

a passion for precision - passion pour la précision - pasión por la precisión - passione per la precisione - a passion for precision - passion po



www.lufftusa.com

Lufft History

- Lufft was founded in July of 1881
- Just celebrated our 130th Year
- European headquarters: Stuttgart, Germany
- USA headquarters: Youngsville, NC
- Business: Sensors and Systems: Weather Sensors and RWIS



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UMB-technology

Universal-Measurement-Bus

*Ability To Install an RWIS
Using Lufft Technology with
minimal investment*

No RPU/Datalogger Needed

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UMB-technology

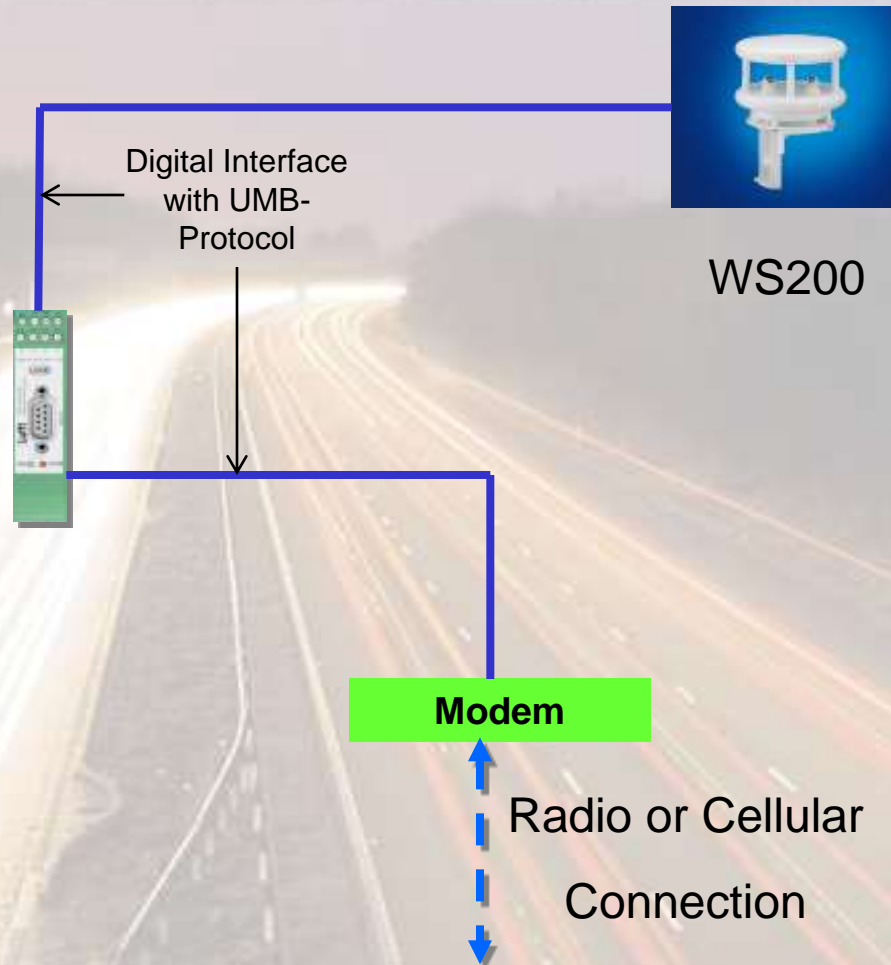
Universal-Measurement-Bus

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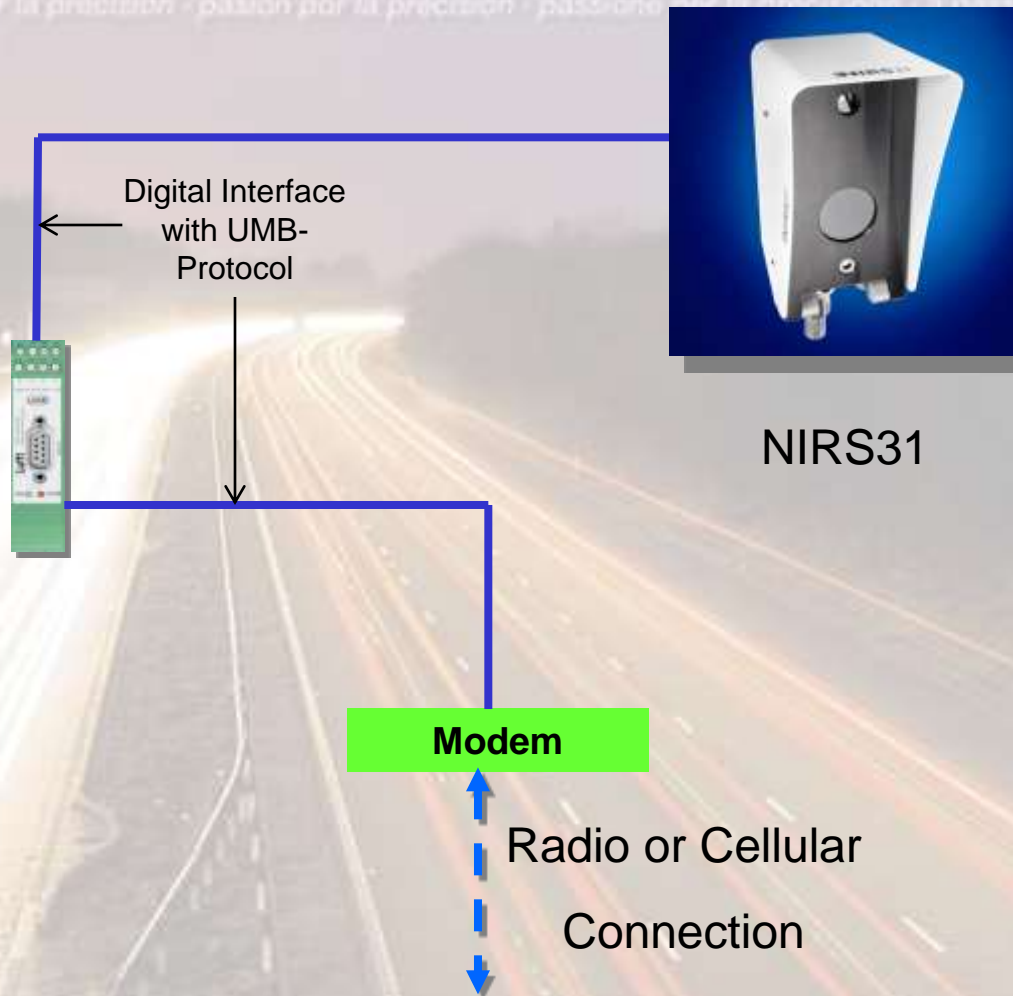
Benefits:

- ***Open Architecture***
- ***Flexible***
- ***Reduce Cost***
- ***Improved Data Quality***

