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Description

The UHF High Performance readers are available in a wide range of power and frequency versions, and comply with ETSI (Europe) and FCC (USA) standards. The power level can be set to any value from 0.1 W to 4 W EIRP, and the frequency from 860 to 960 MHz, fixed or hopping. Some typical settings are:

- 4 W EIRP frequency-hopping in the 902 – 928 MHz ISM band – (USA and some South American countries)
- 1 W EIRP frequency-hopping in the 902 – 928 MHz ISM band (Australia)
- 500 mW ERP fixed frequency in the 869.4 - 869.65 MHz band (Europe)
- 4 W EIRP fixed frequency at 915.3 MHz (South Africa)

The standard data output is RS232 with programmable baud rate and flow control. Optional outputs include RS485, Ethernet, and Wiegand with RS232. All received IDs are date- and time-stamped in the reader. Supply is either from 12VDC or 90 - 264VAC.

Read-Only and Read/Write readers are available. For reading all the data pages transmitted by tags operating in "TTO" mode, the Read/Write reader must be used. The Read-Only version can read only the unique 64-bit ID code of the tag.



Key Features

- § Read-Only or Read/Write, compatible with EM4222, EM4122 and EM4444 chips
- § Can comply with any spectrum allocations in the UHF band (860 – 960 MHz) up to 4 W EIRP
- § Long range (up to 10 m depending on TX power and tag type)
- § Robust anti-collision protocol (up to 240 tags read simultaneously)
- § High tag read rate – up to 200 tags/sec in multi-read application
- § Standard output RS232; RS485, Ethernet, Wiegand outputs optional
- § Real time clock (RTC)
- § IP-65 enclosure and connectors
- § Software, hardware and diagnostics control
- § Built-in test and diagnostics
- § Front panel status LED

Power setting (-rfp-)	0.5 W ERP	1.0 W EIRP	4.0 W EIRP
Read range	Typical read ranges (depends on reader placement and tags used)		
	1 – 3 m	3 – 5 m	6 – 8 m
Power supply (psu)	Mains input type: 90 - 264 VAC @ ~1.4A, 50/60 Hz Low voltage input type: 11.7 – 12.3VDC @ 2.5 A max (typ 600mA for 500 mW reader) (12V device is reverse protected up to 20V max. Provision must be made for additional surge protection and regulated power if necessary)		
Antenna type	Internal 4 dBil circularly polarised		
Communication	Binary or ASCII RS232 with programmable baud rate and flow control Options: Galvanic Isolated RS485/RS422, Wiegand with RS232, Ethernet.		
Data storage	Standard: Internal circular FIFO spool buffer for 64 tags. This data is transmitted as a free running stream and needs to be captured externally by a PC or by a DIMI controller, or other device. Serial protocol manual available. Reader can be configured to send only the first instance of each tag ID it receives, with a settable time-out.		
Electrical interface	12 Pin (P1) circular connector for DATA with 6m cable with 9 Pin D type female connector at the other end 3 Pin (P2) circular connector for POWER with 6m cable with no connector at the other end		
Environmental	Operating temperature range: -10 to +60C, Storage temperature range: -20 to +85C Humidity: 5 to 95% non-condensing, IP rating: IP 65, UV protection: Yes		
Physical	Dimension: 305 (W) x 805 (L) x 60 (H) mm, (Height excludes mounting brackets) Weight: Approx. 6.5 Kg unpacked, 10Kg Packed for shipping.		
Mounting	Two pole-mounting brackets dia. < 60 mm diameter		
Approvals	EMC: CE approved EN 300 683, EN 300 220-1&3, EN 6100-3-2&3, FCC pre-compliance, (Full FCC compliance pending) Safety: CE approved IEC 60950, (Full UL safety compliance pending) Environmental: IEC 60068-2-1,2,5,28, IEC60529, IP65		

Ordering Information

Product Name	Product Code	Description
UHF High Performance Reader, 12V Ethernet RO	IP3293	IP-X URDR-HP-rff-rfp-12V-E-RO
UHF High Performance Reader, 12V Ethernet RW	IP3294	IP-X URDR-HP-rff-rfp-12V-E-RW
UHF High Performance Reader, 12V RS232 RO	IP3177	IP-X URDR-HP-rff-rfp-12V-R-RO
UHF High Performance Reader, 12V RS232 RW	IP3274	IP-X URDR-HP-rff-rfp-12V-R-RW
UHF High Performance Reader, 12V RS485 RO	IP3320	IP-X URDR-HP-rff-rfp-12V-S-RO
UHF High Performance Reader, 12V RS485 RW	IP3323	IP-X URDR-HP-rff-rfp-12V-S-RW
UHF High Performance Reader, 12V Wiegand RO	IP3313	IP-X URDR-HP-rff-rfp-12V-W-RO
UHF High Performance Reader, Mains Ethernet RO	IP3229	IP-X URDR-HP-rff-rfp-MNS-E-RO
UHF High Performance Reader, Mains Ethernet RW	IP3271	IP-X URDR-HP-rff-rfp-MNS-E-RW
UHF High Performance Reader, Mains RS232 RO	IP3142	IP-X URDR-HP-rff-rfp-MNS-R-RO
UHF High Performance Reader, Mains RS232 RW	IP3056	IP-X URDR-HP-rff-rfp-MNS-R-RW
UHF High Performance Reader, Mains RS485 RO	IP3318	IP-X URDR-HP-rff-rfp-MNS-S-RO
UHF High Performance Reader, Mains RS485 RW	IP3321	IP-X URDR-HP-rff-rfp-MNS-S-RW
UHF High Performance Reader, Mains Wiegand RO	IP3319	IP-X URDR-HP-rff-rfp-MNS-W-RO
UHF High Performance EVI Reader Mains Ethernet RW	IP3315	IP-X URDR-HPEVI-rff-rfp-MNS-E-RW

Symbols and their meanings

IP-X	IPICO's Multi-Read protocol
URDR	UHF RFID Reader, operating the band 860 – 960 MHz
HP	High performance (up to 8W EIRP)
HPEVI	High Performance, Linearly polarised antennas for reading horizontal ENP tags (Electronic Number Plate labels, windscreen mounted), or Industrial Vehicle Tags
RO	Read-Only (reads only unique ID, not other data pages from tags set for TTO mode)
RW	Read/Write (reads all data from "TTO" read/write tags, writes to all data pages)
rff	RF frequency, MHz (to be specified with order)
rfp	RF radiated power, expressed in W ERP or W EIRP (to be specified with order)
MNS	AC Supply, 90 – 264 VAC, 50 – 60 Hz
12V	DC supply, 12V
R	RS232 data/control
S	RS485 data/control
W	Wiegand data output (with RS232 connection for data/control)
E	Ethernet connection for data/control