



## ET-M8194H

Ethernet Remote Unit

with High-speed 4-axis Motion Control Module

### Features

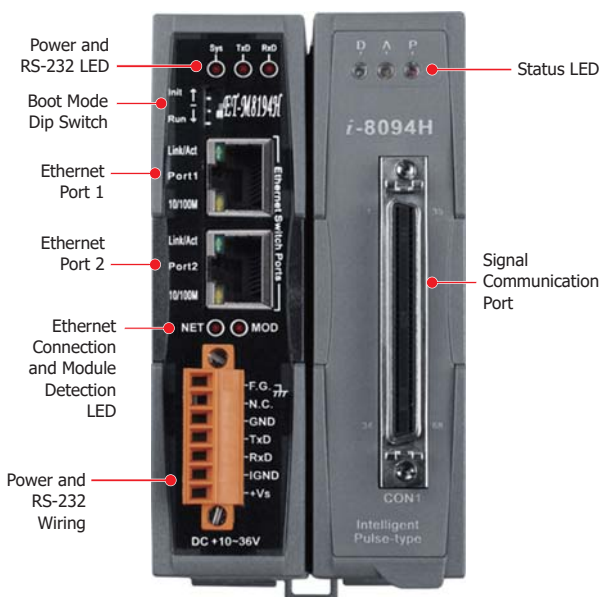
- Remote control via Modbus TCP
- Can be controlled using SCADA, PAC or PLC,ETC
- Can be integrated into multi-station, multi-axis applications
- 4-axis motion control capability
- 2/3-axis linear interpolation function
- 2-axis circular interpolation function
- Programmable automatic homing function
- 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
- Supports high-speed FRnet I/O: 128 DO and 128 DI



### Introduction

The **ET-M8194H** is a new product from ICP DAS that can be used to implement remote control functionality via the Ethernet and includes an I-8094H module (a 4-axis stepping/pulse-type servo motor control module with an embedded CPU) and an Ethernet communication interface. The intelligent ET-M8194H can provide users with the ability to develop a wide range of remote motion control applications, and can be integrated in any system where the host platform is built on the Modbus TCP protocol (for example: PC, PAC or PLC). In addition, implementing a multi-station, multi-axis motion control solution can easily be achieved by cascading several ET-M8194H devices using Ethernet cables, either with or without Ethernet switches. ICP DAS also provides the EzMove Utility and an API Library that can be used to configure the ET-M8194H and to rapidly develop customized control applications.

### Hardware



### ET-M8194H Interface Functions

### Software Supported: ET-M8194H SDK

#### EzMove Utility

EzMove is a configuration utility developed by ICP DAS for the ET-M8194H controller. It is intended to perform motion control tasks and movement test on equipment without the need to first create customized applications. As the EzMove Utility is a Modbus client, it can be used to create and edit Macro Programs (MP), which can then be uploaded to the ET-M8194H. The EzMove Utility can also display and plot position/velocity of all four axes as well as display Modbus TCP messages for easy reference.



#### API Library

The ET-M8194H API Library is composed of nine groups of functions, which can be utilized to edit Macro Programs (MP) and send Modbus TCP commands required to control or configure the I-8094H. The library provides users with the ability to simultaneously control a large number of ET-M8194H from the PC.

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-M8194H
<b>System Specifications</b>		
Communication		Ethernet
Communication Protocol		Modbus TCP
Number of Axes		4 axes
Motion Control Type		IC Chip Based
Pulse Output Rate		4 MPPS (Max.)
Pulse Output Mode	CW/CCW	Yes
	PULSE/DIR	Yes
	A/B Pulse	-
Command Type		Pulse Command
Interpolation	Linear Interpolation	2/3 axes
	Circular Interpolation	2 axes
	Helical Interpolation	-
	Continuous Interpolation	2/3 axes
Auto-Home Search		Yes
Manual Pulse Generation		Yes
Velocity Profile	Trapezoidal Curve	Yes
	S-Curve	Yes
Ring Counter Mode		Yes
<b>Axis I/O</b>		
Mechanical Switch Input	Home	Yes
	Near Home	Yes
	Limit (Positive/Negative)	Yes
	Emergency	Yes
Servo I/O Interface	Latch	Yes
	Input: INP, ALM, RDY	Yes
Encoder Interface	Output: SVON, ALMRST ERC	Yes
	A/B Pulse	Yes
Encoder Counter	Up/Down	Yes
		32-bit
Encoder Counting Rate		4 MHz
Position Compare Trigger		-

Model		ET-M8194H
<b>Digital Input</b>		
Digital Input Channels	Local	1 DI
	Frnet	Up to 128 DI
<b>Digital Output</b>		
Digital Output Channels	Local	-
	FRnet	Up to 128 DO
Input Signal Filter		2 ~ 16 ms, 8 stages
I/O Isolation (with daughter board)		2500 Vrms optical isolation (with DN-8468)
Connector		68-pin SCSI-II
<b>Power</b>		
Input Voltage		+24V
<b>Mechanical</b>		
Dimensions		65x99x121mm
<b>Environmental</b>		
Operating Temperature		20 ~ +75°C
Storage Temperature		-30 ~ +85°C
Operating Humidity		10 ~ 85% RH, non-condensing
Storage Humidity		5 ~ 90% RH, non-condensing
<b>Software Support</b>		
Windows Driver/DLL/Lib		Windows 7/8/10 32/64 bit: Visual C++ lib/DLL C#, VB.Net DLL Visual Basic 6.0 BCB 5.0, 6.0 Demo programs
Software Utility		EzMove Utility
Macro Programming		Yes

## Applications

- X-Y-Z Table
- Fix-Pitch Stamping Machine
- Transfer Machine

- Spinner
- Loader/Unloader

## Ordering Information

<b>ET-M8194H</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