

# 10BASE-T QUAD SMT TRANSFORMER MODULES

Designed for Level One's LXT901/914/944 or  
Texas Instrument's QuadPHY (TNETE2004)



## Application Notes

Pulse designed and developed this series of Quad Modules for "filter-on-chip" 10Base-T multiport applications. Please note: **Additional wave shaping is required for IEEE compliance.** This filtering is typically provided by the transceiver.

*Each module offers a different level of electrical performance:*

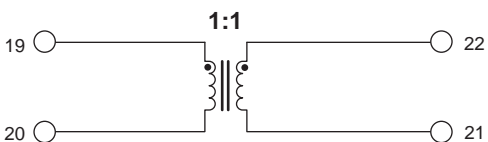
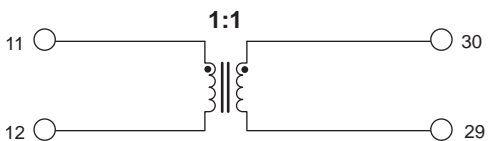
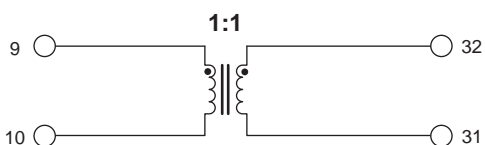
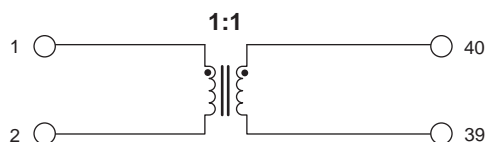
**PE-68065** contains receive and transmit transformers to maintain signal integrity, suppress common mode noise, and supply equipment isolation per the IEEE 802.3i-1993 standard.

**PE-68062** contains the same receive and transmit transformers as well as high impedance, common mode chokes on each transmit channel. Chokes are added for EMI suppression and may be necessary for FCC and CISPR 22 Class B certification. In typical multiport applications, many channels are in close proximity. User compliance with FCC/CISPR 22 Class B requirements can be achieved by applying rigorous design guidelines to suppress noise mechanisms. Attention to high frequency signal paths, good PCB grounding techniques, and component placement are critical. Refer to the suggested layout on page 4.

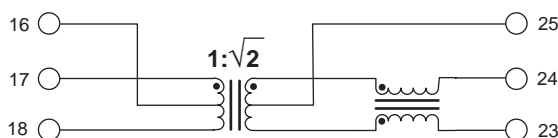
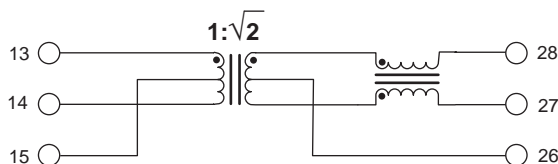
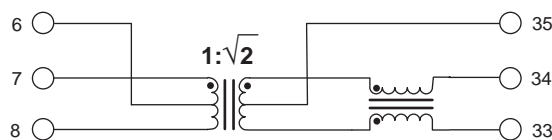
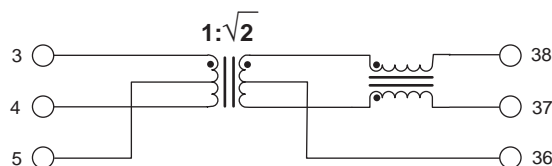
## Schematic

### PE-68062

#### RECEIVE CHANNELS



#### TRANSMIT CHANNELS



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## Application Notes

Both modules are encapsulated in a 40-pin surface mountable package. Mechanical features include:

1. Light weight - approximately 4 grams for rapid pick and place.
2. Compliant leads - provide excellent solder joint reliability.
3. Low profile - under 6mm to accommodate industry standard pick and place equipment capabilities.

4. Compact form factor - footprint allows the user to layout four ports within the space of 2 double stacked RJ45 connectors or a total of twelve (12) ports to a high density 50-pin connector.

