



## ET-M8194A

Ethernet Remote Unit  
with High-speed 4-axis Motion Control Module

### Features

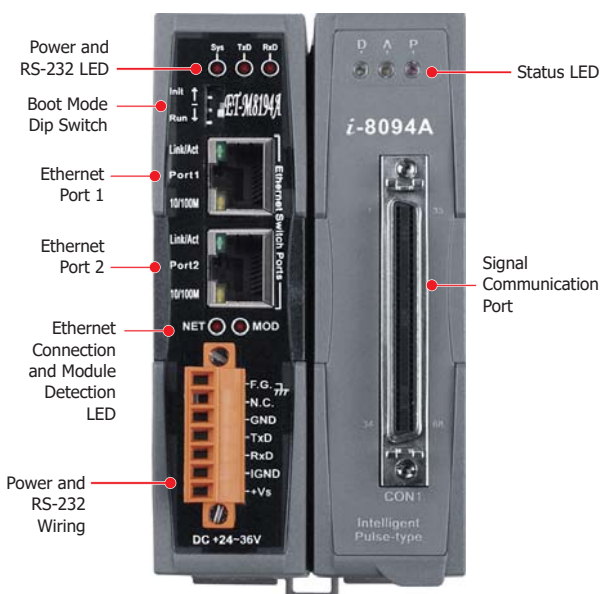
- Remote control via Modbus TCP
- Can be controlled using SCADA, PAC, or PLC
- Can be integrated into multi-station, multi-axis applications
- 4-axis motion control capability
- 2/3-axis linear interpolation function
- 2-axis circular interpolation function
- Programmable automatic homing function
- EzMove Utility for configuration and macro programming
- Test motion functions via EzMove without compilation
- Library for rapid development of applications
- Easy wiring for multi-station applications
- Can be set as a remote or stand-alone motion controller



### Introduction

**ET-M8194A** is a remote four-axis stepping/pulse-type servo motor controller and acts as a server in a Modbus TCP/IP network. This intelligent motion controller also has a variety of built-in motion control functions, such as 2/3 axes linear interpolation, 2 axes circular interpolation, T/S-curve acceleration/deceleration, various synchronous actions, and automatic homing. The controller is suitable for a wide range of remote motion control applications and can be integrated into any system where the host platform is built on the Modbus TCP protocol (for example PC, PAC, or PLC). In addition, a multi-station, multi-axis motion control solution can easily be achieved by cascading several ET-M8194A devices using Ethernet cables, either with or without Ethernet switches. Software configuration utility and API Library are provided to configure the ET-M8194A and to rapidly develop customized control applications.

### Hardware



### ET-M8194A Interface Functions

### Software Supported: ET-M8194A/H SDK

#### EzMove Utility

An EzMove utility is provided for configuring the ET-M8194A and assisting the user in writing macro programs and in getting familiar with the ET-M8194A and its motion commands. Furthermore, it can be used for motion monitoring and tracking of the motion path.



#### API Library

The ET-M8194A/H API Library consists of several single and multi-axis configuration and motion control commands. In addition, APIs are provided to edit and download Macro Programs (MP). No Modbus knowledge is required as the library handles all Modbus communication internally.

DLL and libraries for the following development environments are provided:

- Visual C++
- BCB 5.0, 6.0
- C#, VB.NET
- Visual Basic 6.0

## Specifications

Model	ET-M8194A	
<b>Software</b>		
OS Support	Windows 7/8/10 32/64 bit	
Development	Visual C++ lib/DLL, C#, VB.Net DLL Visual Basic 6.0, BCB 5.0, 6.0 Macro Programming	
Utility	EzMove Utility	
<b>Hardware</b>		
Connector	68-pin SCSI-II	
<b>General</b>		
No. of Axes	4	
Motion Control Type	IC Chip Based	
Synchronous Action	10 activation factors and 14 actions	
Speed Profile	T/S-curve	
Position Control Mode	Incremental and absolute mode	
Command Type	Pulse Command	
Auto-Home Search	Yes	
Input Signal Filter	2 ~ 16 ms, 8 stages	
<b>Axis I/O</b>		
Servo Interface Output	SVON	
Latch Input	Yes	
Manual Pulse Generator	Yes	
Mechanical Switch Input	Home, Limit+/-, Near Home, Emergency	
Position Compare Output	10 KHz (X and Y only)	
Servo Interface Input	INP, ALM	
<b>Encoder Input</b>		
Ring Counter Mode	32-bit	
<b>Model</b>		
Mode	A/B Phase, Up/Down	
Counting Rate	4 MHz	
Counter Width	32-bit	
<b>Pulse Output</b>		
Mode	CW/CCW, PULSE/DIR	
Counter Width	32-bit	
Rate	4 MPPS (Max.)	
<b>Interpolation</b>		
Circular	Any 2 axes (one group only)	
Continuous	Yes	
Linear	Any 2 to 3 axes (one group only)	
<b>Digital Input</b>		
Channels	Local: 4 DI	
Isolation	2500 Vrms (with DN-8468)	
<b>Digital Output</b>		
Channels	-	
Isolation	2500 Vrms (with DN-8468)	
<b>Ethernet</b>		
Protocol	Modbus TCP	
<b>Power</b>		
Input Range	+24V	
<b>Mechanical</b>		
Dimensions (mm)	65 x 121 x 99 (W x L x H)	
<b>Environment</b>		
Operating Temperature	-20 ~ +75°C	
Storage Temperature	-30 ~ +85°C	
Humidity	10 ~ 90% RH, Non-condensing	

## Applications

- ➔ X-Y-Z Table
- ➔ Fix-Pitch Stamping Machine
- ➔ Transfer Machine
- ➔ Spinner
- ➔ Loader/Unloader

## Ordering Information

<b>ET-M8194A</b>	Ethernet Remote Automation Unit with High-speed 4-axis Motion Control Module
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## Accessories

DN-8468UB	Photo-isolated Universal Snap-on Wiring Terminal Board
DN-8468GB	Photo-isolated General Purpose Wiring Terminal Board
DN-8468MB	Photo-isolated Snap-on Wiring Terminal Board for Mitsubishi MELSERVO-J2 Servo Amplifier
DN-8468PB	Photo-isolated Snap-on Wiring Terminal Board for Panasonic MINAS A4/A5 Servo Amplifier
DN-8468YB	Photo-isolated Snap-on Wiring Terminal Board for Yaskawa Sigma II/III/V Servo Amplifier
DN-8468DB	Photo-isolated Snap-on Wiring Terminal Board for Delta ASDA-A Servo Amplifier
DN-8468FB	Photo-isolated Snap-on Wiring Terminal Board for Fuji FALDIC-W Servo Amplifier
CA-SCSI15-H3	68-pin SCSI-II Connector Cable; Length 1.5 M
CA-SCSI30-H3	68-pin SCSI-II Connector Cable; Length 3.0 M
CA-SCSI50-H2	68-pin SCSI-II Connector Cable; Length 5.0 M