

# IrFront™ v2.0

IrDA compliant infrared communication protocol stack

IrFront is ACCESS' original compact embedded IrDA protocol stack. IrFront was developed primarily for mobile phones and other resource-restricted embedded systems. IrFront is compliant with IrDA specification for infrared\*. In Addition to standard feature support like IrCOMM and IrTran-P, major functions like IrFM for IrDA financial services as well as IrMC for OBEX are available as options. IrFront has been widely deployed on mobile phones, and has been used for both data exchange and financial services. Supporting such diverse services ensures broad compatibility with many systems and devices, including digital cameras, mobile printers, POS (Point-of-Sale) systems and more.



\*ACCESS is official member of INFRARED DATA ASSOCIATION (IrDA) and Mobile Computing Promotion Consortium.

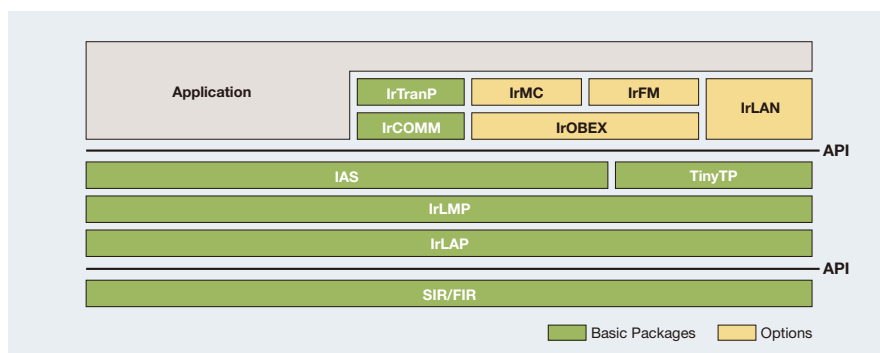
## Features

- Compliant with IrDA Specification (IrDA1.0 and part of IrDA1.1)
- Supports IrFM, IrMC (Optional)
- Simple application interface
  - Provides simple application interface that enables developers to program without considering IrDA connection (Discovery/IAS)
- Optimized module structure for embedded systems
- Guaranteed 24 hour uninterrupted service
- Compact module size
- IrCOMM 3W/9W, IrTranP application provided
- Proven technology that has been widely deployed
- Combination of ACCESS' AVE-Blue and Infrared OBEX application such as IrMC enable smooth transition from infrared to Bluetooth®. Sharing the OBEX layer also provides effective memory usage
- Compliant with IrDA Specification (IrDA1.0 and part of IrDA1.1)
- Supports IrFM, IrMC (Optional)

## SDK (Software Development Kit)

- IrFront consists of a basic package and several option packages. Standard package include IrTran-P and IrCOMM. The IrMC option package provides IrMC/IrOBEX, and IrFM option package provides IrFM/IrOBEX.
- Source code provided
  - CPU/OS agnostic (Code was written by ANSI C)
    - Tested on SH-3 (MS7709ASE01)/µMore v4.0 (µTRON 4.0 compatible)
  - Application development and debugging are supported with PC emulator environment
  - WinSock supported for PC environment

## Module Architecture



### IrMC Option Package

IrMC (Infrared Mobile Communications) is used for data exchange between terminals. Address books, Mail, and Memos can be exchanged through infrared communication. IrFront supports IrMC level 1/2/3/4 and the full MCPC guideline. IrFront guarantees the interoperability of different types of mobile devices.

- Compliant with MCPC object exchange implementation guideline v1.0
- IrMC Level 1/2/3/4 supported
- Supports the following data formats
  - vCard: Address book
  - vCalendar: Schedule (ToDo/Event)
  - vMessage: Mail (E-Mail/SMS)
  - vNote: Memo (Ring tone, Picture, etc)
  - vBookmark: Bookmark

- vParser, simple API of IrMC data, is provided. vParser enables developers to easily develop IrMC applications
- Data such as vCard, vCalendar are easily

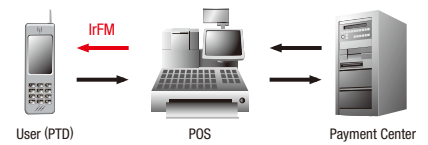


### IrFM Option Package

IrFM (Infrared Financial Messaging) is the worldwide standard for infrared payment services as approved by the IrDA. IrFM sets the compatibility standards for existing credit cards and other electronic payment systems.

- OBEX SESSION
  - Create/Close/Resume/Suspend/Set Timeout
- Support all IrFM1.0 primitive
  - Including all CIP primitive
- Standard Payment Application
- Voucher Application

- VISA Payment
- POS/PTD TESTER is provided



### SDK (Software Development Kit)

#### Basic Package

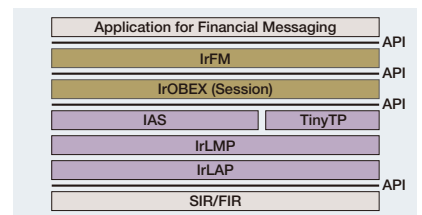
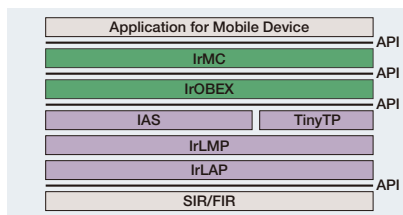
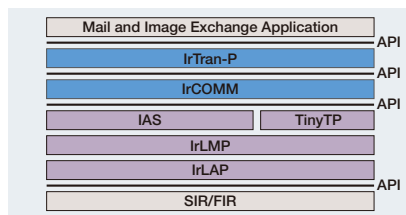
- Program module
  - Compiled library module
  - IrFront kernel/IrCOMM/IrTranP/ source code
  - Evaluation modules (µMore v4.0, AVE-File v1.2, AVE-PLIM v1.1)
- Sample source
  - IrTranP/IrCOMM application/Physical layer (SIR/FIR) driver
- Test program for Windows environment
  - IrTranP/IrCOMM binary/Physical layer (SIR/FIR) binary
- Document
- 3month free e-mail support

#### IrMC/IrOBEX Option Package

- Program module
  - Compiled library module
  - IrMC/IrOBEX source code
- Sample source
  - IrMC/IrOBEX application, IrMC Sync application, vTrigger application
  - vCard/vMessage/vCalendar/vNote parser
- Test program for Windows environment
  - IrMC/IrOBEX, IrMC Sync, vTrigger binary
- Document
- 3month free e-mail support

#### IrFM Option Package

- Program module
  - Compiled library module
  - IrFM/IrOBEX (session) source code
- Sample source
  - IrFM/IrOBEX (session) application
- Test Program for Windows environment
  - IrFM/IrOBEX (Session) binary
- Document
- 3month free e-mail support



Other Kits (IrLAN Option Package, IrFront H8S Trial Kit)

Contact ACCESS for more information

### Tested Environment

CPU	SH7709A (SH-3)/MS7709ASE01
OS	µMore v4.0 (µITRON 4.0 compliant)
Development Environment	Renesas Technologies HEW v1.1, Microsoft Visual C++6.0, Computex ROMICE64+CSIDE95, Windows 95/98/NT4.0/2000

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