Z02205

Modem Controller

Product Brief

Simple Block Diagram

AT Command Set	Auto Dial/ Auto Answer	Line Quality Monitoring and Auto-Retrain
Handshake Controllers	Type I Caller ID	Call Progress Monitoring
Guard Tone Controls	Power Management	V.22bis

Features

Device	ROM (KB)	RAM (Bytes)	Speed (MHz)
Z02205	16	237	116

- Includes AT command set interpreter in on-chip ROM—no external memory required
- Supports Tone dial or Pulse dial
- Call progress monitoring controls
- Handshake controls
- Guard Tone controls
- Line quality monitoring and Auto-Retrain
- Auto-Dial and Auto-Answer
- Glueless interface to Z02201 modem data pump
- Watch-Dog Timer (WDT)/Power-On Reset (POR)
- Type-I Caller ID
- Dynamic power management
- CMOS design for low power consumption

- 0°C to +70°C commercial temperature range
- 28-pin DIP, SOIC package
- 4.5V to 5.5V operating range

General Description

The Z02205 V.22bis Modem Controller serves as the modem controller in embedded V.22bis modem applications. A complete modem can be made by adding ZiLOG data pump (Z02201), phone line interface, and the required DTE interface. The Z02205 is designed for low-cost use and includes a glueless interface to the ZiLOG data pumps. The Z02205 is ideal for applications where small size and low power consumption are requirements.

The Z02205 operates over dial-up telephone connections, provides auto-dial and ring detect, and operates in either SYNC or ASYNC modes.

The Z02205 includes AT command and modem control firmware in on-chip ROM. It also includes enhanced wake-up circuitry, programmable Watch-Dog Timers, and low-noise/EMI options.

AT commands stored on-chip in ROM provide control over the following modem controller functions:

- Call progress monitoring
- Handshake negotiation
- Dial controls—pulse or tone
- S-registers
- Auto-answer and auto-dial
- Guard tones
- On-hook and off-hook
- Auto-retrain

Standard Z02205 sample devices and demonstration boards contain controller code tailored for operation

on the North American phone network. For production usage, customers must modify the controller code to meet the requirements of their particular country and application.

Note: All signals with an $\overline{\text{overline}}$, are active Low. For example, B/$\overline{\text{W}}$, in which WORD is active Low; and $\overline{\text{B}}$/W, in which BYTE is active Low.

Power connections follow conventional descriptions below:

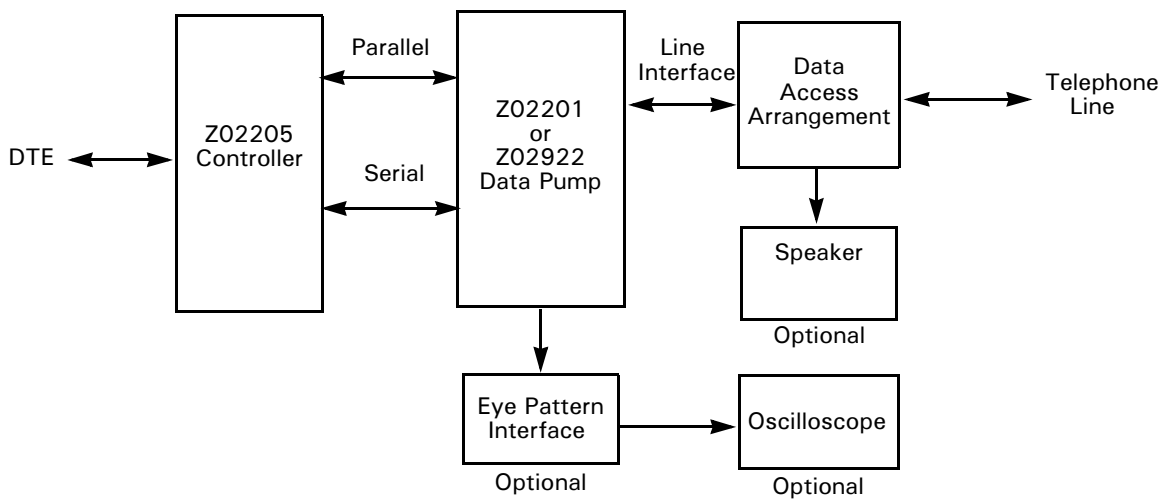| Connection	Circuit	Device
Power	V_{CC}	V_{DD}
Ground	GND	V_{SS}

