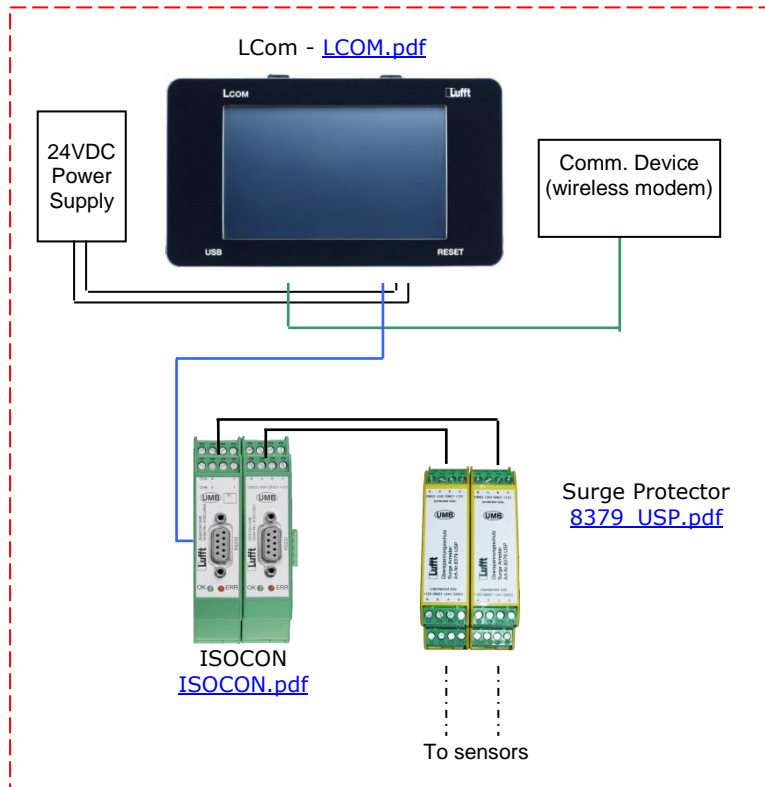




LUFFT Station Overview

RPU Cabinet



Note: One ISOCON and one Surge Protector are required per sensor. (Two currently shown)

Installation Procedure
[IRS_installation.pdf](#)

Replacement of the IRS31
[IRS_replacement.pdf](#)



Intelligent Road Sensor
[IRS31.pdf](#)



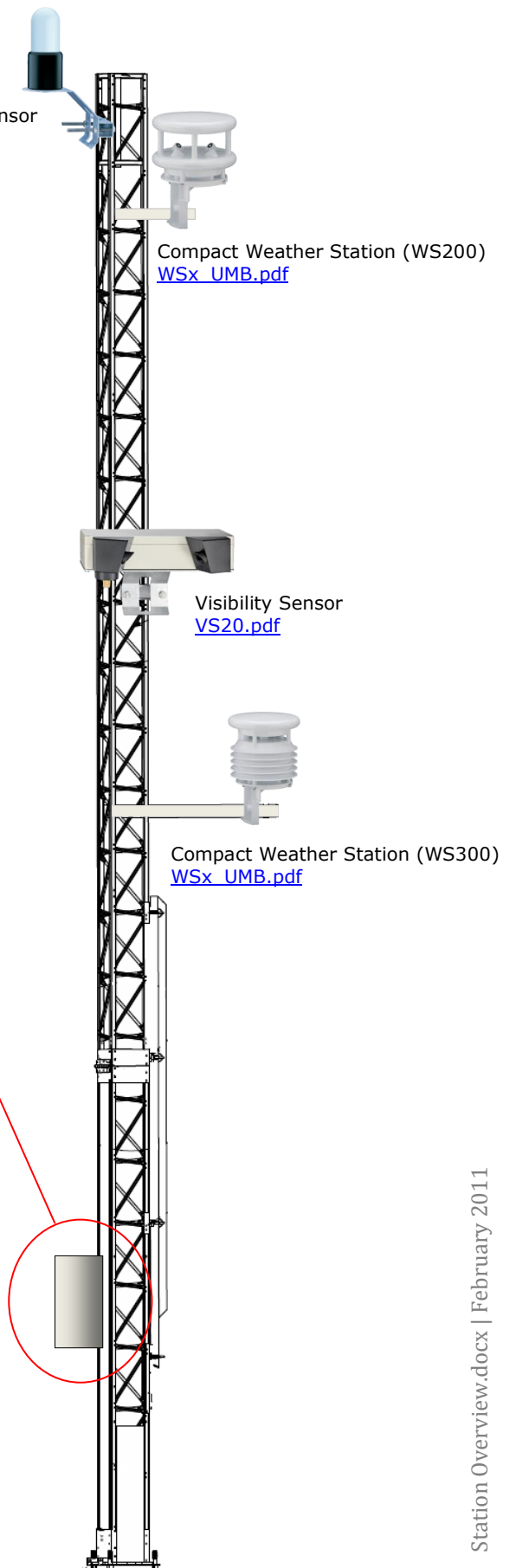
Active Road Sensor
[ARS31.pdf](#)

