

# ACL-6126

## 6-CH 12-Bit Analog Output Card

### Features

- 12-bit D/A resolution
  - 6-CH voltage outputs
  - 6-CH current outputs
  - Bipolar or Unipolar analog output ranges
  - Multiple output ranges
  - 16-CH TTL digital inputs & 16-CH TTL digital outputs
  - Compact, half-size PCB
- **Operating Systems**
    - Windows 2000/NT/XP/9x
    - DOS
  - **Recommended Software**
    - VB/VC++/BCB/Delphi
    - Turbo C/Borland C
  - **Drivers Support**
    - ACLS-LVIEW
    - ACLS-DLL1/DLL2
    - DOS library



### Introduction

ADLINK ACL-6126 is a 6-CH, 12-bit analog output card. The voltage output function provides voltage outputs in ranges of  $\pm 5$  V,  $\pm 10$  V, and accepts external voltage reference for multiplying analog output applications. The current output function provides current loops in ranges of 4 to 20 mA, and accepts external power from 8 to 36 V.

In addition to the analog output functionalities, the ACL-6126 also features 16-CH TTL digital inputs and 16-CH TTL digital outputs, and further expands the application coverage. ADLINK ACL-6126 delivers cost-effective and reliable analog output functionalities for ATE, signal generation and other industrial control applications.

### Specifications

#### Voltage Output

- Number of channels: 6
- Resolution: 12 bits
- Voltage output ranges

Bipolar	$\pm 10$ V, $\pm 5$ V, $\pm$ EXTREF
Unipolar	0 to 10 V, 0 to 5 V, 0 to EXTREF

- Settling time: 30  $\mu$ s maximum (-10 V to +10 V step)
- DNL:  $\pm 0.5$  LSB typical
- Accuracy:  $\pm 0.012$  % of FSR
- Output driving capability:  $\pm 5$  mA max
- Output initial status: 0 V (after RESET or POWER-ON)
- Data transfers: programmed I/O

#### Current Output

- Number of channels: 6
- Resolution: 12 bits
- Current sink ranges: 4-20 mA
- Settling time: 70  $\mu$ s maximum (4-20 mA step)
- External excitation voltage: 8-36 V
- Output initial status: 0 mA (after RESET or POWER-ON)
- Data transfers: programmed I/O

#### Digital I/O

- Number of channels: 16 inputs and 16 outputs
- Compatibility: 5 V/TTL
- Data transfers: programmed I/O

#### General Specifications

- I/O connector
  - 37-pin D-sub female
  - 20-pin ribbon male x 2
- Operating temperature: 0 to 55 °C
- Storage temperature: -20 to 80 °C
- Relative humidity: 5 to 95 %, noncondensing
- Power requirements

+5 V	+12 V	-12 V
360 mA typical	360 mA typical	360 mA typical
450 mA max	450 mA max	450 mA max

- Dimensions (not including connectors)  
163 mm x 123 mm

### Termination Boards

- **DIN-37D**  
Termination Board with a 37-pin D-sub Connector and DIN-Rail Mounting (Including One 1-meter ACL-10137 Cable)
- **ACLD-9137**  
General-Purpose Termination Board with a 37-pin D-sub Male Connector
- **ACLD-9178**  
General-Purpose Termination Board with Two 20-pin Ribbon Connectors (Including Two 1-meter ACL-10120 Cables)
- **ACLD-9188**  
General-Purpose Termination Board with Two 20-pin Ribbon Connectors and One 37-pin D-sub Connector (Including Two 1-meter ACL-10120 Cables)
- **ACLD-9182A**  
Termination Board with 16-CH Isolated Digital Inputs (Including One 1-meter ACL-10120 Cable)
- **ACLD-9185**  
Termination Board with 16-CH Relay Outputs (Including One 1-meter ACL-10120 Cable)

### Pin Assignment

#### CN3: Analog Outputs

D/A CH1 V.OUT	1	20	D/A CH5 V.OUT
D/A CH1 REF.IN	2	21	D/A CH5 REF.IN
D/A CH1 I.OUT	3	22	D/A CH5 I.OUT
AGND	4	23	AGND
D/A CH2 V.OUT	5	24	D/A CH6 V.OUT
D/A CH2 REF.IN	6	25	D/A CH6 REF.IN
D/A CH2 I.OUT	7	26	D/A CH6 I.OUT
AGND	8	27	AGND
D/A CH3 V.OUT	9	28	N/C
D/A CH3 REF.IN	10	29	N/C
D/A CH3 I.OUT	11	30	N/C
AGND	12	31	AGND
D/A CH4 V.OUT	13	32	N/C
D/A CH4 REF.IN	14	33	N/C
D/A CH4 I.OUT	15	34	+12Vout
AGND	16	35	AGND
EXT TRG	17	36	AGND
DGND	18	37	AGND
+5Vout	19		

#### CN1: Digital Output

DO0	1	2	DO1
DO2	3	4	DO3
DO4	5	6	DO5
DO6	7	8	DO7
DO8	9	10	DO9
DO10	11	12	DO11
DO12	13	14	DO13
DO14	15	16	DO15
GND	17	18	GND
+5Vout	19	20	

#### CN2: Digital Input

DI0	1	2	DI1
DI2	3	4	DI3
DI4	5	6	DI5
DI6	7	8	DI7
DI8	9	10	DI9
DI10	11	12	DI11
DI12	13	14	DI13
DI14	15	16	DI15
GND	17	18	GND
+5Vout	19	20	+12Vout

### Ordering Information

- **ACL-6126**  
6-CH 12-Bit Analog Output Card