

### Technical Specifications – EMB03

<b>Network Standards</b>	Ethernet IEEE 802.3u
<b>Speed</b>	100 Mbps
<b>Power Requirements</b>	<i>Input Voltage; 12 VDC @ 1 amp See ordering information for choice of power adaptors.</i>
<b>LEDs</b>	Total 8
<b>Weight</b>	0.8 lbs. (0.36 kg)
<b>Dimensions</b>	3.2" x 2.84" x 1.18" (81.1 cm x 72.1 cm x 29.9 cm)
<b>Environmental</b>	<i>Operating Temperature 32 to 122F (0 to 50 C) Storage Temperature -4 to 140F (-20 to 60 C) Relative Humidity 5% to 90% (non-condensing)</i>
<b>Connectors</b>	One fully Shielded RJ45, 2.5 mm Male External Power & choice of Tap.
<b>Switch</b>	Crossover for RJ45 polarity
<b>Cabling</b>	UTP Category 5, <i>maximum cable distance</i> 100 meters. Thick net co-axial, , <i>maximum cable distance</i> 500 meters
<b>Regulatory Approvals</b>	FCC Class A, <b>CE</b>
<b>Warranty</b>	5 years

### Ordering Information

<i>Part Number</i>	<i>Description</i>
EMC03	<b>10Base5 to 10BaseT Media Converter</b>
AMP 228752-1	Piecing or 'Vampire' Tap
AMP 221914-1	'N' or Screw Tap
AMP 222455-1	BNC Tap



### Model EMC03

10Base5 to 10BaseT Converter

*"The Connectivity Connection"*

## USER'S MANUAL

**EtherCom Corporation**  
 1409 Fulton Place, Fremont, CA 94539, USA  
 Tel: (510) 440 0242 info@ethercom.com  
[www.ethercom.com](http://www.ethercom.com)

## Copyright Notice

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## Trademarks



is the registered trademark of EtherCom Corporation

## CE Mark Declaration of Conformance

This is to certify that this product complies with and conforms to the following specifications:

**EN 50082-1 (1992), EN 55022 (1995) and EN 60 950**

Following the provisions of **89/336/EEC & 73/23/EEC** Directives.

## FCC Compliance Statement

### Federal Communications Commission Radio Frequency Interference Statement

This equipment generates, uses and can radiate energy and if not installed and used properly, that is in accordance with manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to implement whatever measures may be required to correct the interference.

## Terms:

EtherCom Corporation warrants to the original consumer/purchaser that these products, and all components thereof will be free of defects in workmanship and/or materials, EtherCom Corporation will, at its discretion, repair or replace the defective products or components at no additional cost as set forth herein. Repaired or replacement products will be furnished on an exchange basis and will either be reconditioned or new at the discretion of EtherCom Corporation. All defective items replaced hereunder become the property of EtherCom Corporation.

Buyer's sole remedy for breach of any warranty shall be limited, to our sole discretion, to the repair, replacement or refund of the purchase of any products that are returned, and are found to be defective. Buyer assumes all risk and liability for results obtained by use of the products hereunder, whether used singly or in combination with other products. *The express warranties set forth herein are made in lieu of all other warranties, express or implied (either in fact or by operation of law). We expressly disclaim all implied warranties of merchantability or fitness for any particular purpose or use.*

Our support advice shall not create additional warranty or other obligations. This warranty will not be effective if, in the opinion of EtherCom Corporation the product has been damaged by misuse, misapplication, or as a result of service or modification other than by EtherCom Corporation. The limited warranty does not include service to repair damage to products resulting from accident, disaster, misuse, neglect or modification of the product. The term disaster includes such events as lightning strike, flooding, earthquake and fire.

During this warranty period EtherCom Corporation will repair or at its option replace components in the products that prove to be defective at no charge other than shipping and handling, provided that the product is returned pre-paid to EtherCom Corporation. Repairs or replacement under this warranty may be carried out by returning the defective unit(s) to EtherCom Corporation. However this may only be done after receiving authorization from EtherCom Corporation. And the issuance of a Return Material Authorization (RMA) number, with shipping charges prepaid, in the original shipping container or like container, and with proof of date of purchase included with the returned product(s). The RMA number issued MUST be marked clearly and visibly on the outside of the shipping container. Any material returned without such RMA markings shall be rejected and returned to sender unopened. There shall be no warranty for either parts or labor after the expiration date of Five years from the original date of purchase. EtherCom Corporation reserves the right to charge for handling and inspecting any product returned for warranty repair that is determined not to be faulty.

Products found to be defective in accordance with the above criteria will be returned to the consumer after repair or replacement has been completed and by the carrier and method of deliver chosen by EtherCom Corporation. If the customer desires another specific form of conveyance or if no problem is found in testing, then the customer shall bear the cost of the return shipment.