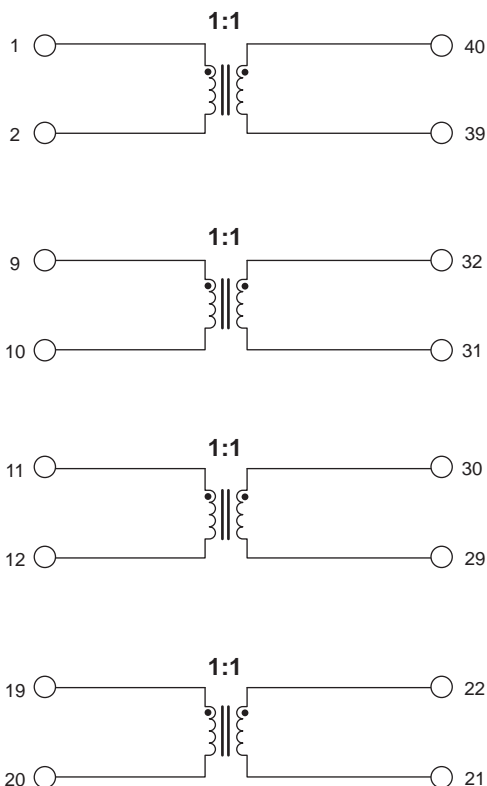
Modules are packaged in tubes unless tape & reel is specified. Please add the suffix "T" such as PE-68062T for tape & reel packaging, in increments of 250 pieces.

Pulse also offers a full line of 10Base-T filter modules, designed to IEEE specifications. For more information, please contact one of the locations listed on the back page of this publication.

