PROFITAP

DUAL OUTPUT GIGABIT ETHERNET COPPER TAP

C1-1G-RG2
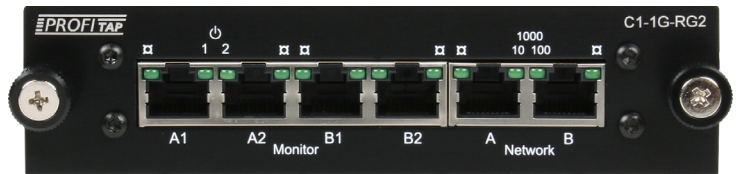
PRODUCT MANUAL

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This package includes:

- 1 x C1-1G-RG2 Dual Output Gigabit Ethernet TAP
- 1 x 90-240 VAC to 12 VDC/0.5 A PSU

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1. FUNCTIONAL DESCRIPTION

1.1 Interface Connectors

The C1-1G-RG2 TAP features 6 RJ45 ports. Network ports A and B are connected to the network, monitor ports A1, A2, B1, and B2 are connected to the analyzer.

1.2 Link / Activity

Six LEDs (Link/Tx) indicate Activity and Link for each of the six ports. The LEDs light up when a link is detected on the port. The LEDs blink when traffic activity is detected on the port.

1.3 Speed LEDs

Two LEDs indicate the speed at which the network link is currently operating at. If only the left LED is on, the link is operating at 10 Mbps. If only the right LED is on, the link is operating at 100 Mbps. If both LEDs are on, the link is operating at 1 Gbps.

1.4 Link Failure Propagation

Profitap Gigabit Copper TAPs transmit link failure errors between ports, allowing the network to activate a redundant path, while the TAP stays available for autonegotiation. LFP ensures less downtime, and is essential for high availability networks.
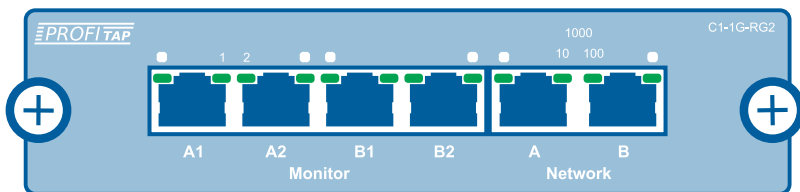
1.5 Power

The C1-1G-RG2 TAP can use redundant powering, guaranteeing continued operation in case power from one of the power inputs were to become unavailable. Two LEDs show the presence of power.
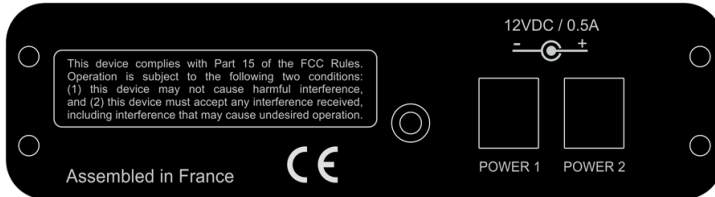
1.6 Power Failure

When the TAP becomes unpowered, it activates its bypass circuits, connecting network ports A and B together. Monitor ports are disabled when the TAP is unpowered.

1.6.1 Fast Failover (1G)

When a power transition event occurs, the network devices renegotiate the link. This operation can take up to 5 seconds depending on network configuration and can cause a network topology reconfiguration. The Fast Failover feature helps to reduce this time by trying to keep the link up without renegotiation during the power change event.

With Fast Failover, the network path unavailability lasts between 30 and 300 ms.

2. INSTALLATION

1. Power both network devices. Do NOT power the TAP. Connect the network devices to the TAP using category 5e UTP cables.

   - If one of the network devices is of DTE type, and the other one of DCE type, use straight cables.
   - If both network devices are of the same type (both DTE or both DCE) use one straight cable and one cross-over cable.

The connected network devices should show a link, or traffic activity. If there is no link, change one of the cables by a cable of opposite type.

2. Power the TAP. If two network devices are connected on the network ports, the Speed LEDs blink to indicate the negotiation of the highest mutual speed. When the connection is established, the Speed LEDs indicate the network speed:

   - Left LED only for 10 Mbps
   - Right LED only for 100 Mbps
   - Both LEDs for 1 Gbps

   If no mutual speed is detected, the two Speed LEDs blink alternatively.

   Network activity is shown by the Link/Tx LEDs of Network A and Network B.

3. Connect the Monitor ports to the analyzer using straight or cross-over CAT5e cables.
   The Monitor ports operate at the same speed as the Network ports.
   The Monitor ports' Link/Tx LEDs are on when a link is found.
   Traffic received by Network A and Network B will be mirrored to Monitor A and Monitor B respectively, and the Link/Tx LEDs will blink as traffic passes through.
   The maximum distance between any of the connected devices is 100 meters.

3. TECHNICAL SPECIFICATIONS

C1-1G-RG2	
Connectors	6 x RJ45 8-pin gold plated
LEDs	6 x Link/Activity, 2 x Network speed, 2 x Power
Power Input	2 x 12 VDC (1 required for operation, 2 for redundancy)
Power Consumption	6 W
Dimensions (WxDxH)	113 x 168 x 30 mm — 4.4 x 6.6 x 1.2 in
Front Panel Dimensions (WxH)	143 x 35 mm — 5.6 x 1.4 in
Accessories	1 x 90–240 VAC PSU
MTBF	250,000 hours
Operating Temperature	0°C to 50°C
Storage Temperature	-22°C to 70°C
Humidity	10 to 90%, non-condensing
Certifications	RoHS, CE, FCC class A, IEEE 802.3

Legal

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