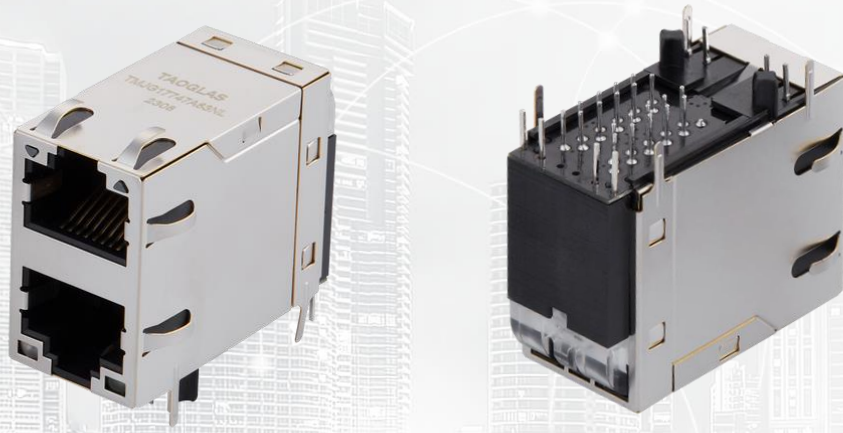




# TAOGLAS®



# Datasheet

## RJ45 ICM 1G Base-T 2x1 Ports

**Part No:**  
TMJG17747A83NL

**Description:**

RJ45 connector with integrated magnetics 1G Base-T.  
Dual Stack Port THT mount and LEDs.

**Features:**

- 2x1 Configuration
- 3 Wire + Transformer
- Voltage/Current Drive
- Shielded EMI Finger
- Board guide
- Industrial grade

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# 1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJG17747A83NL is an RJ45 Integrated Connector 1G Base-T Single 2x1 Ports with shielded EMI finger body and designed for Industrial grade environments.

Typical Applications Include:

- Industrial Automation
- Hubs
- Routers
- Switches
- Wireless Access Points

Taoglas Magnetics offer an extensive product line of RJ45 Integrated Connectors designed for commercial and industrial grade applications, supporting 10/100 Base-T (Atmos100 Series) and 1G Base-T (Atmos1000 series). These surface mount or through-hole components provide reliable performance and maintain signal integrity that meets IEEE 802.3 standards, and they are UL certified. The Power over Ethernet options are also available including PoE, PoE+ and PoE++.

The majority of Taoglas RJ45 ICMs are manufactured with fully automated winding, assembly & testing to ensure consistent performance, quality and reliability while ensuring cost competitiveness for its customers. These products are fully compliant with the REACH and RoHS directive, and compatible with all major PHY vendors.

For customized products or support with integration, contact your regional Taoglas customer support team for further information.

## 2. Specifications

Electrical Performance @25°C	
Inductance OCL	350μH MIN @ 100KHz 0.1V 8mA DC Bias
Turns Ratio (±2%)	TX=1CT: 1CT      RX=1CT: 1CT
Insertion Loss	100KHz: -1.2dB Max
	1~100MHz: $-0.2-0.002 \cdot f^{1.4}$ dB MAX
	125MHz: -3.0dB Max
Return Loss (@100Ω ±15%)	0.1~40MHz: -16dB Min
	40~100MHz: $-10+20 \cdot \text{LOG}_{10}(f/80 \text{ MHz})$ dB Min
Crosstalk (dB Min)	1MHz: -50
	10~100MHz: $-52+22 \cdot \text{LOG}_{10}(f/10)$
Common Mode Rejection Ratio	2MHz: -50dB Min
	30~200MHz: $-15+20 \cdot \text{LOG}_{10}(f/200)$ dB Min
Hi-Pot	1500Vrms

Environmental Specifications	
Operating Temperature	-40°C TO +85°C

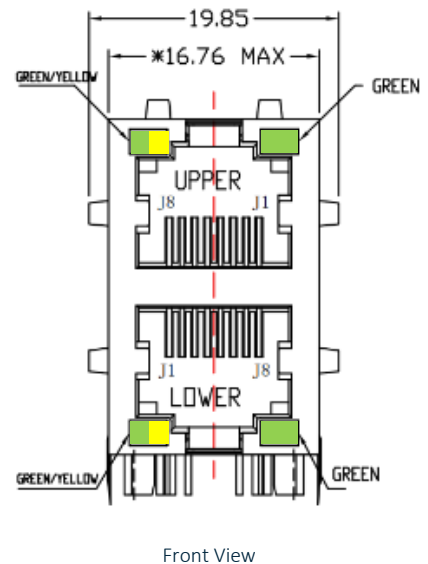
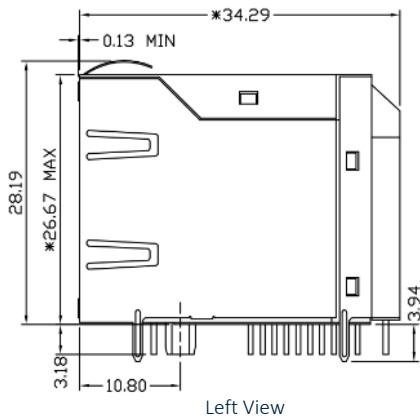
Material Specifications	
Housing	Thermoplastic UL94V-0
Contact/Shield	Copper alloy
Shield plating	Nickel
Contact Plating	Gold in contact area Thickness = 6μ" min.

