3002 2D Imager	20 91 211 1311

*Mobile reading devices with higher read ranges on request*

### Accessories

Ha-VIS RF-M3000 battery 4400 mAh	20 93 405 0101
Ha-VIS RF-M3000 Stylus 5 Pack (spare pen for touch screen)	20 93 405 0102
Power Supply AC universal 5 V / 3 A	20 93 405 0103
RF-M3000 Docking Station Desktop	20 93 305 0101
RF-M3000 Docking Station Quad (4-fold incl. RJ45)	20 93 305 0102
RF-M3000 Cradle Vehicle Powered 12 V	20 93 305 0103
RF-M3000 Ram mounting system	20 93 305 0104
RF-M3000 Plastic pistol grip	20 93 705 0101
RF-M3000 Soft holster kit	20 93 705 0102



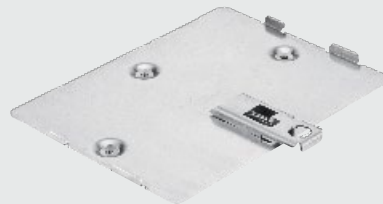
## DIN Rail mounting kit

### Features

- Board inc. screws for installing the Ha-VIS RF-R500 on DIN rail

### Identification

Identification	Part. no.
DIN rail mounting kit	20 93 102 0201



## Ha-VIS RFID reader protection cap

### Features

- Increased protection class IP 64
- Up to 8 PG lead-throughs
- Simple and reliable installation on Ha-VIS RF-R500

### Identification

Identification	Part. no.
Ha-VIS Protection cap RF-R500	20 93 901 0101



### Ha-VIS RFID UHF wide range antenna

**Features**

- Compact design
- High read range
- Suitable for industrial environment
- Optimized for portal applications
- 69° aperture angle
- Antenna gain 8.5 dBic
- High IP 65 protection
- Suitable for outside areas
- TNC socket
- 865 - 870 MHz (EU) or 902 - 928 MHz (US)



**Identification**

**Part. no.**

RF-ANT-WR30-EU	20 93 201 0102
RF-ANT-WR30-US	20 93 201 0103

### Ha-VIS RFID UHF ruggedized wide range antenna, 30° aperture angle

**Features**

- Different aperture angles for azimuth and elevation planes (30° / 70°)
- Ruggedized housing
- Compact design
- High read range
- Antenna gain 11 dBic
- Suitable for industrial environment
- Optimized for portal applications
- High IP 65 protection
- Suitable for outside areas
- N socket
- 865 - 870 MHz (EU) or 902 - 928 MHz (US)



**Identification**

**Part. no.**

RF-ANT-WR80-30-EU	20 93 201 0203
RF-ANT-WR80-30-US	20 93 201 0204



## Ha-VIS RFID UHF mid range antenna

### Features

- Very compact design
- Medium read range (0.2 m - 2 m)
- Suitable for industrial environment with near- and far-field applications
- 100° aperture angle
- Antenna gain 4 dBic
- High IP 67 protection
- Suitable for outside areas
- TNC socket
- 865 - 870 MHz (EU) or 902 - 928 MHz (US)

### Identification

Identification	Part. no.
RF-ANT-MR20-EU	20 93 201 0301
RF-ANT-MR20-US	20 93 201 0302



## Ha-VIS RFID UHF short mid range antenna

### Features

- Very compact design
- Medium read range (0.2 m - 1 m)
- Worldwide applicable (860 - 930 MHz)
- 100° aperture angle
- High IP 67 protection
- Max. input power 1 W
- Ideally suitable for metallic environments because of -12 dBic@866 MHz
- TNC socket

### Identification

Identification	Part. no.
RF-ANT-sMR20 (expected availability Q2 / 2013)	20 93 201 0304



## Ha-VIS RFID UHF ultra-low range antenna

### Features

- Minimal size
- Extremely high spatial selectivity
- Suitable for industrial environment
- Optimized for near-field applications (< 5 cm)
- High IP 67 protection
- Suitable for outside areas
- TNC socket
- worldwide applicable (860-930 MHz)

### Identification

Identification	Part. no.
RF-ANT-LR10	20 93 201 0303



### Ha-VIS RFID wall/mast antenna mounting kit

#### Features

- Very rugged
- Can be aligned in two directions
- Wide adjustment angle



#### Identification

RF-MOUNT-ANT-A (for RF-ANT-WR30)

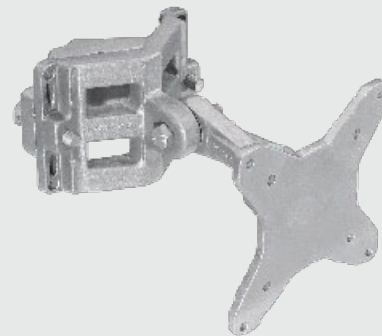
#### Part. no.

