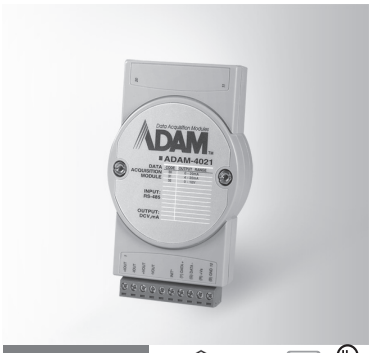
# ADAM-4021
# ADAM-4022T
# ADAM-4024

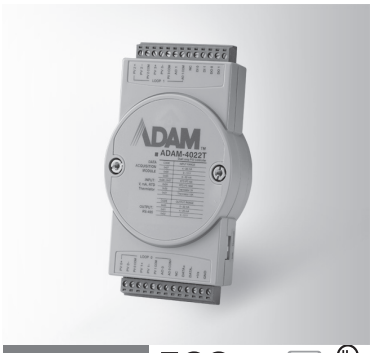
**1-ch Analog Output Module**

**2-ch Serial Based Dual Loop PID Controller with Modbus**

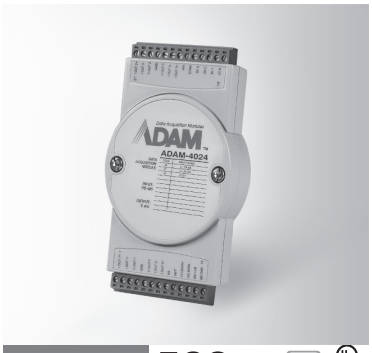
**4-ch Analog Output Module with Modbus**



ADAM-4021



ADAM-4022T



ADAM-4024

## Specifications

### General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Power Consumption** 1.4 W @ 24 $V_{DC}$
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command

### Analog Output

- **Channels** 1
- **Output Impedance** 0.5 Ω
- **Output Range** 0 ~ 20 mA, 4 ~ 20 mA, 0 ~ 10 V
- **Output Type** mA, V
- **Accuracy** ±0.1% of FSR for current output
  ±0.2% of FSR for voltage output
- **Current Load Resistor** 0 to 500 Ω (source)
- **Resolution** 12-bit
- **Isolation Voltage** 3,000 $V_{DC}$
- **Programmable Output Slope** 0.125 ~ 128 mA/sec.
  0.0625 ~ 64.0 V/sec.
- **Readback Accuracy** ±1% of FSR
- **Span Temperature Coefficient** ±25 ppm/°C
- **Zero Drift**
  Voltage output: ±30 μV/°C
  Current output: ±0.2 μA/°C

## Common Specifications

### General

- **Power Input** Unregulated 10 ~ 30 $V_{DC}$

### Environment

- **Operating Humidity** 5 ~ 95% RH
- **Operating Temperature** -10 ~70°C (14 ~ 185°F)
- **Storage Temperature** - 25 ~ 85°C (-13 ~ 185°F)

## Specifications

### General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 4 W @ 24 $V_{DC}$
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command and Modbus/RTU

### Analog Input (Only AI0 and AI2 are the PID input)

- **Channels** 4
- **Input Type** mA, V, Thermistor, RTD
- **Input Range** 0 ~ 20 mA, 4 ~ 20 mA, 0 ~ 10 V
- **Thermistor Type and Temperature Ranges**
  Thermistor 3 K (NTC): 0 ~ 100°C
  Thermistor 10 K (NTC): 0 ~ 100°C
- **RTD Type and Temperature Ranges**
  **Pt 100 RTD**
  Pt 0 ~ 100°C Pt -100 ~ 100°C
  Pt 0 ~ 600°C Pt 0 ~ 200°C
  IEC RTD 100 ohms (a = 0.00385)
  JIS RTD 100 ohms (a = 0.00392)
  Pt 1000 RTD Pt -40 ~ 160°C
- **Resolution** 16-bit
- **Sampling Rate** 10 sample/second
- **Isolation Voltage** 3,000 $V_{DC}$

### Analog Output

- **Channels** 2
- **Output Range** 0 ~ 20 mA, 4 ~ 20 mA, 0 ~ 10 V
- **Output Type** mA, V
- **Resolution** 12-bit
- **Isolation Voltage** 3,000 $V_{DC}$

### Digital Input

- **Channels** 2
- **Dry Contact** Logic level 0-close to GND
  Logic level 1-open

### Digital Output

- **Channels** 2
  Open Collector to 30 V, 30 mA max. load
- **Power Dissipation** 300 mW

## Specifications

### General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 3 W @ 24 $V_{DC}$
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU

### Analog Output

- **Channels** 4
- **Output Impedance** 0.5 Ω
- **Output Range** 0 ~ 20 mA, 4 ~ 20mA, ±10 V
- **Output Type** mA, V (Differential)
- **Accuracy** ±0.1 % of FSR for current output
  ±0.1 % of FSR for voltage output
- **Current Load Resistor** Max. 500 Ω (source)
- **Voltage Load Resistor** Min. 1K Ω
- **Resolution** 12-bit
- **Isolation Voltage** 3,000 $V_{DC}$
- **Programmable Output Slope** 0.125 ~ 128 mA/sec.
  0.0625 ~ 64.0 V/sec.
- **Span Temperature Coefficient** ±25 ppm/°C
- **Zero Drift** Voltage output: ±30 μV/°C
  Current output: ±0.2 μA/°C

### Digital Input

- **Channels** 4
- **Input Level** Logic level 0: 1 V max.
  Logic level 1: 10 ~ 30 $V_{DC}$
- **Isolation Voltage** 3,000 $V_{DC}$

## Ordering Information

- **ADAM-4021** 1-ch Analog Output Module
- **ADAM-4022T** 2-ch Serial Dual Based Loop PID Controller w/ Modbus
- **ADAM-4024** 4-ch Analog Output Module with Modbus





Last updated : 27-Jul-2016

# Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

## US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

## EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660