

AL3094S / AL4094S

Embedded Data/Fax/Voice Modem

xmodus
SWISS



56K Analog socket
modem for embedded
and M2M applications.
Pin compatible with
ISDN, LAN and GSM
socket modems.

Benefits:

- Enables any device to send and receive data via analog (PSTN) line.
- Complete, ready-to-integrate analog modem, suited for a wide range of M2M applications.
- Solid modem quality. V.56bis testing standard used, which defines a series of line impairment combinations based on worldwide telephone line surveys. The TAS equipment was used for testing, with live-line torture tests validating the modem quality. Test results are readily available.

Functions:

- Standard Hayes AT-Command Set and V.250, V.251 Commands.
- ITU-T V.92, V.34, V.32, V.22bis, V.22, V.23, V.21, Bell 212A and Bell 103.
- V.22bis fast connect.
- Built-in host / DTE interface with speeds up to 115.2 kbps.
- Automatic Format and Speed sensing.
- Serial asynchron and synchron data interface.
- V.42 and MNP error correction. V.44, V.42bis and MNP 5 data compression.
- Telephony / TAM functions with V.253 voice commands.
- 2-bit and 4-bit ADPCM, 8-bit linear PCM, and 4-bit IMA coding.
- Concurrent DTMF and ring detection.

- Full-duplex speakerphone (FDSP) supported (AL4094S models).
- Full-duplex Voice send / receive (AT+VTR) supported.
- Fax Modem send / receive up to 14.4kbps (V.17, V.29, V.27ter). Fax protocols EIA/TIA 578 Class 1 and T.31 Class 1.0 supported.
- Worldwide operation (complies to TBR21, Part 68 and other country requirements)

Specifications:

- Compact Size: 64.5 X 26.5 X 5 mm.
- Single 5.0 VDC supply. (3.3V optional)
- Typical Power use: 490 mW @ 5V
- Serial ITU-T V.24 (EIA/TIA-232-E) 5-Volt tolerant TTL interface.
- Approved for Europe (CE). R&TTE directive. Meets specification TBR21.
- Approved for FCC Part 68 and Canada CS-03 in accordance to TIA-968-A.
- Safety according EN60950, IEC60950-1.
- EMC according EN55022, EN55024.
- CB test certificate Nr. AT1777
- Lightning protection according K.21 and FCC Part 68 (on board).
- Conforms to the RoHS directive.
- 2 Year warranty.

Ordering: **AL4094S** (with FDSP)
 AL3094S


(for 3V version add -3V)

Pin Diagram		Pin No	Name	Pin No	Name
1	TIP	64	SPEAKER		
2	RING	63	AGND		
		62	MICRO IN		
		61	VCC		
				3..23	NO PIN
				24	RESET
				25	NC
				26	GND
				27	NC
				28	NC
				29	DCDIND
				30	RXDIND
				31	DTRIND
				32	TXDIND
				33	RTS#
24	RESET#	44	XTCLK (4094)		
25	NC	43	RXCLK (4094)		
26	NC	42	TXCLK (4094)		
27	DGND	41	GND		
28	NC	40	DTR#		
29	NC	39	DCD#		
30	DCDIND	38	CTS#		
31	RXDIND	37	RI#		
32	DTRIND	36	DSR#		
	TXDIND	35	RI#		
		34	TXD#		
		33	RXD#		
		32	RTS#		
		31	CTS#		
		30	DCD#		
		29	DTR#		
		28	AGND		
		27	VCC		
		26	AGND		
		25	VCC		
		24	AGND		
		23	VCC		
		22	AGND		
		21	VCC		
		20	AGND		
		19	VCC		
		18	AGND		
		17	VCC		
		16	AGND		
		15	VCC		
		14	AGND		
		13	VCC		
		12	AGND		
		11	VCC		
		10	AGND		
		9	VCC		
		8	AGND		
		7	VCC		
		6	AGND		
		5	VCC		
		4	AGND		
		3	VCC		
		2	AGND		
		1	VCC		

Operating Conditions	Symbol	Limits	Units
Supply Voltage 5V Version	VDD	+ 4.75 to + 5.25	VDC
Supply Voltage 3V Version (-3V version)	VDD	+ 3.15 to + 3.45	VDC
Operating Ambient Temperature	T _A	0 to + 70	°C

Power Requirements	Typical Current (mA)	Max. Current (mA)
Normal Mode: Off-hook, normal data connection	98	108
Normal Mode: On-hook, idle, waiting for ring	93	102
Sleep Mode	30	33

Additional Documentation	Doc Nr.
Designers Guide	AL4094S-E00-100
AT Command Manual	AL4094S-A00-104

Contact Information	
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