20 93 102 0103

### Ha-VIS RFID mast antenna mounting kit

#### Features

- Diameter of post 25 - 76 mm
- Turnable by two links
- Precision of angle adjustment 2°
- Max. weight to carry 20 kg



#### Identification

RF-MOUNT-ANT-C (for RF-ANT-WR30)

#### Part. no.

20 93 102 0105

### Ha-VIS RFID mast mounting

#### Features

- Very rugged
- Can be tipped
- Stainless steel
- Necessary pipe (diameter 50 - 115 mm) not included



#### Identification

RF-Mount-ANT-B (for RF-ANT-WR80-30)

#### Part. no.

20 93 102 0104

## Ha-VIS RFID standard antenna cable

### Features

- 3 m standard cable
- TNC - SMA
- Attenuation 68 dB/100 m (@800 MHz)

### Identification

Ha-VIS Coax SMA-TNC, RG58, 3 m

### Part. no.

20 93 204 0101



## Ha-VIS RFID low loss antenna cable

### Features

- 3 m and 10 m low loss cable
- Attenuation 28 dB / 100 m (@800 MHz)
- Outer diameter 5.4 mm
- Left side: SMA connector
- Right side: TNC or N connector

### Identification

Ha-VIS Coax SMA-TNC, LL 240 flex, 3 m

Ha-VIS Coax SMA-TNC, LL 240 flex, 10 m

Ha-VIS Coax SMA-N, LL 240 flex, 3 m

Ha-VIS Coax SMA-N, LL 240 flex, 10 m

### Part. no.

20 93 204 0102

20 93 204 0103

20 93 204 0104

20 93 204 0105



## Ha-VIS RFID heavy duty low loss antenna cable

### Features

- 3 m and 10 m low loss cable
- Suitable for harsh environments
- Attenuation 22 dB / 100 m (@800 MHz)
- Outer diameter 10.3 mm
- TNC - N

### Identification

Ha-VIS Coax TNC-N, RG 213, 3 m

Ha-VIS Coax TNC-N, RG 213, 10 m

### Part. no.

20 93 204 0106

20 93 204 0107



### Ha-VIS RFID SMA TNC antenna cable adapter

**Features**

- Adaptor for connecting RG213 cable to reader

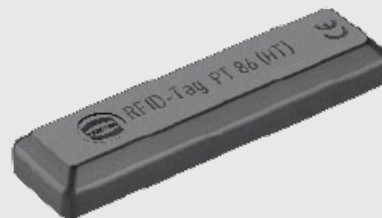


Identification	Part. no.
Adapter TNC-SMA	20 93 204 0301

### Ha-VIS RFID PT 86 (HT)

**Features**

- Functions on metal
- Rugged, chemical resistant housing
- EPC C1 Gen2 compatibility
- Protection class IP 69K
- Expanded memory



Identification	Part. no.
Ha-VIS RFID PT 86 (HT) 10 units	20 92 641 0101
Ha-VIS RFID PT 86 (HT) 50 units	20 92 641 0102

### Ha-VIS RFID VT 86 (HT)

**Features**

- Functions on metal
- Rugged, chemical resistant housing
- EPC C1 Gen2 compatibility
- Protection class IP 69K
- Expanded memory
- Flexible mounting

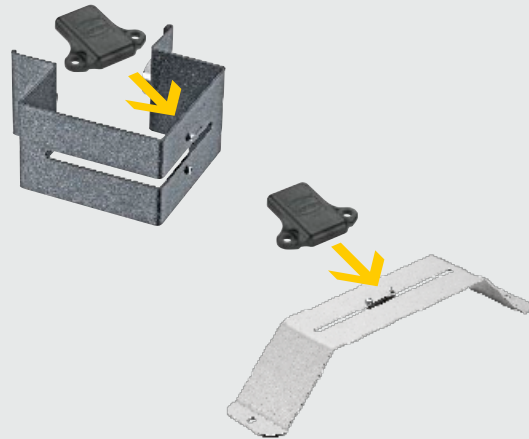


Identification	Part. no.
Ha-VIS RFID VT 86 (HT) 10 units	20 92 641 0201
Ha-VIS RFID VT 86 (HT) 50 units	20 92 641 0202
Ha-VIS RFID VT868 (HT) 0.43k (EU, 0,43 kByte memory) (expected availability Q2 / 2013)	on request
Ha-VIS RFID VT92 (HT) 0.43k (US, Asia, 0.43 kByte memory) (expected availability Q2 / 2013)	on request

## Ha-VIS SL89 Set

### Features

- Extremely high level of mechanical protection
- Protection class IP 69K
- EPC C1 Gen2 compatibility
- Expanded memory
- Customer specific shapes of metal pieces for individual customer requests



### Identification

Ha-VIS SL89 Set

### Part. no.

On definition of metal piece

## Ha-VIS RFID CT/CF/CS 89 (NT) product family

### Features

- Can also be read in damp environments
- Rugged housing
- EPC C1 Gen2 compatibility
- Protection class IP 69K
- Expanded memory



