



**IF5 Intellitag®
FIXED READER**

**Product
Profile**

- **An intelligent reader – embedded Linux based internal controller to host edge-server applications**
- **Software configurable to read/write EPC Gen2 and ISO tags**
- **Factory configurable to operate in 869MHz, 915MHz or 950MHz RFID bands**
- **Directly monitors and controls presence detectors and signal lights**

Joining an already diversified line of RFID readers, the Intermec® Intellitag® IF5 fixed reader delivers unmatched capability at the tag scan site. Considered a “smart” reader, custom applications running on the IF5 enable it to filter information from tags, as well as monitor external sensors and control audible and visual indicators, without the expense, and potential additional point of failure of a separate server “box”, required by other RFID scanning solutions. As with all Intellitag reader products, the IF5 both reads and writes to RFID tags.

Beginning in 2003, Intermec and IBM worked with a common goal of creating an RFID reader capable of filtering incoming tag data and sending only pertinent information upstream to the application server. The resulting IF5 smart reader is based on a Linux platform, and runs IBM’s WebSphere® Everyplace® Micro Environment (WEME). This eliminates the need and added cost of an additional industrial PC for data filtering or processing at the point of collection. In large scale enterprises, eliminating the need for a server for every RFID reader, not only reduces cost, but also lowers the number of potential failure points in the network.

Continuing to focus on keeping the cost of ancillary equipment and installation low, the IF5 platform includes powered general purpose input/output (I/O) circuitry, which allows direct monitoring and/or controlling of peripheral devices such as presence detectors and signal lights without requiring extra circuitry and power supplies to facilitate the connection.

The IF5 filters, manages and acts upon the data read from tags according to application parameters, all made possible by Java applets. The Java applets can also be programmed to change the application parameters of the IF5 in response to new incoming data from a tag or peripheral device. For example, a portal –mounted IF5 reader can be programmed to scan the “destination” field on all tags passing through, and subsequently flash a red beacon light for the fork lift driver if an item is about to be incorrectly loaded.

The IF5 reader is factory configured to operate in any of three RFID frequency bands: 869MHz (Zone 1, primarily Europe), 915MHz (Zone 2, primarily North and South America), and 950MHz (Zone 3, primarily Japan and Asia). Multi-national enterprises operating in North America, Europe and Asia no longer have to purchase and support readers from several manufacturers in order to cope with the different frequency bands present in each region.

An internal auto-range adapting power supply, requiring approximately 15 watts of 100 to 240 Volts AC, allows the IF5 to be capable of continuous operation anywhere in the world. For sites with infrastructure supporting Power over Ethernet (PoE), the internal controller can be configured to use PoE.

The Basic Reader Interface included with IF5 simplifies the control of RFID interrogators with text-like command/response protocol that is portable to many platforms, easy to learn, easy to optimize, and easy to support.

Physical Description

The IF5 Intellitag® fixed reader is an intelligent RFID reader that can be factory configured to operate in RFID frequency bands: 869MHz or 915MHz. In addition to performing both read and write functions, the IF5 is also capable of running custom applications to filter information from tags, as well as monitor external sensors and control audible and visual indicators.

Physical Characteristics

Length: 35.6 cm (14 in.)
Width: 23.1 cm (9.1 in.)
Height: 9.53 cm (3.75 in.)

Environment

Operating Temperature:
 -25°C to 70°C (-13° F to 158° F)
Storage Temperature:
 -30°C to 75°C (-22° F to 167° F)
Humidity: 10% to 90% (Non-condensing)
Enclosure: IP53

Standard Features

Communications Interface options:
 Ethernet 10/100BaseT or Wireless 802.11g
Operating System: Open Source Linux version 2.4.23
Input/Output Circuits: Four input (0-40VDC) and four output (0-48VDC .5 amp) circuits, 500ma 12VDC power

Antenna Connections

Four - Reverse SMA, -20dB software controlled

Power

110-240 VAC auto ranging, Power over Ethernet for controller (option)
 Power Supply is internal and included
Duty Cycle: 100%

RFID Frequency Ranges:

869 and 915 MHz

Tag Air Interfaces

Intellitag G1 (Fairchild G1)
 ISO 18000-6b (Philips i-code HSL)
 Philips Version 1.19
 EPCglobal UHF Gen 2

Protocols

ANSI INCITS 256:2001
 Intermec Basic Reader Interface

Connection to Network

Ethernet, 802.11G or 802.3 wired

Software

Device and Software Management:
 UC Davis NetSNMP
 DHCP client
 Telnet server
 Intermec ICCE/ICCU (config settings)
 IBM Tivoli
 IBM WebSphere Everyplace Device Manager
 Wavelink Avalanche

User Programmable Internal Controller for "Edge server" or "Middleware" apps

Motorola 240 MHz MPC8245, 16 Mbytes of SDRAM, 4 Mbytes Flash, LINUX OS

Accessories

802.11g radio, antennas, antenna cables, mounting bracket

Standards

AIAG B-11
 ANS INCITS 256:1999 (R2001) - Parts 2, 3.1 & 4.2
 ANSI MH10.8.4
 ISO/IEC CD18000 Part 4
 ISO/IEC WD18000 Part 6

Part Number

IF5UA20300000004 - RFID Reader, Fixed, EPC global Gen 2 only, FCC, Ethernet (this is one of multiple unique configurations)

Restrictions On Use

Some approvals and features may vary by country and may change without notice. Please check with your local Intermec sales office for further information.

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