Block Diagram

Figure 1.   Z02205 Block Diagram

Pin-Outs and Pin Direction
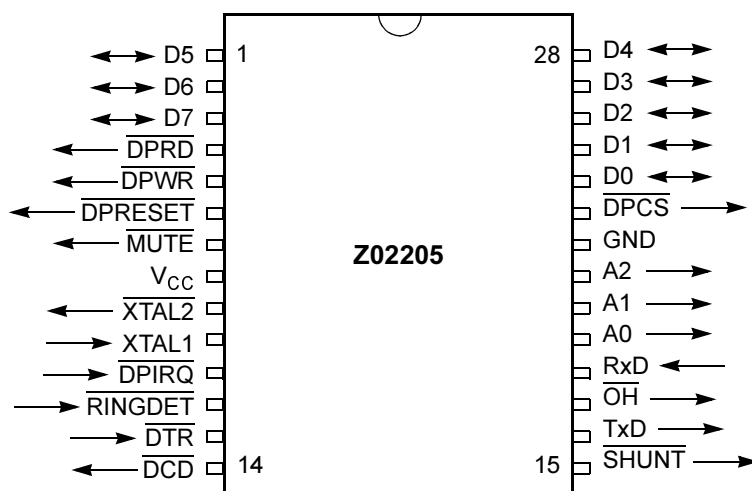
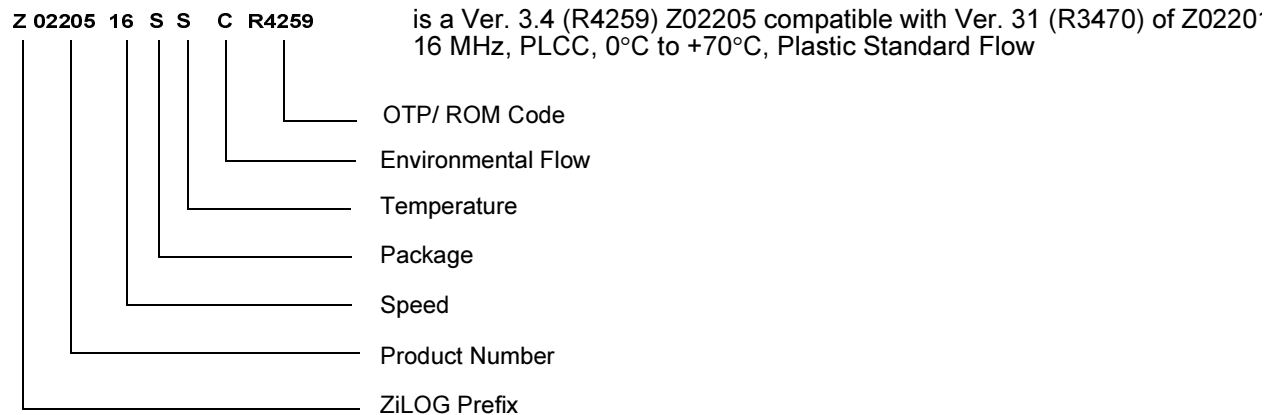
Figure 2. Z02205 Pin Diagram, SOIP/DIP

Ordering Information

28-Pin SOIC	Z0220516SSCR4292
	Z0220516SSCR4259
	Z0220516SSCR3461
	Z0220516SSC1961
28-Pin DIP	Z0220516PSCR4292
	Z0220516PSCR4259
	Z0220516PSCR3461
	Z0220516PSC1961

Codes

Package	S = Small Outline Integrated Chip (SOIC) P = Plastic DIP
Standard Temperature	S = 0°C to +70°C
Speed	16 = 16 MHz
Environmental	C = Plastic Standard
ROM Code	R4292 = ROM code number 4292 (ROM code Version 3.4) R4259 = ROM code number 4259 (ROM code Version 3.4) R3641 = ROM code number 3641 (ROM code Version 3.0) 1961 suffix = Blank Device; One Time Programmable (OTP)

Example

Z 02205 16 S S C R4259

is a Ver. 3.4 (R4259) Z02205 compatible with Ver. 31 (R3470) of Z02201
16 MHz, PLCC, 0°C to +70°C, Plastic Standard Flow

OTP/ ROM Code

Environmental Flow

Temperature

Package

Speed

Product Number

ZiLOG Prefix

Refer to the Z02205 Product Update (OT0021) for the software differences between the ROM code versions. The Product Update also lists the workarounds for earlier versions of the ROM code.

For fast results, contact your local ZiLOG sales
offive for assistance in ordering this part.

Z02205 Compatibility Matrix for ZiLOG Data Pumps

ZiLOG recommends use of latest modem data pumps.

	Z02201 Code Version 0x31 ROM Code #R3470	Z02201 Code Version 0x48 ROM Code #4078	Z02922 Code Version 0x3A ROM Code #R3796	Z02922 Code Version 0x42 ROM Code #R3910
Z02205 **Version 3.0**	Z02205 ROM #R3641			

Z02205 Version 3.4	Z02205 ROM #R4259	Z02205 ROM #R4292		

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