



# ORION TELECOM NETWORKS INC.

## Dual Balun (Shielded) 2 x BNC (F) (75 Ohms) to RJ-45 (F) 120 Ohms Converter

---

### Data Sheet & Product Brochure

#### **Headquarters: Phoenix, Arizona**

#### **Orion Telecom Networks Inc.**

16810, Avenue of the Fountains,  
Suite # 108, Fountain Hills, AZ 85268 U.S.A.  
Phone: +1 480-816-8672,  
**Fax:** +1 480-816-0115  
**E-mail:** [sales@oriontelecom.com](mailto:sales@oriontelecom.com)  
**Website:** <http://www.oriontelecom.com>

#### **Regional Office: Miami, Florida**

#### **Orion Telecom Networks Inc.**

4000 Ponce de Leon Blvd. Suite 470,  
Coral Gables, FL 33146 U.S.A.  
Phone: 1-305-777-0419,  
**Fax:** 1-305-777-0201  
**E-mail:** [sales@oriontelecom.com](mailto:sales@oriontelecom.com)  
**Website:** <http://www.oriontelecom.com>

## Dual Balun (Shielded) 2 x BNC (F) (75 Ohms) to RJ-45 (F) 120 Ohms Converter

### Product Overview

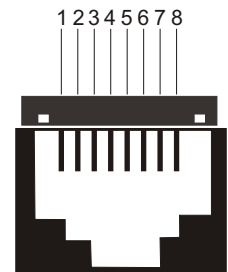
The Dual Balun converts 2 x BNC (F) (75 Ohms) to RJ-45 (F) 120 Ohms.



Dual Balun (Shielded)  
2 x BNC (F) (75 Ohms) to RJ-45 (F) 120 Ohms  
Converter

### RJ-45 for E1 Interface

RJ-45 (Female) Pin #	Signal in RJ-45 (Female)
1	Tx Tip (Data Out)
2	Tx Ring (Data Out)
4	Rx Tip (Data In)
5	Rx Ring (Data In)



RJ-45  
(Female)

### BNC Description

BNC	DTE BNC
Receive Input	Tip
Receive Ground	Ring
Transmit Output	Tip
Transmit Ground	Ring

**Electrical**

Matching Impedance	75 Ohms unbalanced coaxial to 120 Ohms balanced twisted pair
Bit Rates	2 Mbit/s and 8 Mbit/s as per G.703
Return Loss	2 Mbit/s exceeds G.703 (>25 dB from 52 KHz ~ 3072 KHz) and 8 Mbit/s as per G.703
Insertion Loss	< 0.16 dB for 2 Mbit/s service (51 KHz to 3072 KHz) < 0.3 dB for 8 Mbit/s service (211 KHz to 12.672 MHz)
Cross Talk	> 60 dB from 51 KHz to 12.672 MHz between two channels
Pulse Shape	2 Mbit/s and 8 Mbit/s as per G.703
Isolation Voltage	250 V DC between input and output
Signal Levels	2.37 V nominal peak voltage at 2Mbit/s and 8Mbit/s at the coaxial end as per G.703
EMC	EN50082-2 (CISPR 22) Class A for radiated emissions with UTP cable

**Materials**

Enclosure	High Impact Polystyrol      Colour Grey
Coax Connector Outer Contact/Body	Brass Alloy As AS 1567 Type 385 Finish Cu/Ni5b
Coax Connector Insulator	PTFE
Coax Connector Inner Contact	Phosphor Bronze. Finish Cu/Ni 1.25/Au 1.25
RJ45 Housing	PBT Glass Filled, Black
RJ45 Contacts	Phosphor Bronze. Finish Ni/Au
RJ45 Shield	Bronze. Finish Ni

