

# IF61

## Enterprise Reader



- Intel Celeron processor and ample storage to run complex RFID applications
- Hosts applications written in Java, Java Script or C# .Net
- “Store and forward” capabilities ensure data won’t be lost
- Directly monitors and controls presence detectors and signal lights
- Localized workbench to load, edit and run JavaScript directly on the reader
- Based on EPCglobal certified radio
- Available in multiple regional configurations

In order for RFID readers to do more than simply read and act as a data conduit, they need processing speed and ample memory. With the powerful combination of an Intel Celeron M 600 MHz processor and up to 1 GB of optional memory, the Intermec™ IF61 Enterprise Reader is the smartest RFID reader available, capable of running complex RFID applications, delivering faster processing and localized intelligence.

When the host system or electrical power fails, the ample storage resources, and “store and forward” capabilities of the IF61 ensure that data won’t be lost, even in the highest tag volume environments. In fact, with the optional spinning drive installed, the IF61 can store over 6 billion EPC tags. When applications are mission critical and “re-work” isn’t an option, the IF61 can be counted on.

By hosting applications written in Java, JavaScript or C# .Net., the IF61 filters, stores and manipulates information from tags and sends it to a server in a required format, while monitoring external sensors and controlling audible and visual indicators. For example, the IF61 can be programmed to store a day’s worth of shipping manifests, compare the pallet tags it reads against the manifests in its memory, and drive a peripheral device to issue a visual or audible signal of a correctly or incorrectly loaded pallet.

The IF61 can perform all of these tasks without the extra expense, and potential point of failure, of a separate industrial PC often required by other RFID reading solutions. Additionally, the IF61 includes powered general purpose input/output (GPIO) circuitry, which allows direct monitoring and/or controlling of peripherals such as presence detectors and signal lights without requiring extra devices and power supplies to facilitate the connection.

The IF61 is a Smart RFID Reader capable of embedding enterprise-class edge server software in lieu of requiring an on-premise PC. Advanced network services built into the IF61 greatly facilitates enterprise architects in configuring a highly secure, scalable, and reliable RFID infrastructure.

The IF61 is the only RFID reader to provide a localized workbench to load, edit and run JavaScript as a standard feature. The workbench allows programmers to test business logic directly on the reader, enabling faster application development while utilizing fewer resources.

SmartSystems™ Foundation, standard on the IF61, provides a single, convenient console for quick set-up and configuration of all of the settings contained in the device. Administrators can change device settings, send firmware upgrades, update software applications, and execute other changes directly from the console to save time and significantly cut costs.

The IF61 Enterprise Reader is based on Intermec's IM5 radio module, which is EPCglobal Certified Compliant and Interoperable.

#### Physical Description

The IF61 enterprise reader incorporates the Intermec IM5 radio module as well as an Intel Celeron M 600 MHz processor and up to 1 GB of optional memory. The IF61 can host applications written in Java, JavaScript, VB .Net or C# .Net, while also monitoring external sensors and controlling audible and visual indicators. The IF61 meets ETSI and FCC standards and is factory configured to operate in many regions including USA and Canada, EU, China, S. Korea, Thailand, Australia, and New Zealand.

#### Physical Characteristics

**Length:** 32.4 cm (12.74 in)  
**Width:** 22.6 cm (8.90 in)  
**Height:** 10.8 cm (4.25 in)  
**Weight:** 2.55 kg (5.62 lbs)

#### Environment

**Operating Temperature:** -25°C to 55°C (-13° F to 131° F)  
**Storage Temperature:** -30°C to 75°C (-22° F to 167° F)  
**Humidity:** 10% to 90% (Non-condensing)  
**Enclosure:** IP54  
**Shock and Vibration:** MIL-PRF-28800F, Class 2

#### Standard Features

Intel Celeron M 600 MHz processor  
**Communications Interface options:** Ethernet and optional Wi-Fi  
**Configuration:** Internal web Graphical User Interface (GUI)  
General Purpose Input/Output (GPIO)  
Four mono-static RF ports  
Dense Reader Mode  
Built-in power supply