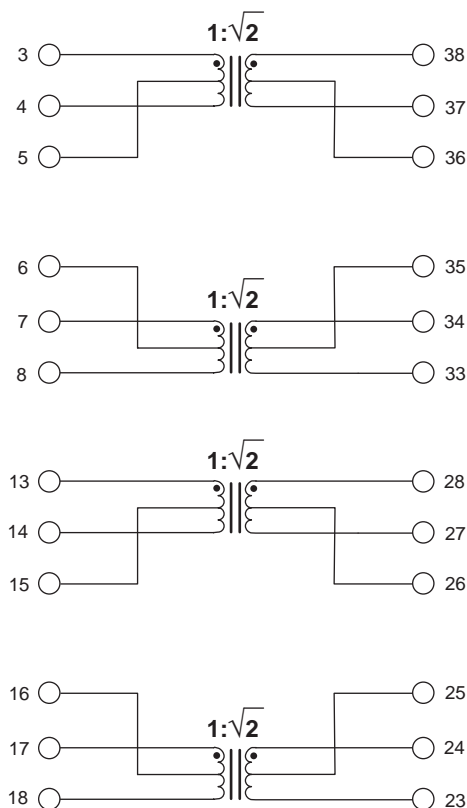
## Schematic

**PE-68065**

### RECEIVE CHANNELS



### TRANSMIT CHANNELS

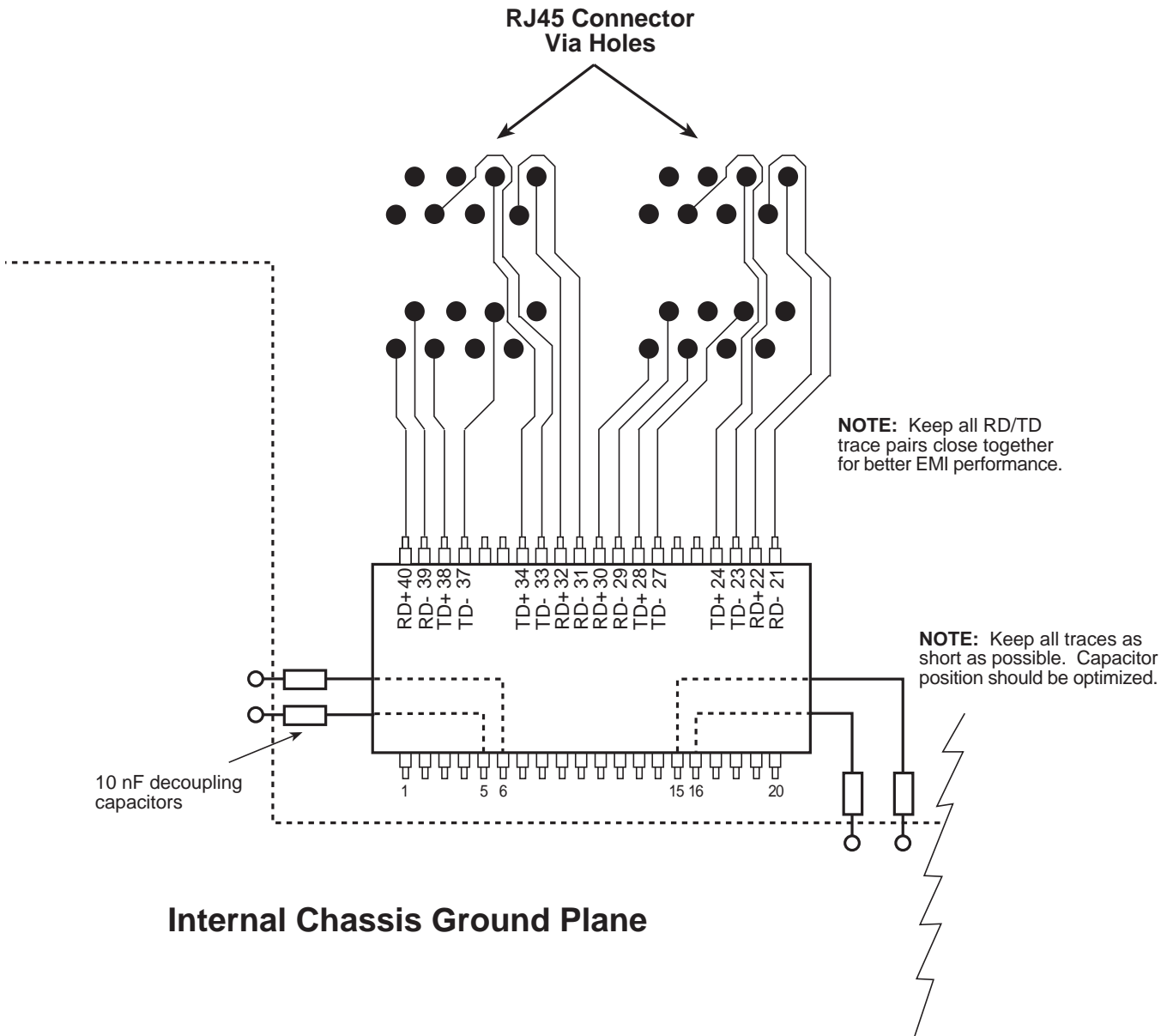


# 10BASE-T QUAD SMT TRANSFORMER MODULES

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## Recommended Layout for Multi-Port Hubs with Double-Stacked RJ45s



### For More Information :

#### Corporate

12220 World Trade Drive  
San Diego, CA 92128  
Tel: 619 674 8100  
FAX: 619 674 8262  
<http://www.pulseeng.com>  
Quick-Facts: 619 674 9672

#### Europe

Dunmore Road  
Tuam  
County Galway  
Ireland  
Tel: 353 93 24107  
FAX: 353 93 24459

#### Asia

P.O. Box 26-11, KEPZ  
6 Central Sixth Road  
KEPZ, Kaohsiung  
Taiwan, R.O.C.  
Tel: 886 7 821 3141  
FAX: 886 7 841 9707

#### Distributor

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