Wind Sensor only RWIS

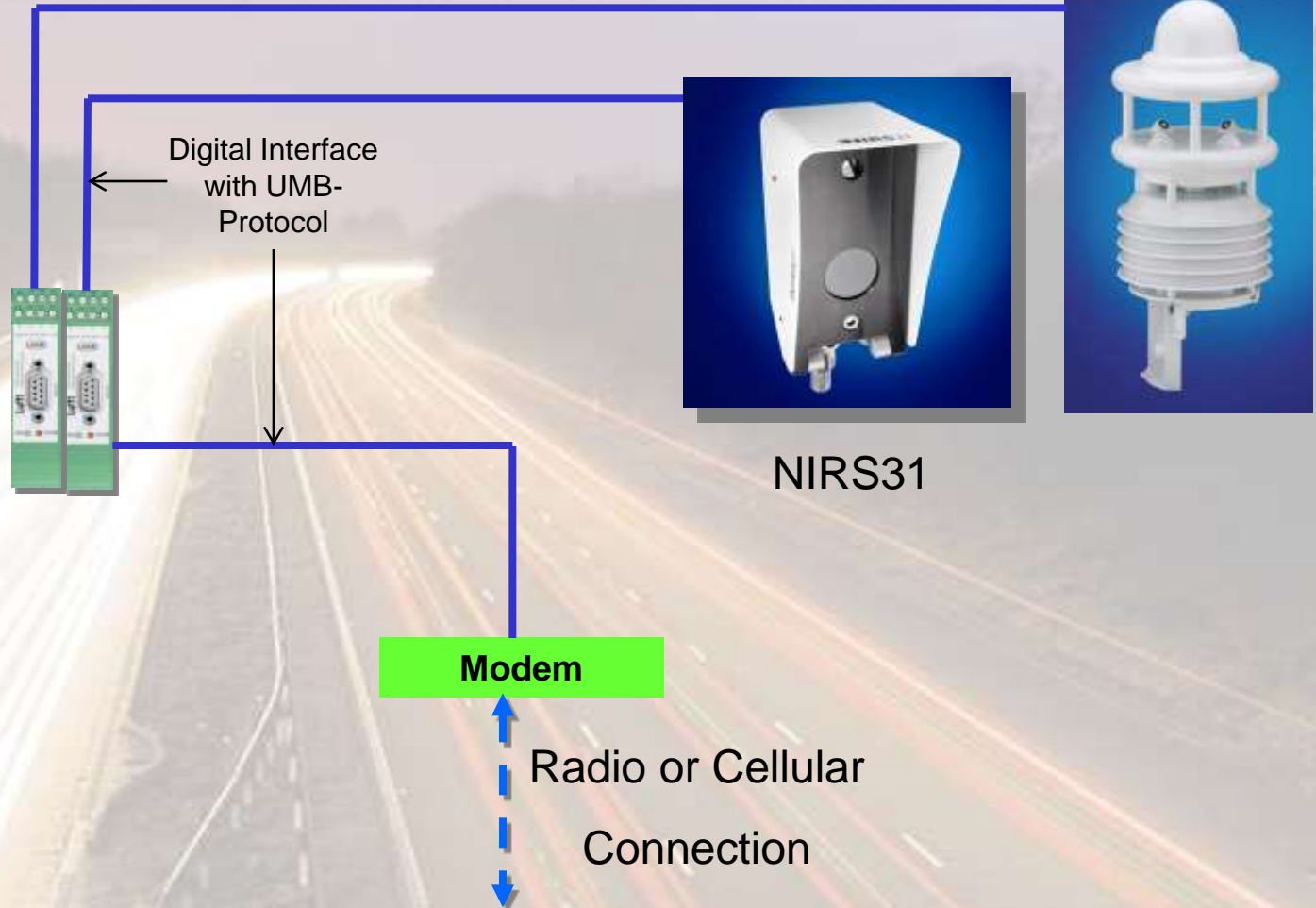


Pavement Sensor only RWIS



Small Compact RWIS

WS600



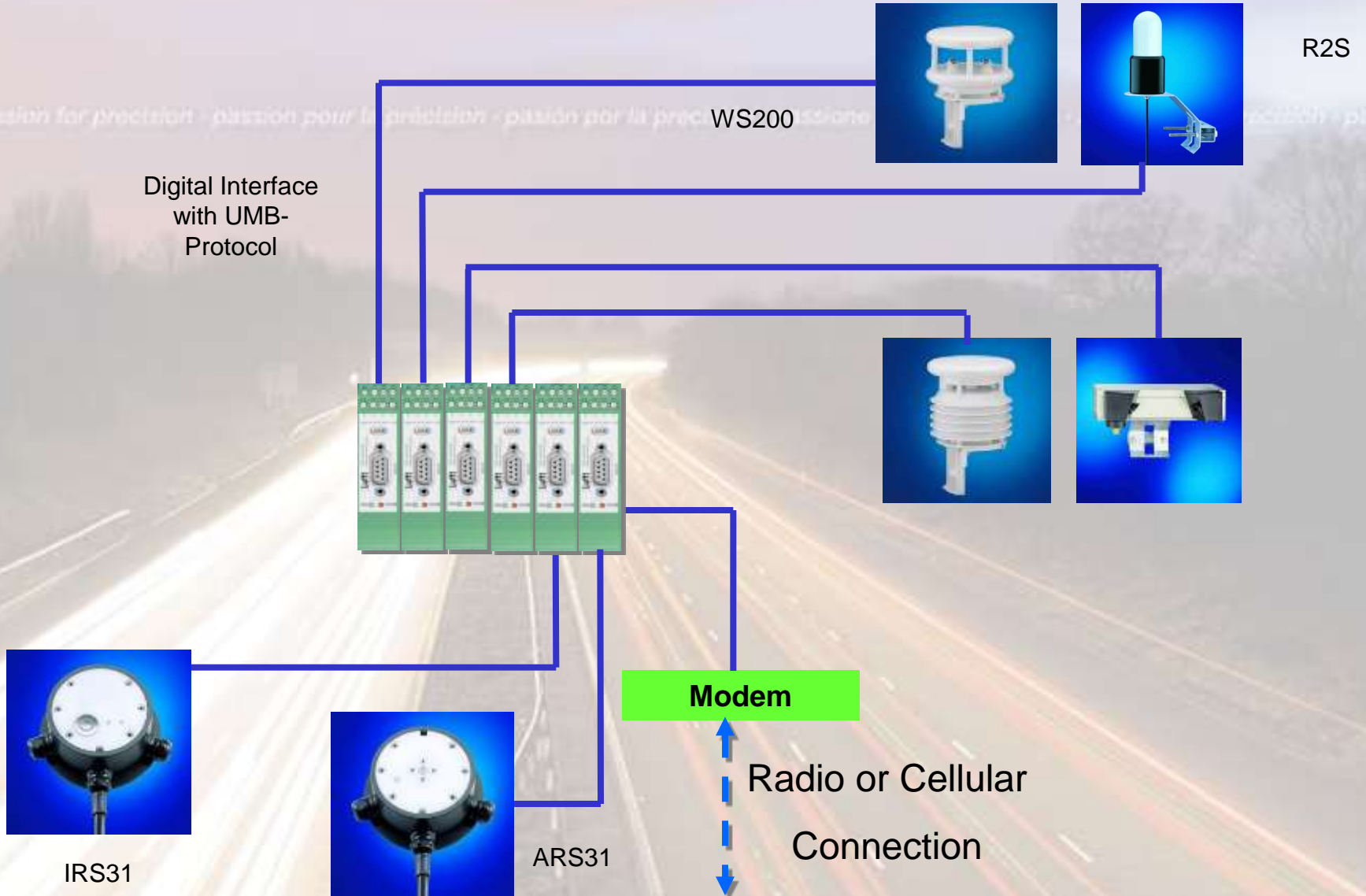
Digital Interface
with UMB-
Protocol

NIRS31

Modem

Radio or Cellular
Connection

RWIS Site with No RPU



NIRS31 Non-Invasive Pavement Condition Sensor

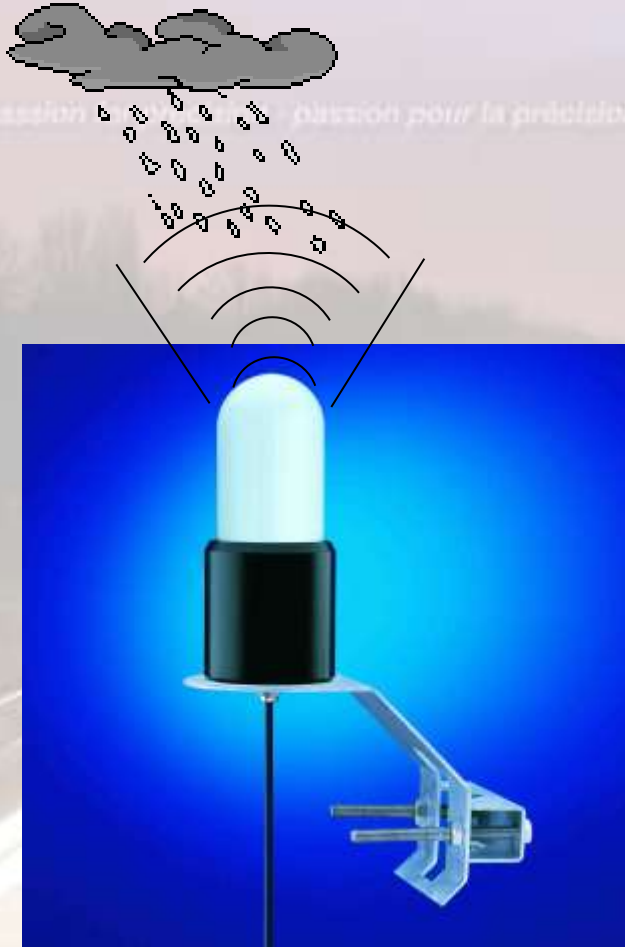
Measurement of surface conditions such as wetness, ice, snow or frost.

•FREEZE TEMPERATURE – NON-INVASIVELY

- Measurement of water film height
- Measurement of ice percentage in water and determination of freeze temperature
- Measurement of friction
- Fully integrated surface temperature measurement (pyrometer)
- Electric Isolation of RS485 interface for network with other UMB sensors