Precipitation Sensor
[R2S_UMB.pdf](#)

Compact Weather Station (WS200)
[WSx_UMB.pdf](#)

Visibility Sensor
[VS20.pdf](#)

Compact Weather Station (WS300)
[WSx_UMB.pdf](#)





Hardware definition

LCom – LUFFT Communicator

The LCom consists of a Windows CE touch screen computer which polls and formats sensor values from LUFFT's UMB protocol to different protocol standards such as NTCIP.

LCom features:

- On site data display
- Remote firmware update of sensors
- Automatic reboot on communication failure
- Automatic reboot on sensor failure
- Data storage (optional)

ISOCON – UMB Converter

The UMB ISO Converter is an intelligent interface converter with electrical isolation for connecting UMB sensors to a UMB network. The devices are easily installed on standard DIN rails and networked together by means of mounting rail bus connectors. The 24V feed for the power supply takes place via the bus connector.

ANACON – Analogue UMB Converter

The UMB Analogue/Digital Converter is an intelligent analogue/digital converter with electrical isolation, suitable for integration of non-UMB sensors to a UMB network. The devices are easily installed on standard DIN mounting rails and networked together by means of mounting rail bus connectors. The 24V feed for the power supply takes place via the bus connector. Windows software is available for the configuration of the ANACON via RS232 port.

USP – Surge arrester

The USP serves to protect the LUFFT UMB sensors and is installed between the ISOCON-UMB and the UMB sensor. A surge arrester is required for each UMB sensor.



UMB Sensor definition

R2S – Precipitation Sensor

The R2S is a precipitation sensor which can be used to determine the type of precipitation, precipitation quantity as well as precipitation intensity. The R2S operates with a 24GHz Doppler radar, which records raindrop falling speed. The precipitation quantity is then calculated by means of the correlation of raindrop size and speed. Sensor includes a 40W heating element for winter use.

WSx – Compact Weather Station

The WS family is a range of low cost, compact weather stations for the acquisition of a variety of measurement variables, as used for example for environmental data logging in road traffic management systems. Depending on the model, each device has a different combination of sensors for the various measurement variables.

	WS200	WS300	WS301	WS400	WS500	WS501	WS600
Air Temp.		x	x		x	x	x
Humidity		x	x		x	x	x
Air Pressure		x	x		x	x	x
Wind Dir.	x			x	x	x	x
Wind Speed	x			x	x	x	x
Precipitation							x
Compass	x						x
Pyranometer			x			x	

VS20 – Visibility Sensor

The VS20 is a visibility measurement device for the determination of optical visibility in the range from 0 – 2000m (0 - 6560ft).

IRS31 – Intelligent Road Sensor

The IRS31 serves to monitor the road condition. It can be used to monitor the following data:

- Road surface temperature
- Two sub-surface temperatures at different depths (optional)
- Salt concentration
- Freezing temperature
- Water film height on the surface of the sensor.

ARS31 – Active Road Sensor

The ARS31 serves to determine the freezing temperature of a liquid on the road surface. It can be used to measure salt concentration (NaCl, CaCl and MgCl) as well as freezing temperature (independent of mixture).