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Description

This tag can be used in applications where long range, multi-read, high-speed item identification is required.

- § Transport Management (Electronic Number Plate / licensing, rolling stock, vehicles, trailers)
- § Supply Chain Management (item, pallet, container, roll-tainer, crate)
- § Marine applications – IP65
- § Access control and asset control
- § Industrial (machines, process control)

Chipset

X2 / EM4122

Tag Construction

- § Consists of a chip attached to a printed antenna above a conducting ground plane which renders the tag independent of the surface to which it is attached
- § Housing made of UV resistant ABS with profiled inserts for covering screw recesses



Key Features

- § Available for most spectrum allocations, including FCC, ETSI, ACA, WPC, etc.
- § Robust anti-collision protocol – more than 30 tags can be read simultaneously
- § Factory programmed 64 bit ID number
- § Fast moving tags can be read – up to 300 km/h
- § High tag read rate – about 200 tags/sec in a multi-read application
- § Passive – no battery
- § Compatible with all IP-X Read/Write and Read-Only tags in mixed populations
- § Compatible with all IPICO UHF readers
- § High tag data transmission rate – 256 kbit/sec typical
- § Frequency independent chip – (used at frequencies from 315 MHz to 2.45 GHz)
- § -40 to +85° C

Multi-Read Performance (Tag numbers & Tag Speed)

Speed version	Data rate	Maximum interval	Tag Speed	Number of tags readable
V3	256 kbit/s	16 kbits	360 km/h (100 m/s)	1
			36 km/hr (10 m/s)	20

Version V3 is available as a standard device, but other versions can be produced as custom products. Enquiries should be directed to IPICO SA.

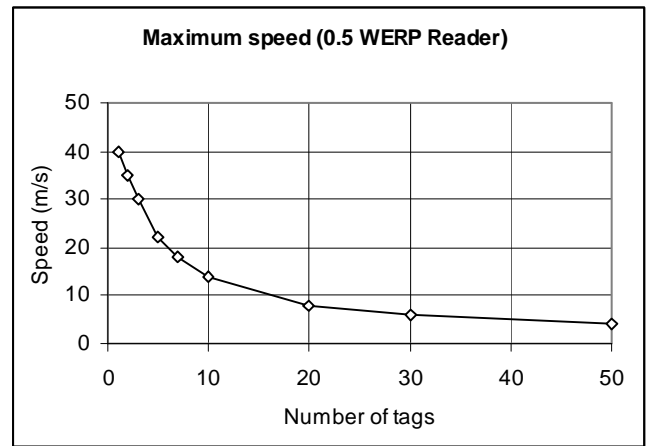
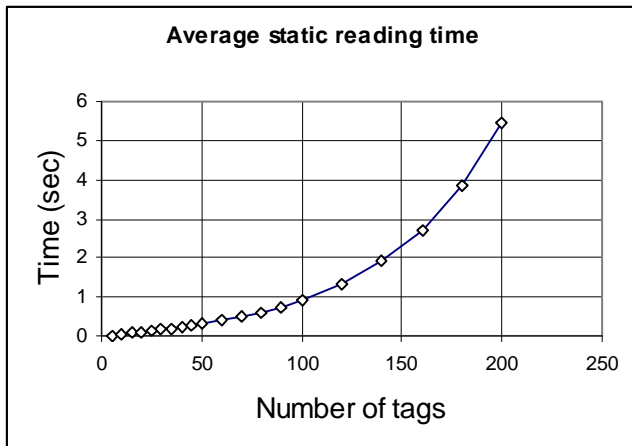
The maximum number of tags readable at a certain tag speed is determined by protocol saturation. See graph "Maximum speeds (Reader Power = 0.5 WERP)" on next page.

Specifications

Device name	IP-X UHF Industrial Vehicle Tag
Part Description	IP-X X2-rff-V3-V241x49x34-LOG
Power requirements	No batteries (passive back-scatter)
Read Range	2 - 15 m (Depends on reader power output and configuration)
Tag Data rate	256 kbit/s typical
Max Tag speed	Depends on number of tags present simultaneously. See Multi-Read Performance Table on page 1 and graph below
ID Length	64 bits (16 bit CRC)
Protocol Saturation	<ul style="list-style-type: none"> • Protocol optimised for high speed applications (i.e. few fast moving tags in the reader beam) • Interval 4kbit • Data rate 256kbit/s
Multi-read rate	Average time to read: 5 tags = 16 msec, 10 tags = 40 msec, 50 tags = 316 msec
Antenna	Printed antenna on flexible substrate, reflective back plane
Programmability	Factory programmed Read-only ID
Life Expectancy	Virtually indefinite
Environmental	Operating temperature range: -30 to +85 C Storage temperature range: -40 to +90 C Waterproof IP rating: IP 65 UV resistant
Physical	241 x 49 x 34 mm: Mass = 140 g

Typical read ranges

Reader power	0.5W ERP	1 W EIRP	4 W EIRP	8 W EIRP
Region/Regulator	Europe/ETSI	Australia/ACA	South Africa/ICASA USA/FCC	
Read range	3 - 5 m	4 - 6 m	7 - 10 m	10 - 15 m



Ordering Information

Product name	Ordering code	Description
X2 UHF tag, Industrial Vehicle RO	IP3161	IP-X X2-869-V3-V241x49x34-LOG
X2 UHF tag, Industrial Vehicle RO	IP3097	IP-X X2-915-V3-V241x49x34-LOG