SHARP®

IrDA Components Group

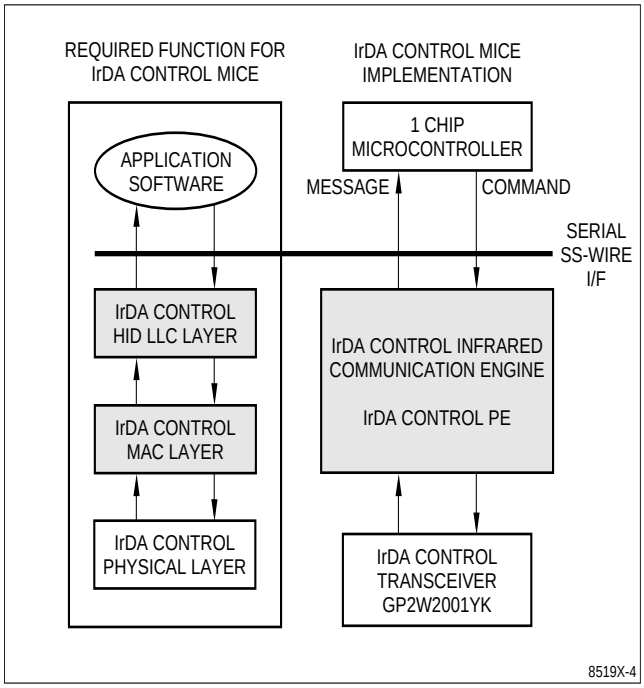
**APPLICATIONS:**
- Network Computer

# LZ8519X IrDA Control Peripheral Engine (PE)

## FEATURES

- All-in-One Embedded Communication Controller (Encoder/ Decoder, IrDA, IrDA Control MAC Layer, HID LLC Layer)
- Simple Command given by an ordinary µP enables PE to operate every protocol required for IrDA Control Infrared Wireless Communication
- Optimized interface to SHARP IrDA Control Infrared Transceiver (SHARP P/N: GP2W2001YK)
- Serial interface (Synchronous Serial Wire) is prepared for the interface between µP and PE.
- Low current consumption: $I_{CC}$ = 3 mA (at operation)
- Supply Voltage: $V_{DD}$ = 2.7 V - 3.3 V

## SYSTEM BLOCK DIAGRAM



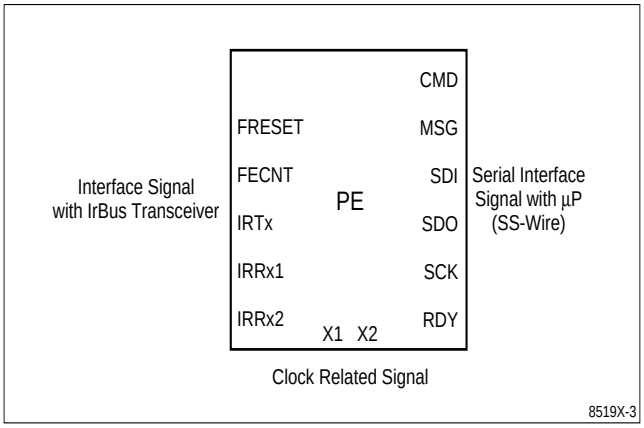

## DESCRIPTION

SHARP IrDA Control Peripheral Engine will exchange the information with µP through this serial interface (SS-Wire). Only two attributes, 'Command' and 'Message', a simple software will be used for information transaction. Other protocol stacks are supported by PE and users can simply minimize design effort and time.

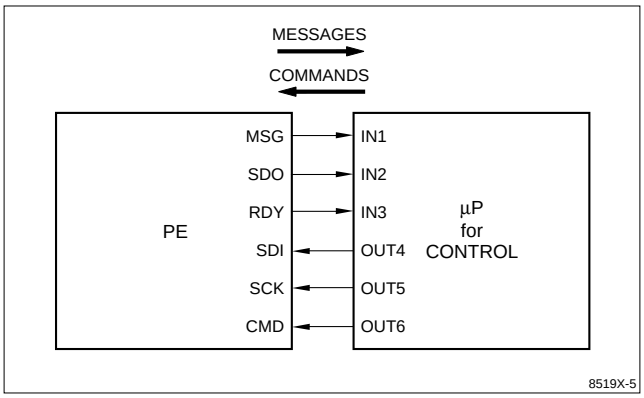
The SHARP IrDA Control Peripheral Engine (PE) is an embedded Communication controller, designed to fully support IrDA Control MAC Layer and HID LLC Layer services. It has an optimized interface to SHARP IrDA Control transceiver, and the Serial Interface (Synchronous Serial Wire) for µP.