Compliance	
UL recognized - FILE NO. E528697	
RoHS Compliant	

Storage requirements	
Humidity	MSL - 1
Storage Temperature	-40°C TO +85°C

# 3. Mechanical

## 3.1 Mechanical Drawings

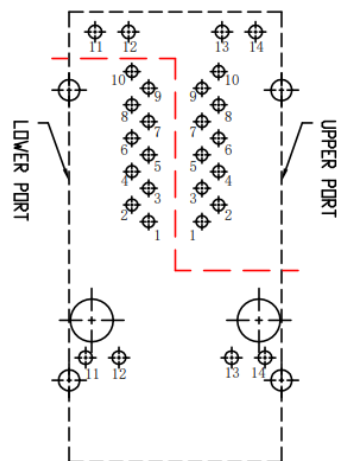
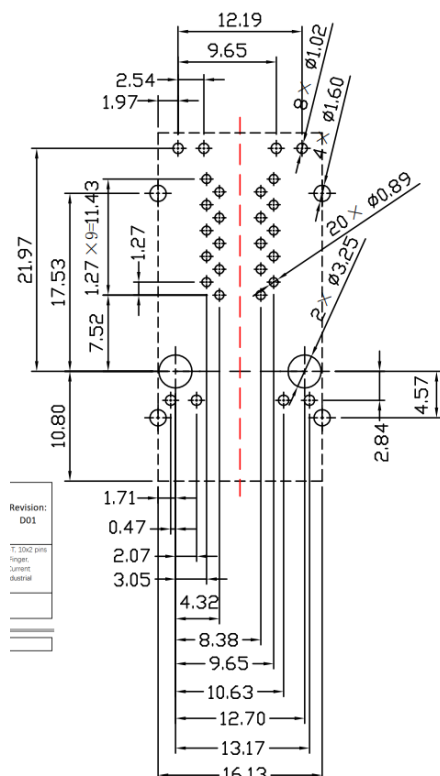


### Mechanical Specifications

Height Above Board	28.19 mm
Width	19.85 mm
Depth	34.29 mm
Mounting Style	Through Hole (THT)
Mounting Angle	Right Angle

Dimensions are in millimeters with the following tolerances: X.XX = ±0.25

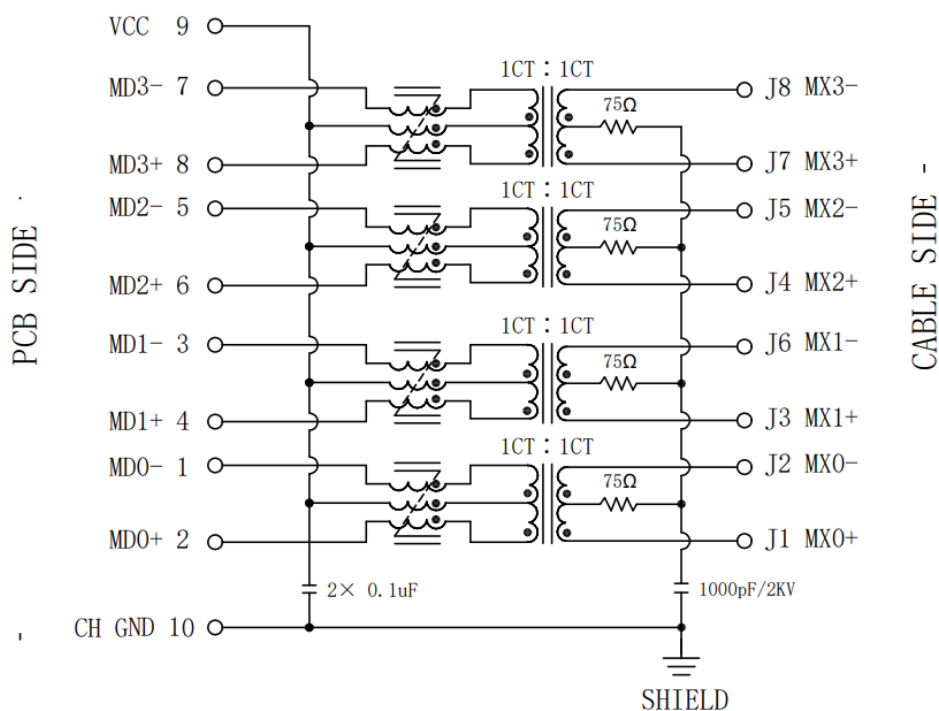
## 3.2 PCB Layout



Suggested PCB Layout (Top View)  
Dimensions are in millimeters with the following tolerances: X.XX = ±0.10

