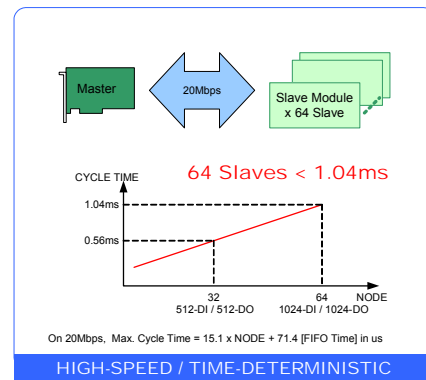
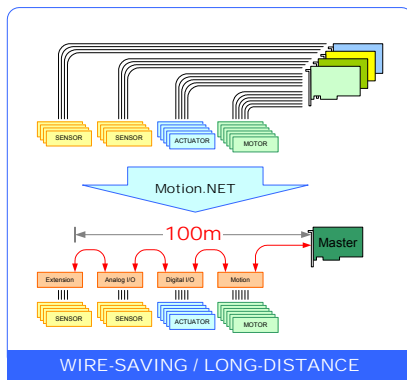


## Introduction

### Overview

Motionnet is a series product based on innovative architecture and designed for versatile industrial automation applications, especially those with motion control requirements. Motionnet products are divided into 2 parts - **Master Card** and **Slave Module**. The communication between master and slave is based on a proprietary RS-485 technology with **Wire-Saving/Long-Distance** and **High-Speed/Time-Deterministic** features. The communication interface between master and host PC is accomplished by the way of Memory Mapping. Motionnet delivers slaves that mount on a standard industrial DIN rail and connects a bank of digital I/O, Motion and different modules. The master collects information from distributed slaves and publishes the data to its host PC or vice versa.



### Master Card

Motionnet provides two kinds of master products, one is **basic master** and the other is **advanced master**. **Basic master** transfers data between host and slaves directly without any operation in between. **Advanced master** is equipped with a processor that is used to interpret commands from host to slaves and/or feedbacks results from slaves to host. Each port of the master can control up to 2048 I/O points or 64 axes or as a combination of I/O and Motion together. The master uses with different bus interface to communicate with the host PC, including **PC/104** and **PCI**. Due to the high-speed communication, Motionnet can also be considered as serialized ISA bus products. Customers can replace most ISA or PC/104 cards with Motionnet series products. Motionnet lowers total system costs with integrated software and distributed hardware that makes the product easier to set up and maintain.

### Slave Module

Motionnet provides 3 categories of slaves, one is for **motion control**, the second is for **digital I/O** and the last is for miscellaneous function. Motionnet provides customer motion control modules that can be used together with either servo driver/motor or stepping driver/motor from different vendors. For digital I/O, there are 3 main types; they are 32In, 32Out and 16In/16Out. With these slaves you can connect your actuators/sensors directly and easily. You can access I/O points nearby or 100 meters away using simple wiring. The last is miscellaneous functions, mainly for analog type I/O to connect with different sensor types including thermocouples, RTD's, strain gauges etc.

### Customized Extensions

In addition to the above outstanding features Motionnet supports customized extensions easily. The customized extensions range from Motion, Digital I/O to even intelligent functions. Products can be easily extended to support the functionality of DCS (Distributed Control System)

### Conclusion

Motionnet provides engineers the freedom to quickly and easily place control/measurement nodes near motor/drivers and actuators/sensors, avoiding the inconvenience and cost of point-to-point wiring.

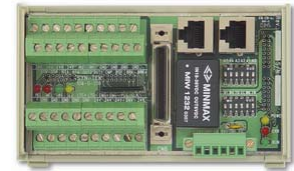
# MNET-M101-DUM



## 1-Axis Motionnet Motion Slave Module

### Features

- ◆ DIN rail mounting (L-124 x W-72 x H-53 mm)
- ◆ Max. 20Mbps transfer rate
- ◆ Max. 6.5MHz, 1-Axis pulse output
- ◆ 28 bits counter for incremental encoder
- ◆ Programmable acceleration and deceleration time
- ◆ T-curve and S-curve velocity profiles support
- ◆ Change speed/position on-the-fly
- ◆ Simultaneously start/stop on multiple motion control modules
- ◆ Easy installation with RJ45 phone jack and LED diagnostic
- ◆ Easy installation for servo or stepping motor driver



**MNET-M101-DUM**

<Reference figure>

### Specifications

- ◆ Series interface: Half duplex RS-485 with transformer isolation
- ◆ Cable type: CAT5 UTP/STP Ethernet cable
- ◆ Surge protection: 10KV
- ◆ Transmission speed: 2.5Mbps, 5Mbps, 10Mbps and 20Mbps
- ◆ Programmable Pulse output mode:  $\pm$ OUT/DIR,  $\pm$ CW/CCW,  $\pm$ A/B phase
- ◆ Programmable pulse command speed: Max 6.5Mpps / Min 0.05pps
- ◆ Position range: 28 bits ( $\pm$ 134,217,728 pulses)
- ◆ Home return mode: 13 types
- ◆ Velocity profiles: T-curve, S-curve
- ◆ Counter for encoder feedback signals: 28bits up/down
- ◆ Position latch input: LTC
- ◆ Position compare output: CMP
- ◆ Incremental encoder input:  $\pm$ EA,  $\pm$ EB
- ◆ Encoder index signal input:  $\pm$ EZ
- ◆ Machine interface: PEL, MEL, ORG, SLD, PCS, CLR, EMG, BSY
- ◆ Servo driver interface: ALM, RDY, SVON, INP, ERC, ALMRES
- ◆ Simultaneous start/stop motion input: STA, STP
- ◆ LED indicator: PWR, RUN, ERR, PEL, MEL, ORG, SLD
- ◆ Power supply: +18V DC to +30V DC, consumption: 3W typical
- ◆ Working temperature: 0 to 60°C