

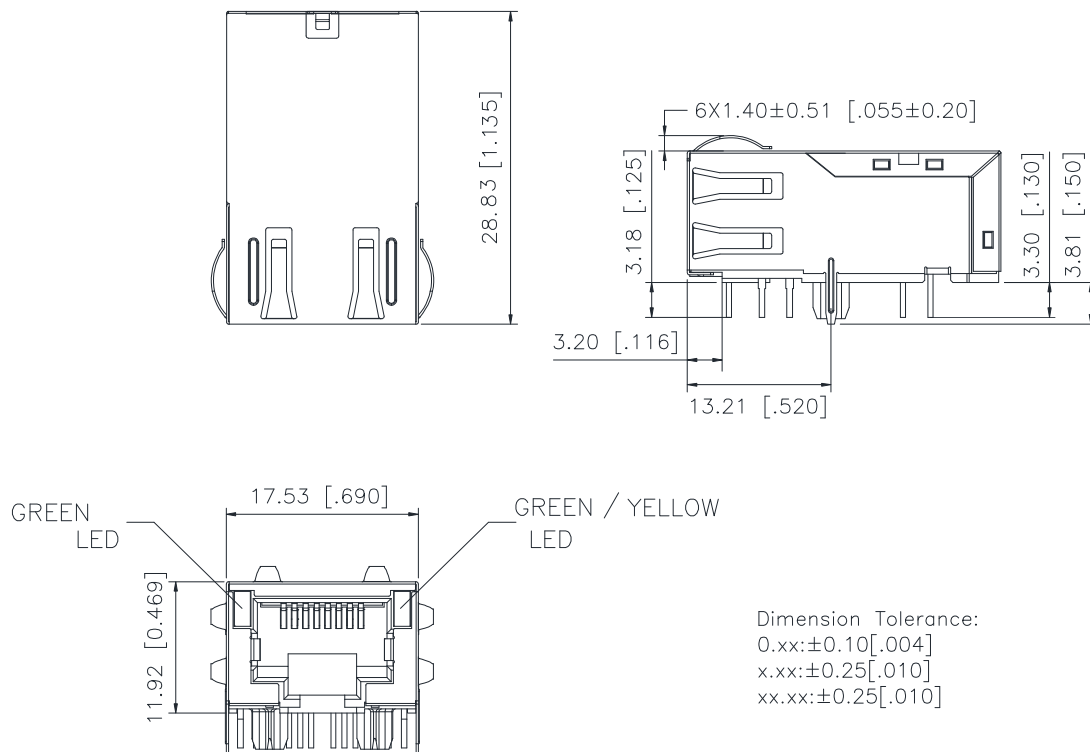
# Part Number: AE-RJD101G003

## 1\*1 Port RJ45 10G Network Connector

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- RoHS compliant.
- Housing: PA46 Black UL94V-0.
- Shielding: 0.2mm Thickness With Brass.
- Contact: Phosphor bronze. With 50μ" gold plating.
- Operating Temperature: 0°C TO +70°C.
- Dielectric Withstanding Voltage Between Shield And Terminal: 2250 VDC, 1MIN.