#### RF Antenna Connections

**Four mono-static RF ports:** FCC -Reverse SMA. ETSI Standard SMA, 30 dBm to 10 dBm  
RF power output software controlled

#### RFID Frequency Ranges

865, 869, 915 and 950 MHz

#### Tag Air Interfaces

EPCglobal UHF Gen 2  
ISO 18000-6b  
ISO 18000-6c  
Philips Version 1.19  
Fairchild G1

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#### Internet

www.intermec.com  
Worldwide Locations:  
www.intermec.com/locations

#### Host Interface Protocols

Intermec Basic Reader Interface (BRI),  
EPCglobal ALE and LLRP

#### Power

**Internal power supply:** 95-264 VAC auto ranging,  
47-63 Hz

#### GPIO

A 25 pin D-Type connector provides the GPIO interface  
4 optically isolated inputs (0-40 VDC).  
4 optically isolated outputs (0-48 VDC).  
Supply output 12 VDC at 500 mA.

#### Processor

Intel Celeron M 600 MHz

#### Memory

128 MB of DDR expandable to 1 GB  
1 GB Flash memory standard  
Optional 40 GB hard drive

#### Connectivity

**Ethernet:** IPv4 & IPv6, Auto detect and  
selectable 10-100 Mbps full and half duplex  
Optional 802.11 a/b/g Wi-Fi  
USB for storage  
RS-232 for peripheral devices

#### Indicators LEDs

Power; Intermec Ready-to-work; Ethernet; Wi-Fi;  
RF power; Tag Identification

#### Network Services

HTTP/HTTPS Web server, SSH server, FTP server,  
Telnet server, Domain Name System (DNS), Simple  
Network Time Protocol (SNTP), Syslog, Server Message  
Block (SMB/CIFS), Network File System (NFS)

#### Device Management

Wavelink Avalanche Client  
Intermec SmartSystems  
SNMP v1-3

#### Device Discovery

Bonjour® UDP discovery Service  
UPnP® Discovery  
DHCP  
Intermec SmartSystems

#### Sales

Toll Free NA: (800) 934-3163  
Toll in NA : (425) 348-2726  
Freephone ROW: 00 800 4488 8844  
Toll ROW : +44 134 435 0296

#### OEM Sales

Phone: (425) 348-2762

#### Media Sales

Phone: (513) 874-5882

#### Customer Service and Support

Toll Free NA: (800) 755-5505  
Toll in NA : (425) 356-1799

#### Device Configuration

Options for RF configuration, tag types, tag  
reporting, tag singulation, medium access,  
antenna configurations, and more via:

- HTTP/HTTPS
- RS-232
- Intermec SmartSystems
- Wavelink Avalanche™ Client

#### Firmware Upgrades

Web interface using HTTP/HTTPS  
Intermec SmartSystems  
USB  
Wavelink Avalanche™ Client

#### Security

Username & password  
Enable/Disable network services  
RADIUS client  
Enable/Disable serial configuration  
Server and CA Certificates  
OpenSSL  
SSH

#### Enterprise Software Support

EPCglobal Application Level Events  
(ALE) 1.1 implementation  
EPCglobal Low Level Reader Protocol  
(LLRP) implementation  
SAP Auto-ID Infrastructure (All)  
Device Controller certified  
IBM Ready4 Platform certified supporting  
IBM Premises Server 6.1  
Microsoft BizTalk RFID Provider implementation

#### Development Environments

Built in Java Virtual Machine: JSE v6.0  
VB Net & C# .Net support  
OSGi console  
JavaScript Interpreter  
Built-in JavaScript workbench  
Built-in application installer  
Equinox OSGi Framework  
Web test interfaces: Display tags, GPIO test, BRI commands  
Intermec Development Libraries for Java and .Net

#### Accessories

802.11 a/b/g radio, power cables, antennas, antenna  
cables, mounting bracket, internal hard drive

#### 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

#### Restrictions on Use

Some approvals and features may vary by country and  
may change without notice. Please check with your  
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