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**IrFM POS Adapter and Protocol IC
ACT-IR103SL & IR8203L
(v0.1.1-030208)**

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**IrFM POS Adapter and Protocol IC
(ACT-IR103SL & IR8203L, V0.1.1-030208)**

Revision History		
Revision	Date	Comment
Rev. 0.1.0	01/20/2003	First Draft
Rev. 0.1.1	02/08/2003	Added IR103SLi/IR8203L photo

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IrFM POS Adapter and Protocol IC ACT-IR103SL & IR8203L

A) IrFM POS Adapter and Protocol IC, IR103SL & IR8203L

IrFM POS Front End Adapter is a sub-assembly designed specifically to handle the lower level IrDA protocol layers for IrFM POS. It is a ready to use, assembled and tested hardware/firmware sub-assembly that handles IrPHY, IrLAP (including Fast Connect), IrLMP (including IAS for IrFM OBEX), and TinyTP. Physically, it can be as external RS232 adapter (IR103SL), internal PCB (IE103SLi), or protocol IC (IR8203L).

B) Benefits of IR103SL & IR8203L

- 1) Speed up the IrDA IrFM certification process.
- 2) Speed up time to market for IrFM POS.
- 3) Lower the non-recurring cost of developing IrFM POS.
- 4) Lower the incremental cost of producing IrFM POS.
- 5) Lower the maintenance cost of IrFM POS.
- 6) Relieves the hosting IrFM POS from handling Fast Connection.
(Newly published by IrDA, January 15, 2003).
- 7) Relieves the hosting IrFM POS from handling the Transceiver hardware specifics.
- 8) Relieves the hosting IrFM POS from handling time critical requirements of IrLAP.
- 9) Enables easy POS emulation to test PTD (Personal Trusted Device).

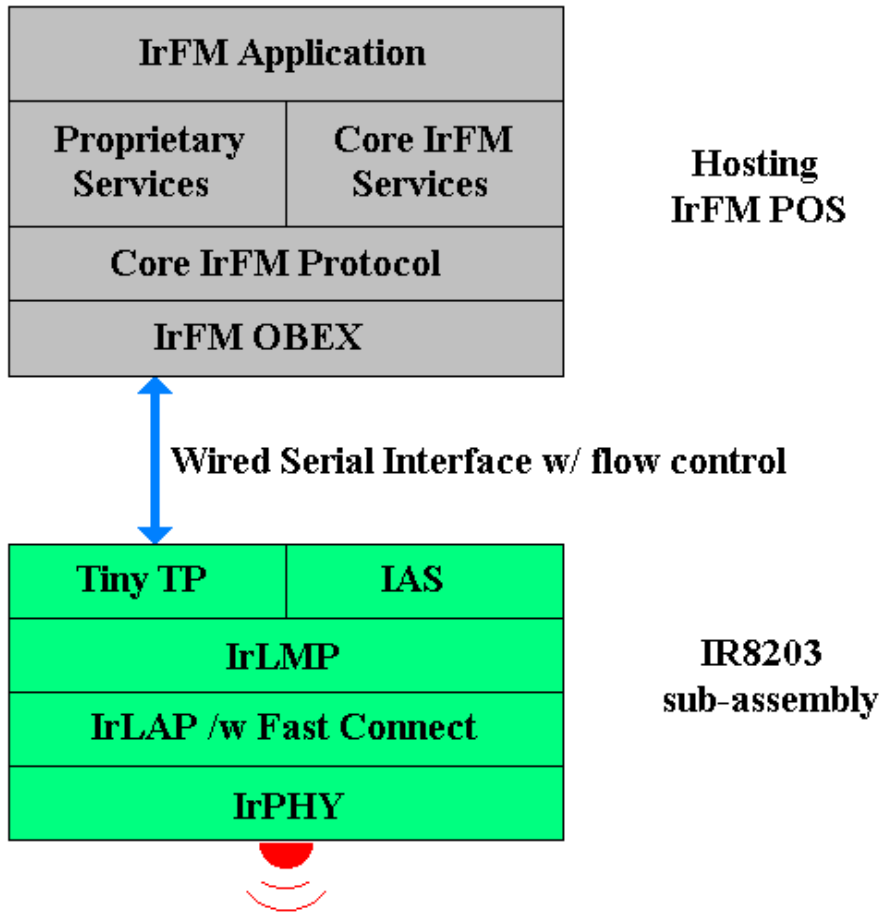
C) Features of IR103SL & IR8203L

- 1) Simple wired serial interface to the hosting IrFM POS.
- 2) Automatically handles Fast Connection. (Newly published by IrDA, January 15, 2003) without burdening the hosting IrFM POS.
- 3) Efficiently and automatically handles the minimum turnaround, maximum turnaround, and all time critical requirements.
- 4) Compliant to IrDA requirements for IrPHY and IrLAP layers.
- 5) Very low component count. Small and modular in construction.
- 6) Low cost, low power.

D) IrFM Protocol Partition Block Diagram

- 1) IR8203L/IR103L/IR103Li includes; IrLAP with Fast Connect, IrLMP, IAS, Tiny TP and IrFM OBEX Transport.
- 2) This IrFM POS external adapter, internal PCB, or controller IC interfaces with host POS system through wired serial with flow control.

3) What's left, and the only practical way to partition, is to implement in host POS system; IrFM OBEX, Core IrFM Protocol, Core IrFM Services and Proprietary Services, and IrFM Application program. These are show below:



E) IrFM POS Adapter and Protocol IC Photo

An example of the ready made/pre-tested IrDA/FastConnect internal PCB, ACT-IR103SLi and IrFM protocol processor IC, ACT-IR8203L are shown below:



About IrFM:

The Infrared Financial Messaging (IrFM™) “Point & Pay” Specification v1.0 was published on Jan. 15, 2003 for free download from IrDA website (www.irda.org). It utilizes existing financial services infrastructures to process wireless payment transactions (credit, debit and smart cards, checks, and loyalty cards) at the point of sale (POS). It easily and inexpensively enables existing POS devices (card readers, ATMs, kiosks, gas pumps, turnstiles, toll booths, etc.) to receive and send consumer payment information and approvals wirelessly between POS and handheld devices. It is built upon proven IrDA standards for cell phones, PDAs and terminal adapters. It also provides a compatibility path for RF technologies; e.g. Bluetooth, WAP, 3GPP.

Changes in existing IrDA Standards was necessary in order to provide much faster connect time capability for express payment environments such as mass transit turnstiles, toll booths and vending machines (less than 0.2 seconds). These modifications (IrLAP Fast Connect) have now been incorporated into this recently released IrFM™ v1.0 Standard, an improvement that will provide significant overall IrDA user benefits. At the same time, requirements for vouchers, loyalty programs and coupons were also being added.

About ACTiSYS Corp.

ACTiSYS Corp., has been offering wireless connectivity hardware and software solutions for the mobile applications since 1990. We offered the IR wireless printing and PC data transfer two-in-one adapter for PDAs in 1991. We are the leading supplier of IrDA adapters for PC-RS232, USB, motherboard, and parallel and serial printers.

We also offer IrDA protocol processor, and external RS232 adapter and internal PCB for embedded systems. We supply the effective IrDA BER (Bit Error Rate) handheld tester and is one of the five IrDA certification centers approved by IrDA Test Council. ACTiSYS was one of the early members of IrDA since 1992. Our executives were elected by the IrDA member companies to be chair of Technical committee, and Test/Interoperability committee. We continue develop unique IR and RF solutions for vertical markets as well as volume products for the consumer market. The company is privately funded and is headquartered in Fremont, California. Visit www.actisys.com for more information.