

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

North America

Corporate Headquarters

6001 36th Avenue West
Everett, Washington 98203
Phone: (425) 348-2600
Fax: (425) 355-9551

South America & Mexico Headquarters Office

Newport Beach, California
Phone: (949) 955-0785
Fax: (949) 756-8782

Europe/Middle East &

Africa Headquarters Office

Reading, United Kingdom
Phone: +44 118 923 0800
Fax: +44 118 923 0801

Asia Pacific

Headquarters Office
Singapore
Phone: +65 6303 2100
Fax: +65 6303 2199

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

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

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www.L-TronDirect.com

800-830-9523

info@L-Tron.com

596 Fishers Station Dr | Victor, NY | 14564 | Suite 1 A

www.L-Tron.com

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on social media!