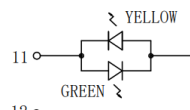
## 4. Electrical

### 4.1 Electrical Drawings



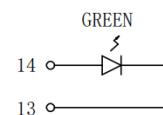
#### LED Electrical Specification

Standard LED	Wavelength (nm)	$V_F$ ( $I_F=20mA$ )	$I_R$ ( $V_R=5v$ )
Green	565	1.8~2.6v	10 $\mu A$ Max
Yellow	585	1.8~2.6v	10 $\mu A$ Max



LEFT LED

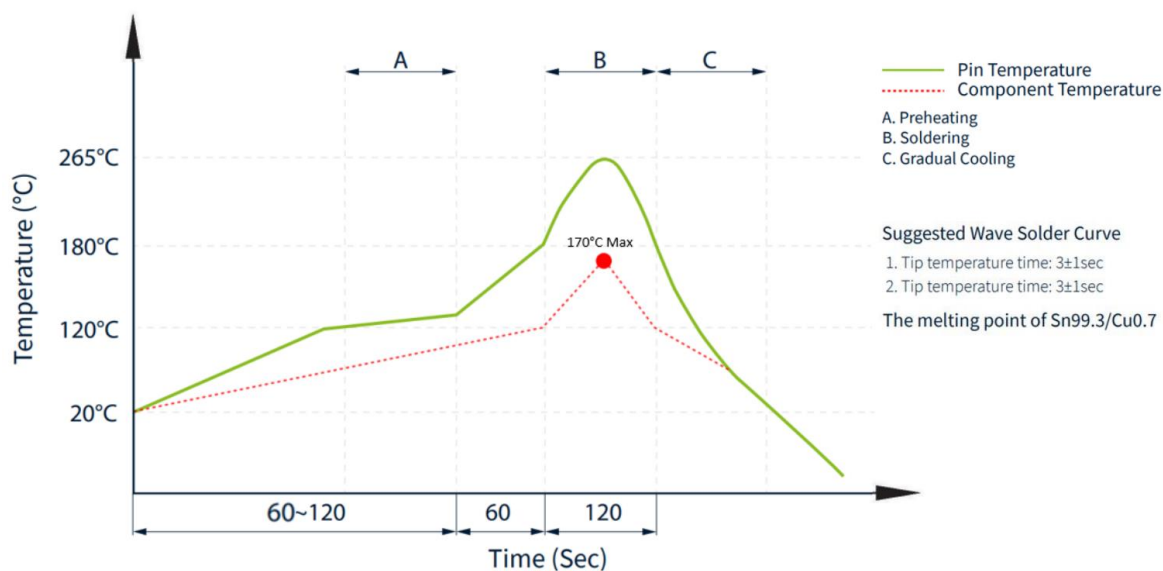
LED POLARITY		COLOR
PIN 11	PIN 12	
+	-	GREEN
-	+	YELLOW



RIGHT LED

LED POLARITY		COLOR
PIN 13	PIN 14	
-	+	GREEN

### 4.2 Profile of Wave Solder



## 5. Packaging

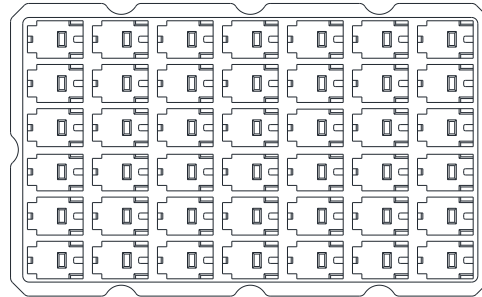
### 5.1 SPQ

42 pcs/tray

Tray dimension: 340\*220\*44 mm

Tray Weight: 875g

Packaging material: PVC



1 Carton = 4 trays = 168 pcs

Carton dimensions: 350\*230\*210mm

Carton Weight: 3.75kg



### 5.2 Label

<b>Taoglas Limited</b>	
P/N NO: XXXXXXXX	
PO: XXXXXXXX	B/N: XXXXXXXX
QYT: XXX PCS	DC: XXXX
DATE: XXXX-XX-XX	

**Carton Label (8x4cm)**

# Changelog

Changelog for the datasheet

**SPE-23-8-070 – TMJG17747A83NL**

**Revision: B**

Date:	2023-07-05
Notes:	Update in solder profile
Author:	Javier Vasena

**Previous Revisions**

**Revision: A (Original First Release)**

Date:	2023-03-30
Notes:	
Author:	Javier Vasena





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