

white bream

SI3I Infrared protocol stack

This IrDA® secondary station protocol stack is designed for small embedded systems that need an easy to implement serial but wireless communication facility.

Specifications:

- Secondary station mode,
- Window size 1,
- Packet size 64-2048 bytes,
- SIR baudrates 9600-115200 bps,
- 3/9-Wire serial and parallel emulation,
- Modular upper layer,
- Ansi C

Supported protocols:

- IrPHY,
- IrLAP,
- IrLMP,
- TinyTP,
- IAS,
- IrCOMM,
- IrLPT,
- IrPNP,
- IrOBEX (optional),
- Custom

Description:

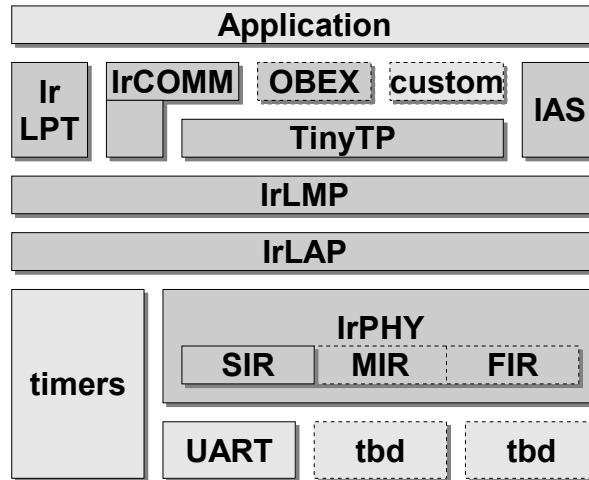
Today probably more devices have an IrDA infrared communications port than a classic serial RS232 connection. Most of today's notebook computers, PDA and cellphones provide IrDA services. Therefore this standard is a very viable solution for interfacing from your embedded system to such consumer devices. This eliminates the need for cables and makes it easier for your customer to establish a connection with your product.

The stack can be used with any decent microcontroller as long as an ANSI C compatible compiler is available because the protocol stack is distributed as source code. This also gives the option to modify the software at will to your own preferences if needed.

Licensing:

The Infrared secondary station protocol stack is sold as a royalty-free source license with 60 days of technical support that is valid for one target implementation. The license does not include the right to use the IrDA trademark or logo with your product. Such license needs to be purchased from IrDA directly.

* The use of the name IrDA does not imply any association of the "Infrared Data Association" or "IrDA" with this product. This name is only used to indicate the compatibility with the IrDA Standards specifications.



Applications:

- Printers,
- Test & measurement,
- Dataloggers,
- IP68 Equipment,
- Vending machines

Resources:

- ~ 9kB Code & data,
- ~ 2kB RAM,
- tbd MIPS

I12I - Serial Infrared Endec

Applications:

- Serial infrared standard (SIR),
- 9600 - 115.200 Baud,
- Uses 16x baudrate clock,
- VHDL source

Chip resources:

- 31% of Xilinx XC9536XL,
- 34% of Lattice M4-32/32,
- 1.4% of Actel APA075,
- 2% of Xilinx XC2S30

Description:

This VHDL solution for an infrared serial encoder/decoder provides a very cost effective solution for embedded system that require low-speed IrDA communication facilities. The endec component can easily be integrated into a larger design or it can be implemented with a dedicated logic device such as one from the resources table.

The Serial Infrared Endec is sold as a royalty-free source license with 60 days of technical support that is valid for one target implementation.

EI05 - Infrared evaluation board

Features:

- S13I Infrared secondary station stack demo,
- Supports IrCOMM, IrLPT and IrPNP,
- I12I Serial Infrared Endec demo,
- Renesas H8/3672F microcontroller,
- Xilinx XC9536XL-10 logic device,
- Vishay TFDU4100 IrDA transceiver,
- 5-15V Power supply (9V battery),
- RS232 or LVTTL serial interface,
- Dimensions 65 x 31 mm

Description:

An easy way of demonstrating, evaluating and testing the S13I Infrared stack is given with this evaluation board. The board can be configured by jumper settings to provide IrCOMM, IrLPT and IrPNP services. This way compatibility with an existing application can easily be confirmed before actually purchasing and implementing the stack.

Tools:

Using the freely available toolchains GNU C for the H8/3672F and Xilinx ISE Webpack for the CPLD, the design can easily be modified or reused for other purposes.

Retail prices excluding VAT:

S13ISEC	€	1500.-
S13SRC	€	tbd
I12ISRC	€	150.-
EI05DEM	€	tbd

Your White Bream distributor: _____

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