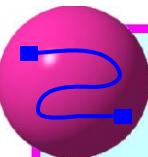




# Bridging the Gap between Real World and Computer



## EMA8308/D



**Software key function**

### Introduction

EMA8308 is an Ethernet analog I/O module.

Some models have 24-bit unipolar analog input which can be wired as single end or differential input. The other model have 24-bit bipolar analog input but only differential input.

As the models have 2 channel analog output with optional 12-bit or 16-bit bipolar output.

It can work as a standalone web server to provide control directly by web page. It also provide password to prevent un-authorized change.

DLL is provided for WinXP, Win7 and later or LINUX platform and sample programs come with VB source code.

### Applications

- ▶ For remote analog voltage sensing
  - sensor signal sensing
  - analog voltage monitoring
- ▶ For remote voltage output
  - speed control
  - light dimmer control
  - temperature control

### Software Support

#### ▶ PC OS Support

WinXP, Win7 and later or Linux O.S.  
Embedded XP, Win CE (at request)

#### ▶ Library

DLLs, VI library

#### ▶ Develop Software

Visual C++, Visual Basic,  
Borland C/C++ Builder, LabVIEW etc

#### ▶ Example Source Code

Visual Basic

### Ordering Information

- ▶ **EMA8308** : Ethernet I/O module, 24-bit uni-polar 8 differential /16 single end analog input, 2 16-bit analog output
- ▶ **EMA8308D** : Ethernet I/O module, 24-bit bi-polar 8 differential analog input, 2 16-bit analog output
- ▶ **JD52000** : 110/220Vac to 24Vdc @1.5A power supply
- ▶ **JS52026** : 110/220Vac to 24Vdc @0.75A power adapter

## Ethernet Module Analog I/O



### Features

- ▶ Over-voltage protection on analog input
- ▶ Over-load protection on analog output
- ▶ 24-bit accuracy
- ▶ 10 samples per second
- ▶ -10V~ +10V output
- ▶ IP re-assignment
- ▶ 10/100M auto detection
- ▶ UDP and TCP/MODBUS protocol
- ▶ Peer to peer response time < 2ms
- ▶ 16 Single end analog input (EMA8308)
- ▶ Multiple analog input range : 0~5V, 0~10V, 4~20mA, 0~20mA
- ▶ 8 Differential analog input (EMA8308D)
- ▶ High common mode voltage up to 10V
- ▶ Multiple analog input range : -5~ +5V, -10~ +10V  
4~20mA, 0~20mA
- ▶ Standalone function : step sequence control instruction, device to device communication

### Specifications

#### Analog Input

- ▶ Input Channels : EMA8308 : 16 channels unipolar single  
Single end or differential  
EMA8308D : 8 channels differential

- ▶ Resolution : 24-bit
- ▶ Offset Error : 2.5uV(typ), 5uV(max)
- ▶ Offset Error Drift : 20nV / °C
- ▶ Input Common Mode Rejection : 120dB
- ▶ Sample Rate : 10 samples/second (pre channel)
- ▶ Input Type : differential or single end (port programmable)
- ▶ Input Range :
  - 0~5V(23-bit), 0~10V(24-bit), 0~20mA(23-bit),  
4~20mA(22-bit) (EMA8308)
  - 5V ~ +5V(23-bit), -10V ~ +10V(24-bit),  
0~20mA(23-bit), 4~20mA(22-bit) (EMA8308D)

- ▶ Input Filter : 7.03K, 3.52K, 1.76K, 879Hz
- ▶ Over-voltage Protection : 20Vdc(max)

#### Analog Output

- ▶ Output Points : 2 channels
- ▶ Resolution : 16-bit (EMA8308, EMA8308D)
- ▶ Output Range : -10Vdc ~ +10Vdc
- ▶ Over Load Protection : 50mA(peak)

#### Ethernet

- ▶ 10/100M auto switch x 2 port
- ▶ WDT : 1~1000sec based on 0.1 sec time base for  
communication discontinuity detect
- ▶ Response time 2ms

#### Main Card General

- ▶ Power Requirement : 12Vdc ~ 24Vdc
- ▶ Operation Temperature : 0 °C ~ +70 °C
- ▶ Storage Temperature : -20 °C ~ +80 °C
- ▶ Operation Humidity : 5~95% RH, non-condensing
- ▶ Dimensions : 115.4(D)\*136(W)\*34(H)mm  
4.6(D)\*5.4(W)\*1.4(H)in