

## JANUS® READER

### The Next-Generation Reader from MARK IV

#### Overview

Taken from the name of the mythological God of Gateways, the **JANUS** Reader is the high performance, next-generation reader from MARK IV. **JANUS** takes accurate transponder identification and reliable revenue capture to the next level in an updated design. It is fully compatible with the IAG protocol and Badger lane controller interfaces. The result is an extraordinarily flexible reader that either replaces IAG Badger readers, or seamlessly synchronizes with existing Badger readers to add lane capacity.

#### Scalability

The next-generation **JANUS** Reader is designed to achieve high performance transponder reading in open road toll collection environments. It supports up to 8 RF channels or 5 ORT channels.

#### Key Benefits

- » High lane discrimination performance at single and multi-reader sites
- » Processes transactions at least two times faster than Badger readers
- » Increases transaction memory capacity
- » Provides more efficient and cost-effective diagnostic data gathering
- » Simplifies system configuration, diagnostics and overall maintenance
- » Faster reader to lane controller communications

#### Meets IAG Technical Specifications

- » Active read/write at 500 kbps
- » Supports up to 8 RF channels (5 ORT channels)
- » 16 high-speed serial ports with 8 master ports and 8 slave ports with speed-doubled 115.2 kbps data rates
- » Enhanced channel voting and weighting logic
- » Protocol compatibility for high-speed synchronization between **JANUS** and Badger readers
- » Compatibility with existing RF modules and antenna networks
- » Ethernet communications for reduced latency
- » Standard connectivity and optional web connection with SSL encryption security features
- » Fast 5ms transaction processing
- » Remote monitoring, diagnostics, configuration and software update capabilities
- » Memory capacity of 400,000 buffered transactions
- » USB interface
- » Network time synchronization support
- » Intuitive browser interface



# JANUS READER

## Technical Specifications

<b>Operating Frequency</b>	915.75 MHz (nominal center using FCC RF Module)
<b>Dimensions (WxHxD)</b>	19.0 in. rack-mountable ; rack 9U high 19.0 x 15.8 x 10.8 in. 48.26 x 40.13 x 27.43 cm
<b>Weight</b>	63 lbs. (excluding cabinet) 28.6 kg
<b>Buffered Data Capacity</b>	400,000 transactions
<b>Data Format</b>	Manchester Keyed Carrier
<b>Error Checking</b>	16-bit Cyclic Redundancy Check (CRC)
<b>Data Rate</b>	500 kbps $\pm$ 10% (uplink/downlink)
<b>Operating Temperature</b>	-37° C to +74° C -34° F to +165° F
<b>Storage Temperature</b>	-45° C to +93° C -49° F to +199° F
<b>Relative Humidity</b>	5% to 95% non-condensing
<b>Vibration</b>	NEMA TS-1
<b>Shock</b>	NEMA TS-1
<b>Input Power/Consumption</b>	145W @ 110VAC, UL/CSA power supply
<b>Regulatory</b>	Makes use of FCC approved RF module(s). Part 90 site license required for operation in the USA
<b>Compatibility</b>	MARK IV JANUS Interior, JANUS FME Exterior, JANUS Feedback as well as IAG style 256-bit transponders, including ROADCHECK FPT, LPT, RMT and Fusion®
<b>Maximum Cabling Distance</b>	200 ft. assuming IAG-1 antenna and using Ultralink TL93605 cabling
<b>Communications Interface</b>	Lane controller RS-232-C or RS-422 or 1000BaseT interfaces available. Up to 1Gbps asynchronous data transfer. Handshake protocol required. Each side of reader unit features up to 8 serial ports, 2 Ethernet ports, and a Diagnostic Port. Sync cable connection
<b>RF Channel Capacity</b>	Supports 8 lane-based channels or up to 5 ORT channels
<b>Options</b>	Also available in non-redundant and/or Ethernet only versions



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