

IrDA PROTOCOL IC COMPARISON TABLE (v1.28, 2004/01/08)

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(ACTiSYS ACT-IR82x0P/ACT-IR8200LX, and Microchip MCP2150)

| | | ACTIR8250P | MCP2150 | ACTIR8200P | ACTIR8200L | IR8200LM | IR8200LT |
|----------------------------|--|---|----------------|---|---|--|--|
| Compatibility | Windows98SE/ME/2000/XP | All Compatible | Yes | All Compatible | All Compatible | All Compatible | All Compatible |
| | Palm O.S. | All Compatible | Not All | All Compatible | All Compatible | All Compatible | All Compatible |
| | Windows CE & Pocket PC | All Compatible | Not All | All Compatible | All Compatible | All Compatible | All Compatible |
| | Symbian O.S. | Compatible | Not Sure? | Compatible | Compatible | Compatible | Compatible |
| Certificat. | *IrDA-IrReady Certified | Yes, in Embedded RS232 Adapter | No | Yes, in Embedded RS232 Adapter | Yes, in Embedded RS232 Adapter | Yes, in Embedded RS232 Adapter | Yes, in Embedded RS232 Adapter |
| | *Your Product To Pass Certification | Yes, Quickly | No | Yes, Quickly | Yes, Quickly | Yes, Quickly | Yes, Quickly |
| IrDA Protocol Stack | IrDA Protocol Lower Layers | Same | Same | Same | Same | Same | Same |
| | IrDA Protocol Upper Layers | IrComm, IrLPT, IrObex Transport, IrSocket | IrComm only | IrComm, IrLPT, IrObex Transport, IrSocket | IrComm, IrLPT, IrObex Transport | IrComm, IrLPT, IrObexTspt, <u>IrFM</u> | IrComm, IrLPT, IrObexTspt, <u>IrFM</u> |
| | Primary-mode; Secondary-mode | Secondary only | 2ndary only | Primary, 2ndary; or Primary+2ndry | Secondary only | Primary, 2ndary; or Primary+2ndry | Primary, 2ndary; or Primary+2ndry |
| | IrDA Baud Rate | 9.6k – 115.2k bps | Same | Same | Same | Same | Same |
| | Data Size/Packet | 64 bytes | 64 bytes | 64 bytes | 128 bytes | 128 bytes | 2,048 bytes |
| | Protocol & Host Parameters Select | Customer Selectable & Factory Set | Not Selectable | Customer Selectable & Factory Set | Software or Jumper Selectable | Software or Jumper Selectable | Software or Jumper Selectable |
| Host Interface | Host Interface Data Format | Customer/Factory Set: 8n1, 8e1, 8o1, 7e1, 7o1 | 8n1 only | Customer/Factory Set: 8n1, 8e1, 8o1, 7e1, 7o1 | Factory Set: 8n1, 8e1, 8o1, 7e1, or 7o1 | Factory Set: 8n1, 8e1, 8o1, 7e1, 7o1 | Factory Set: 8n1, 8e1, 8o1, 7e1, 7o1 |
| | UART Rate | 300~115.2kbps | 9.6k~115.2k | 300~115.2kbps | 1.2k~115.2kbps | 1.2k~115.2kbps | 1.2k~115.2kbps |
| | Flow-control | Hardware, extra 4 bytes tolerance | Hardware | Hardware, extra 4 bytes tolerance | Hardware, extra 4 bytes tolerance | Hardware, extra 4 bytes tolerance | Hardware, extra 4 bytes tolerance |

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| | | ACT-IR8250P | MCP2150 | ACT-IR8200P | ACT-IR8200L | ACT-IR8200LM | ACT-IR8200LT |
|-------------------------|------------------------------------|---|---------------|--|--------------------------|--------------------------|-----------------------------|
| | Throughput | Slow | Very Slow | Medium | Medium Fast | Medium Fast | Fast |
| Special Feat. | Firmware Customization | Yes, Special Order | No | Yes, Special Order | No | No | No |
| | AES Encryption | Special Order | No | Yes, Special Order | No | No | No |
| | Firmware Field Programmable | Yes, Special Order | No | Yes, Special Order | No | No | No |
| Electrical Spec. | Operating Vcc | 3V-3.6V | 3V-5V | 3V-3.6V | 3.3V, 5.0V | 3.3V, 5.0V | 3.3V, 5.0V |
| | Active Pwr | 2 mA@ 3.3V | 4 mA @5V | 2 mA@ 3.3V | 10 mA@ 3.3V 40 mA@ 5V | 10 mA@ 3.3V 40 mA@ 5V | 10 mA@ 3.3V 40 mA@ 5V |
| | Standby Pwr | 2 µA | <1mA@5V | 2 µA | 10 mA@ 5V | 10 mA@ 5V | 10 mA@ 5V |
| | Crystal Freq. | 7.3728MHz | 11.0592MHz | 7.3728MHz | 22.1418MHz | 22.1418MHz | 22.1418MHz |
| | Endec Xstal Freq. | No Need | No Need | No Need | 3.6864MHz | 3.6864MHz | 3.6864MHz |
| | IrDA Xsmit Pwr | <100 mA | <100 mA | <100 mA | <100 mA | <100 mA | <100 mA |
| Extra Functn. | Extra Function | Shutdown and Standby modes with Automatic Wakeup by Incoming IR | No | Shutdown and Standby modes with Automatic Wakeup by Incoming IR; 8ch ADC10 | No | No | Extra External SRAM Support |
| Package | Form Factor | IC & Small PCB Module | IC only | IC & Small PCB Module | IC & PCB module | IC & PCB module | IC & PCB module |
| | Chip Set | Single IC | Single IC | Single IC | 1 IC + 1 Endec IC | 1 IC + 1 Endec IC | 1 IC + 1 Endec IC |
| | Package | 28 Pin TSSOP | 20 Pin | 64 Pin QFP | 44Pin PLCC,TQFP | 44PinPLCC, TQFP | 44PinPLCC, TQFP |
| \$ | Price | Low | Low | Medium | Medium High | Medium High | Medium High |
| | Adapter & Voltage | IR8250PEK,DB;3/5/12V | Eval.kit Only | IR100SP; 5/12V | IR100SL;5/12/30V | IR100SLM;5/12/30V | IR100SLT;5/12/30V |

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*IrReady certification assures: a) reliable error-free IR data transfer, b) solid compatibility with other IrReady certified IrDA devices, c) strong immunity to interference. "IrReady Certified Products Honor Roll" is listed at www.irda.org/prodlist/irready.asp. IrReady certification requires passing: IrPHY (Bit Error Rate, Intensity, Sensitivity, Timing), IrDA Protocol and Inter-Operability (IrDA Application Profiles) tests.