### Identification

Ha-VIS RFID CT89 (NT) 10 units  
 Ha-VIS RFID CT89 (NT) 50 units  
 Ha-VIS RFID CF89 (NT) 10 units  
 Ha-VIS RFID CF89 (NT) 50 units  
 Ha-VIS RFID CS89 (NT) 10 units  
 Ha-VIS RFID CS89 (NT) 50 units

### Part. no.

20 92 641 0301  
 20 92 641 0302  
 20 92 641 0401  
 20 92 641 0402  
 20 92 641 0501  
 20 92 641 0502

## Ha-VIS RFID Transponder FT 89

### Features

- For non-conductive surfaces
- Extremely mechanical robust
- Barcode and company logo possible
- Flexible mounting on different surfaces
- Adhesive mounting



### Identification

Ha-VIS RFID FT 89 passiv Tr. 50 units  
 Ha-VIS RFID FT 89 passiv Tr. 500 units

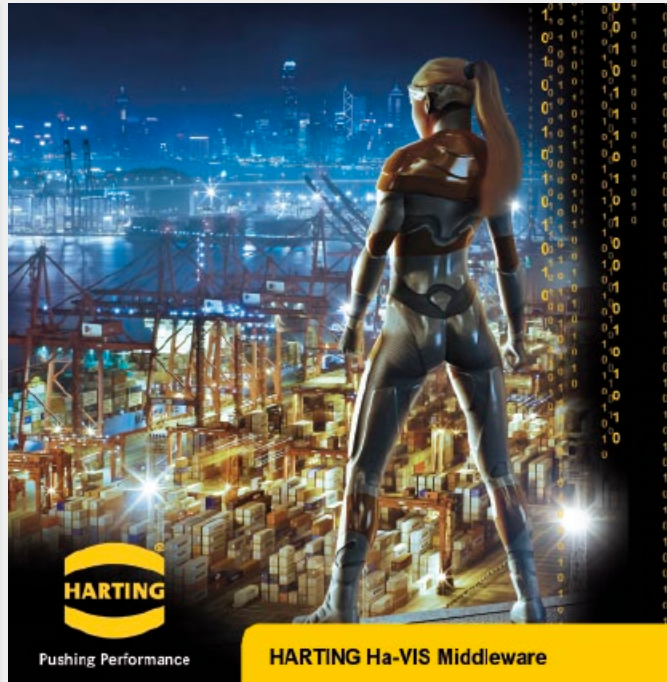
### Part. no.

20 92 641 0702  
 20 92 641 0703

## Ha-VIS Middleware

### Features

- The bridge between RFID readers and company software
- Easy integration of HARTING RFID Reader
- Filtering, grouping and aggregation based on various tag information
- Application flow triggered by manual, digital IO or scheduled events
- Report of cumulated data in standardized or customized formats
- Central RFID Reader management
- Advanced reading, writing, locking and muting of RFID transponders
- Conform to EPCglobal® ALE 1.1 standard

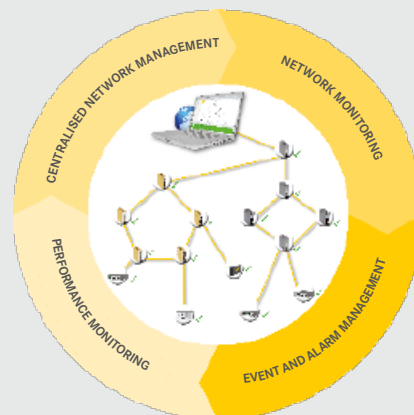


Identification	Part. no.
<b>Ha-VIS Middleware</b> Incl. XML Subscriber and Connector for one Ha-VIS RF-R500 RFID Reader	20 16 210 1110
<b>Subscriber (software side)</b> Easy API	20 16 220 3110
MySQL Subscriber	20 16 220 4110
<b>Connector (hardware side)</b> Connector for up to 5 RF-R500	20 16 230 1120
Connector for up to 15 RF-R500	20 16 230 1130
Connector for up to 25 RF-R500	20 16 230 1140
Connector for up to 50 RF-R500	20 16 230 1150

## Ha-VIS Dashboard

### Features

- Centralised management of managed Ethernet devices
- Network monitoring
- Event- and Alarm-Management
- Performance Monitoring
- Administration of complex RFID Reader-Installations



Identification	Part. no.
Ha-VIS Dashboard License 64	20 16 111 2110
Ha-VIS Dashboard License 128	20 16 111 3110
Ha-VIS Dashboard License 256	20 16 111 4110

## ICPN Service

- RFID Proof-of-Concept at the site of customer or in the RFID laboratory
- Configuration service for Ha-VIS RFID Reader and Middleware
- Commissioning at site of customer
- Consulting for RFID systems
- Trainings
- Telephone hotline
- Email support

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