### Mechanicals:

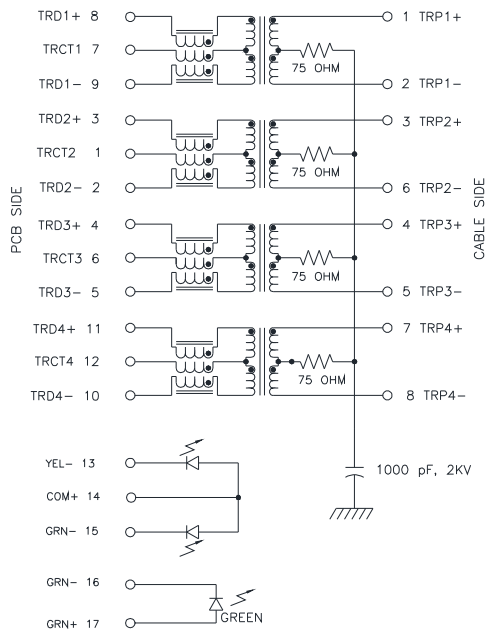


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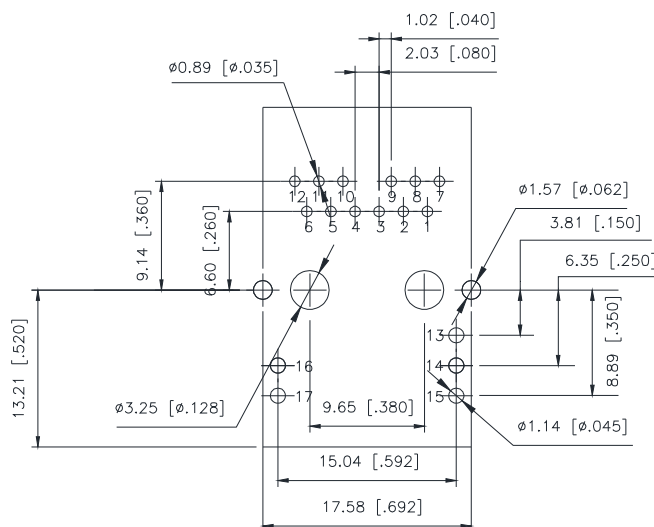
## Schematic



### Electrical Characteristics:

1. TR: (100KHz, 0.1V);
  - PINS: (P8-P9): (J1-J2) = 1:1 ± 3%
  - PINS: (P3-P2): (J3-J6) = 1:1 ± 3%
  - PINS: (P4-P5): (J4-J5) = 1:1 ± 3%
  - PINS: (P11-P10): (J7-J8) = 1:1 ± 3%
2. LX: (100KHz, 100mV)
  - PINS: (J1-J2), (J3-J6), (J4-J5), (J7-J8) = 180uH MINIMUM
3. INSERTION LOSS (DATA CHANNELS):
  - 3.0dB MAXIMUM AT 100KHz;
  - 2.0dB MAXIMUM AT 1MHz TO 400MHz;
4. INSERTION LOSS (CM SENSE CHANNELS):
  - 5.0dB MAXIMUM AT 3MHz TO 500MHz;
5. RETURN LOSS:
  - 22dB MINIMUM AT 1MHz TO 100MHz;
  - 22dB + 18.27 \* LG(f/100) MINIMUM AT 100MHz TO 500MHz;
6. CROSS TALK:
  - 28dB MINIMUM AT 1MHz TO 100MHz;
  - 19dB MINIMUM AT 100MHz TO 500MHz;
7. COMMON MODE REJECTION RATIO:
  - 35dB MINIMUM AT 1MHz TO 100MHz;
  - 30dB MINIMUM AT 100MHz TO 300MHz;
  - 25dB MINIMUM AT 300MHz TO 500MHz;
8. COMMON TO DIFFERENTIAL COMMON MODE REJECTION:
  - 30dB MINIMUM AT 1MHz TO 250MHz;
  - 22dB MINIMUM AT 250MHz TO 500MHz;

### Recommended PCB Layout:



RECOMMENDED P.C.B LAYOUT  
TOP VIEW (COMPONENT SIDE)

Dimensions Tolerance:

All PCB LAYOUT Tolerances:  $\pm 0.05$  [.002]

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**Reliability Test And Condition:**

Test Item	Test Condition	Cycles or Hours	Reference
<b>Vibration Test</b>	1. Amplitude: 0.75mm 2. Frequency: 5-500Hz 3. Number of sweep cycles per axis 10 4. Direction: X. Y. Z	Duration: 2 hours each direction	IEC-68-2-6
<b>Drop Test</b>	1. Height: 1m 2. Concrete platform	6 Times	IEC-68-2-32
<b>Thermal Shock Test</b>	1. Low temperature: -40℃ 2. High temperature: +85℃ 3. Soak time: 30 minutes 4. Transition time: less than 20 minutes	5 Cycles	IEC-68-2-14
<b>Solderability Test</b>	Dipped in 245±5 ℃ molten solder	Time: 3~5 seconds	IEC-68-2-20
<b>High Temperature Test</b>	1. Humidity: less than 50% RH 2. Temperature: 85±2 ℃	Duration: 96 hours	IEC-68-2-2
<b>Low Temperature Test</b>	Temperature: -40±3 ℃	Duration: 96 hours	IEC-68-2-1