

# Intelleflex RFID Research Kit

*Intelleflex Corporation offers all-in-one starter kit for RFID research and implementation*



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The Intelleflex RFID Research Kit is a fully-functional RFID system that provides the academic and research community with the opportunity to evaluate battery-assisted passive RFID technology quickly and economically. The kit includes Intelleflex readers, antennas, tags, and software for easy integration with applications and back-end systems.

The Intelleflex FMR-5000 reader provides extended capabilities with its advanced design ensuring exceptionally high read/write accuracy. The reader's multi-protocol capability allows it to read EPC C1G2 as well as Intelleflex battery-assisted tags.

The STT-7000 general purpose tags are rugged, compact tags designed for a wide variety of applications, indoors and outdoors. The SMT-7100 tags are the first tags that offer long range with on-edge performance regardless of tag orientation, and are optimized for mounting on metallic surfaces. The BAT-7300 badge tag offers outstanding performance in a thin profile. It is primarily used for personnel applications, but may also be used for other RFID-based asset tracking.

Based on EPC and ISO standards, the Intelleflex solution provides longer read ranges, extended on-tag memory, and data security far beyond standard EPC C1G2 – all at a fraction of the cost of most active RFID systems.

Components	
Item	Quantity
Intelleflex FMR-5000 reader	1
Intelleflex STT-7000 tags	5
Intelleflex SMT-7100 tags	5
Intelleflex BAT-7300 tags	5
Antennas and cables	2 pairs
Demonstration software	
Assorted cables and connectors	
SDK Document Set	

## INTELLEFLEX TAG SPECIFICATIONS

<b>Device Type</b>	Class 3 RFID (battery-assisted passive) single chip transponder
<b>Protocol</b>	Class 3
<b>Modulation</b>	Amplitude modulated forward link (reader to tag) Frequency modulated reverse link (tag to reader)
<b>Range</b>	Up to 50 meters read/write range
<b>Battery Life</b>	Up to 5 years typical, based on duty cycle
<b>Data Rates</b>	8, 32 or 48 Kb/sec forward link 2, 8 or 32 Kb/sec backward link
<b>Data Retention</b>	5 years at 85°C
<b>Operating Temperature</b>	-20° to +60°C
<b>Memory Size</b>	64 Kb total, 60 Kb rewritable user memory
<b>Other Features</b>	"Disable" command Password-controlled read, write and permalock on 1 Kb block of memory

## FMR-5000 READER SPECIFICATIONS

<b>Protocol</b>	Class 3 and Class 1 Gen 2 (C1G2)
<b>Power Output (EIRP)</b>	2 W
<b>Number of Channels</b>	4
<b>Connectivity</b>	
Network	10/100 BaseT Ethernet RJ45
External Interfaces	GPIO Port (4 input, 4 output ports) DB15 RS232 Serial DB9
RF Connectors	Reverse-TNC
Antenna Ports	4 transmit ports, 4 receive ports
Power Supply	+24V DC @ 1,5 amps
<b>Host Interface Protocol</b>	XML, LLRP, and .NET
<b>Dimensions</b>	19 cm x 30,5 cm x 6,6 cm (includes mounting plate with four 6,5 mm mounting holes)
<b>Weight</b>	1,6 kg
<b>Visual Status Indicators</b>	LEDs for power (green), activity (yellow) and software on (red)
<b>EMC<sup>1</sup></b>	FCC Part 15 Class B, EN55022 Class B, EN55024, CISPR 22 Class B
<b>Agency Listings<sup>1</sup></b>	UL 60950, cUL C22.2 No. 60950-00, TUV EN60950, CE
<b>RoHS Compliant</b>	Restriction of Hazardous Materials Compliance

1. Pending certification.

## ANTENNA SPECIFICATIONS

<b>Type</b>	Circularly polarized patch antenna Separate transmit and receive antennas
<b>Connectors</b>	Reverse-TNC
<b>Dimensions</b>	305 mm x 305 mm x 25 mm
<b>Weight</b>	1,2 kg
<b>Gain</b>	6,85 dBil / 9 dBic (no cable loss assumed)
<b>VSWR</b>	1,5:1 (max)

Intellex reserves the right to change product information and specifications without notice.

## ORDERING INFORMATION

<b>Part Number</b>	<b>Description</b>
RKD-1600-EU	Intellex RFID Research Kit; Europe 865.6 - 867.6 MHz frequency band