Since IrDA Control MAC layer and HID LLC layer protocol stacks are already built-into PE, one can easily implement IrDA Control Peripherals with SHARP IrDA Control transceiver and PE.

## GENERAL CHARACTERISTICS




## SYSTEM DATA FLOW




This Product Information is from Prelimary Product Information Issue Date: April 15, 1998.

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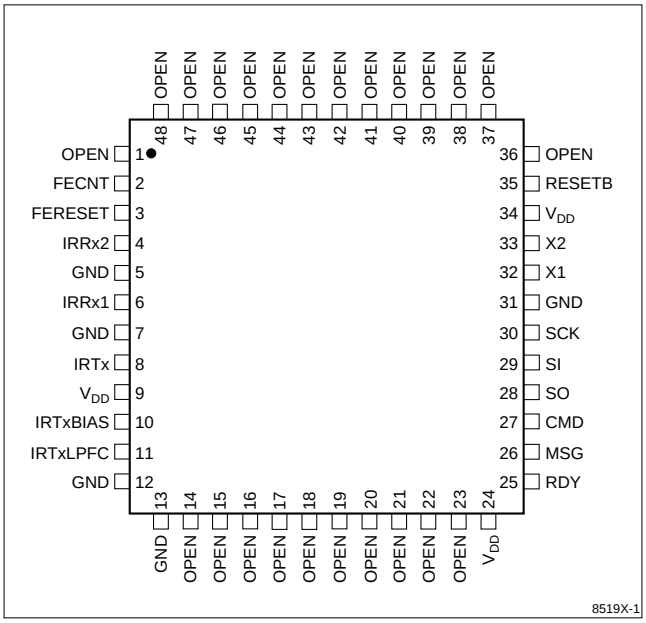
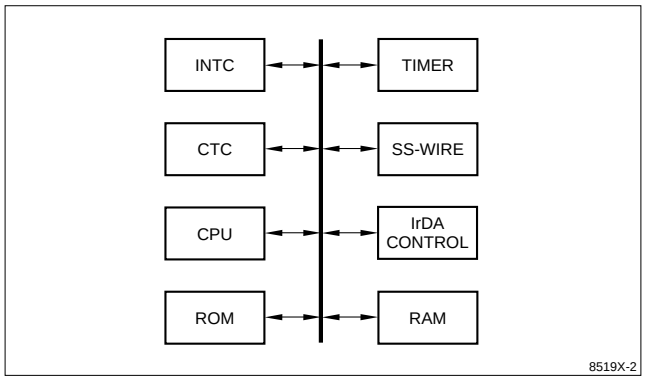
## 48-PIN SOP




## BLOCK DIAGRAM




## PIN DESCRIPTION

| PIN NAME | I/O | DESCRIPTION |
|---|---|---|
| SI | Input | Serial data input |
| SO | Output | Serial data output |
| SCK | Input | Clock signal for serial data |
| MSG | Output | MSG = H indicates the PE holds messages. µP must issue Get_Message command and read in the message. When PE no longer holds messages, PE outputs MSG = L |
| RDY | Output | Signal for flow control |
| CMD | Input | Timing signal for command ID |
| IRTx | Output | Connected to TXD pinout of Infrared Transceiver (P/N: GP2W2001YK) |
| IRTxBIAS | Output | N/C |
| IRTxLPFC | Output | N/C |
| IRRx1 | Input | Connected to $V_O$ pinout of Infrared Transceiver (P/N: GP2W2001YK) |
| IRRx2 | Input | N/C |
| FECNT | Output | Connected to SD pinout of Infrared Transceiver (P/N: GP2W2001YK) |
| FERESET | Output | Connected to RESET pinout of Infrared Transceiver (P/N: GP2W2001YK) |
| RESETB | Input | Hardware reset signal |
| X1 | Input | Clock input. Clock of 6 MHz must be input |
| X2 | Output | NC |