

# WI-IAS-415: Intelligent Antenna Switch

Simplifying legacy system migration and communication updates



## Introduction

The WI-IAS-415 enables a seamless transition from legacy licensed radio networks to advanced Weidmüller licensed wireless radios in a controlled and systematic way. This minimizes risks, downtime and equipment duplication during the migration. Upgrading Supervisory Control and Data Acquisition (SCADA) communication networks can be complex and costly, but the intelligent antenna switch streamlines this process, enhancing efficiency and cost-effectiveness.

The WI-IAS-415 is installed at the base or primary repeater site, requiring minimal downtime by leveraging existing antenna infrastructure. Installation involves only minor cabling adjustments and minimal changes to SCADA polling parameters. It supports both legacy and Weidmüller wireless units by facilitating data and antenna connections, while continuously monitoring incoming serial data and remote site communication. As sites are upgraded, the WI-IAS-415 automatically routes data without requiring operational intervention.

Paired with the WI-BSR-415 base station repeater, the WI-IAS-415 provides a reliable redundant hot standby for the base or repeater site, ensuring seamless system integration.



## Industries & Applications

- Water and Wastewater: SCADA system upgrades for pump stations, reservoirs and plants
- Oil & Gas: Pipeline monitoring and wellhead automation
- Utilities: Substation automation and grid modernization projects
- Mining: Monitoring and redundancy for conveyor and pump systems
- Renewables: SCADA communication for solar farms, wind turbines and hydro

## Ordering data

Type	Frequency	Qty	Order no.
WHAS-415-C4	400-480 MHz	1	3093540000
WHAS-415-C9	928-950MHz	1	3104850000

Note: Contact Weidmüller for other frequency ranges

## Regulatory compliance

- Safety EN/IEC 60950-1
- EMC FCC CFR47 Part 15; EN 301 489-3; EN 301 489-5
- RF (radio) FCC CFR47 Part 90; IC RSS 119; EN 300 113; EN 300 220; AS/NZS4295

### Weidmüller, Inc

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## Technical data

Communications			
Frequency bands	400-480MHz	928-950MHz	
RF insertion loss	Less than 1dB		
RF power	Max 10W input with internal protection		
VSWR	Max 1.3:1 (Return loss -18dB)		
Switch isolation	30dB		
Interfaces			
Antenna switch	Two RF switches supporting redundant antenna systems	Primary: Weidmuller base or repeater	Alternate: Legacy base or repeater ANT: Antenna system
Serial data	Legacy radio: DB25 RS-232	SCADA computer: DB25 RS-232	Rear DTE: DB9 RS-232
Power	4 way screw terminal. Pluggable.		
Earth lug	M6 lug for system protective earth connection		
Terminals supply/RS485	Supply input +/- RS-485 Base/Repeater control		
Indications & diagnostics			
LED indication	Power alternate, alarm, primary for each antenna system		
Connections			
Regulatory	1 x WAN, 1 x LAN or 2 x LAN, Auto 10/100Mbps		
Cellular antenna	2 x SMA female diversity, switched main / AUX		
Terminals IO/RS232/RS485	Pluggable. Push connect terminals up to 1.5 mm <sup>2</sup> (28 - 16 AWG) 300V / 8A		
Terminals supply	Pluggable. Screw terminal up to 1.5 mm <sup>2</sup> (28 - 16 AWG) 300V / 8A		
RS-232	2 wire interface (Tx and Rx) terminal block		
RS-485	2 wire data interface terminal block		
Compliance			
Regulatory	USA: FCC, Canada: IC, Australia: RCM, Europe: CE		
Power supply			
Nominal supply	11-30 Vdc, under/over voltage protection		
Current	30mA @ 12 Vdc		
Environmental & general data			
Size (WxDxH mm)	429(W) x 226(D) x 40(H) (19.9" x 8.9" x 1.6")	Front panel 482(W) x 44(H) (19" x 1.7")	
Housing	Rack mounting enclosure 1U		
Mounting	19" rack		
Temperature rating	-40 to +75°C (-40 to +158°F)	0-99% RH non-condensing	
Weight	320g (7lb)		
Altitude	0-3000m (0-10000ft)		
Pollution degree	4		

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