

## AL3094S

Embedded Data/Fax/Voice dial-up modem module with V.92 (56K). The preferred analog modem module for embedded and M2M applications.

Pin compatible with ISDN, LAN and GSM socket modules.

### 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 UART 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, V.253 voice commands.
- 2-bit and 4-bit ADPCM, 8-bit linear PCM, and 4-bit IMA coding.
- Concurrent DTMF and ring detection.

### Connectivity:

- 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

### Specifications:

- Compact Size: 64.5 X 26.5 X 5 mm.
- Single 5.0V or 3.3V VDC supply.
- Typical Power use: 490 mW @ 5V
- Serial UART, 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
- Conforms to the RoHS directive.
- 2 Year warranty.

Ordering:



**AL3094S-5V**  
**AL3094S-3V**

Pin Diagram				Pin No	Name	Pin No	Name
1	TIP	SPKR	64	1	TIP	64	SPEAKER
2	RING	GND	63	2	RING	63	GND
		NC	62	3..23	NO PIN	62	NC
		VCC	61	24	RESET	61	VCC
24	RESET	GND	41	25	NC	60	NO PIN
25	NC	DTR	40	26	GND	59	NO PIN
26	GND	DCD	39	27	NC	58	NO PIN
27	NC	CTS	38	28	NC	57	NO PIN
28	NC	DSR	37	29	DCD LED	56	NO PIN
29	DCD LED	RI	36	30	RXD LED	55	NO PIN
30	RXD LED	TXD	35	31	DTR LED	54	NO PIN
31	DTR LED	RXD	34	32	TXD LED	45...53	NO PIN
32	TXD LED	RTS	33	33	RTS	44	NO PIN
				34	RXD	43	NO PIN
				35	TXD	42	NO PIN
				36	RI	41	GND
				37	DSR	40	DTR
				38	CTS	39	DCD

Operating Conditions	Symbol	Limits	Units
Supply Voltage 5V Version (-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	TA	0 to + 70	°C
Extended temperature (ET Version)		on demand	

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

Product Documentation	Doc Nr.
Designers Guide	AL4094S-E00-103
AT Command Manual	AL4094S-A00-105
Additional Documentation	<a href="http://www.xmodus.ch">www.xmodus.ch</a>

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