- Easy to mount
- Low Maintenance costs by firmware-Updates via UMB-technology
 - *Automatic calibration according to type of road (concrete or asphalt)*
 - *Automatic recalibration during dry periods (surface conditions)*
 - *No need to adjust the unit according to the distance between installation point and road spot*
 - *Long-term stable measurement technology*
 - *Infrared temperature measurement optionally integrated into the same sensor*



R2S-UMB Radar precipitation sensor



Innovative principle: **R2S** microwaves–doppler radar

Precipitation type (rain, snow, mixed rain, ice rain and hail) /
Precipitation intensity (mm/h)

Maintenance-free sensor

Accumulation calculation (resolution 0.01mm / 0.1mm / 1mm)

Digital data communication with **standard protocol** (Lufft-UMB-
Protocol) and 2 digitale outputs

IRS31-UMB Intelligent Road Sensor

Passive salt concentrations- and freeze point temperature measurement by measuring the **conductivity dependent on water film height**

Road condition detection → dry, damp/humid, wet, ice, snow (critical), critical wetness

Maintenance-friendly, exchangeable electronics



ARS31-UMB Active Road sensor

Measurement of salt concentration and freeze point temperature by **active cooling and heating** of the sensor surface.

Maintenance-friendly, exchangeable electronics



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Thank You