**EtherCom Corporation** MAKES NO EXPRESS OR IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EXCEPT AS EXPRESSLY SET FORTH IN THIS WARRANTY. IN NO EVENT SHALL **EtherCom Corporation** BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, COST, OR EXPENSES ARISING OUT OF OR IN CONNECTION WITH THE USE OF PERFORMANCE OF THE PRODUCT DELIVERED HERE UNDER.

## Returning Units for Repair

If a unit is defective, follow this procedure:

- Call Supplier and ask for technical assistance. A representative will respond and discuss the problem with you.
- If the unit has to be returned for repair, an authorization number will be issued. Pack the unit in its original box, if available, and return it to the Supplier with the authorization number quoted on your purchase order or repair order.

**DO NOT RETURN GOODS WITHOUT AN AUTHORIZATION NUMBER, OTHERWISE THERE WILL BE A DELAY IN RETURNING YOUR GOODS.**

- Enclose a description of the problem or fault  
THE UNIT WILL BE REPAIRED AND RETURNED TO YOU AS SOON AS POSSIBLE.

**SHIPPING FOR REPAIR OR ADJUSTMENT:** All shipments of EtherCom electronic products should, wherever possible, be made in the original packaging or if it is not available, use suitable packaging that is rigid and of adequate size, and surround the product with shock absorbing material.

## Features and Benefits

- Utilize existing thick-net cable with newer twisted pair devices.
- IEEE802.3u compatibility to ensure interoperability with other standard network products.
- 8 LEDs for system monitoring & management.
- Simple plug & play installation. No switches, jumpers or software to configure.
- Compact, about the size of a cigarette pack, for easy installation.
- Accepts standard AMP taps.
- Solid Steel enclosure.
- Designed & Manufactured in the good old US of A.
- 5 year Warranty
- MDI/MDIX Switch on RJ45 Port

## Inspecting the Package and product

Package should contain:

1. ***EMC03 Converter***
2. ***Power Supply***
3. ***This User Guide***

Examine the shipping container for obvious damage you believe occurred during shipment or delivery. Inspect the contents of this package for any signs of damage and ensure that along with this guide, you have the unit itself.

## **Product Description**

The EMC03 offers a very cost effective way to utilize existing thicknet cable, without costly re cabling

### **Installation**

#### **Locating the EMC03.**

You will need to locate the unit in close proximity to a power outlet. With a Vampire Tap you can be anywhere along the thick net cable. The N Tap will depend on whether you are using existing termination or creating new. It is advisable to follow the Ethernet specifications for aggregate cable lengths.

The EMC03 is fully compatible with Ethernet V2.0/IEEE 802.3 transceiver specifications for CSMA/CD 10 Mbps operation.

Special consideration should be given to maximum segment lengths on each side of the EMC02. It is ***strongly recommended*** that IEEE 802.3 specifications for segment distances be adhered to:

**UTP (10BaseT) = 100m (328 feet)**  
**Thick-net (10Base5) = 500m (1,640 feet)**

### **LEDs**

Monitoring of the unit is simple with a complement of 8 LEDs. A wall mount 12 VDC power supply is supplied with the unit and is available for 110-240 Vac operation.

#### **The EMC03 has 8 LEDs.**

There is one LED per transceiver for each of the following:

**CX REC**, Indicates that the Thick-net segment is receiving.

**CX COL**, Indicates presence of collisions on the Thick-net segment. Normally off during “clear” transmission periods. Will clear when collisions stop.

**TP COL**, Indicates presence of collisions on the twisted pair segment. Normally off during “clear” transmission periods. Will clear when collisions stop.

**TP REC**, Indicates that the twisted pair segment is receiving.

**POL**, Indicates that the twisted pair segment crossover switch is set correctly.

**LINK**, Indicates that a proper 10BaseT link has been established at the port.

**JABBER**, Indicates that the port is the one in use.

**PWR**, Indicates transceiver is properly receiving power

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### **Switch**

*The switch for the EMC03 is on the outside of the unit. This makes it unnecessary to take the unit apart and reconfigure jumpers for any changes.*

### **UTP Crossover Capability**

To provide maximum installation flexibility, there is a switch located next to the each RJ45 connector. This is a UTP crossover switch. It eliminates the need for a specially configured UTP crossover cable. It allows a repeater or a non-repeater device to be attached to the UTP segment side. This switch should be toggled in both directions until you can see that the corresponding LINK LED is illuminated.

### **Power Supply**

The EMC03 is powered by an external AC to 12 V DC power converter. This converter must suit national requirements. Connect the power supply output to the connector socket on the EMC03.