**Coaxial Connector (75 Ohm)**

BNC Series	To IEC 169-8
------------	--------------

**RJ45 Connector**

Type	Shielded, 8 Position, 8 Contact
------	---------------------------------

**Environmental**

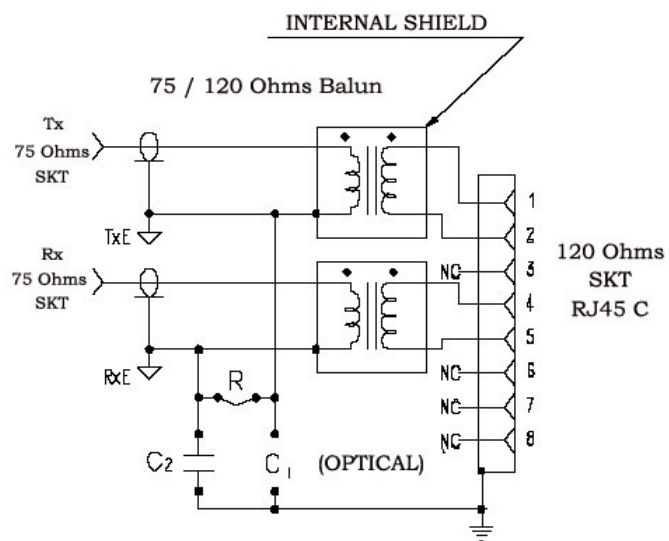
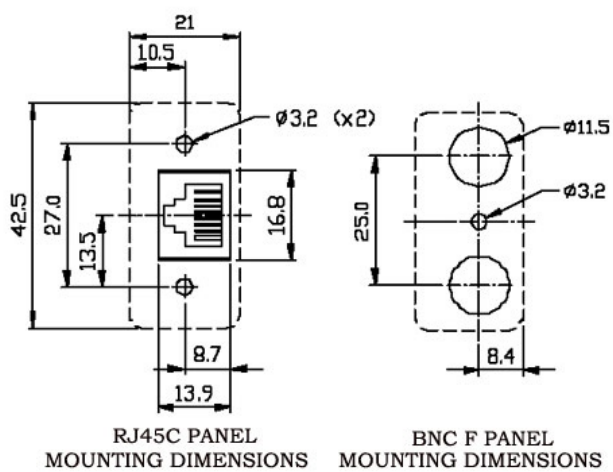
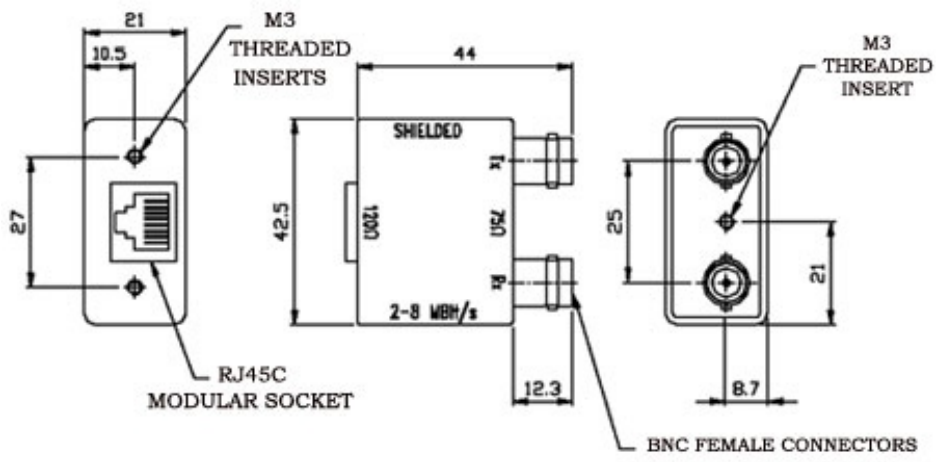
Working Temperature	- 30 <sup>0</sup> C to 75 <sup>0</sup> C
---------------------	--

**Mounting Options**

Double sided tape is provided to allow mounting onto any clean dry surface.
---

Dual Balun (Shielded) 2 x BNC (F) (75 Ohms) to RJ-45 (F) 120 Ohms Converter

Drawing



Note: (OPTIONAL EARTHING CONFIGURATION WITH R, C1 & C2)

## Ordering Information

Dual Balun (Shielded) 2 x BNC (F) (75 Ohms) to RJ-45 (F) 120 Ohms Converter			
S No.	Part #	Product Description	Qty
1.	VCL-EMOD-0133-Balun	Dual Balun (Shielded) 2 x BNC (F) (75 Ohms) to RJ-45 (F) 120 Ohms Converter	1

Technical specifications are subject to changes without notice.  
Revision 02 - October 14, 2009

### Headquarters: Phoenix, Arizona

#### Orion Telecom Networks Inc.

16810, Avenue of the Fountains,  
Suite # 108, Fountain Hills, AZ 85268 U.S.A.  
Phone: +1 480-816-8672,  
**Fax:** +1 480-816-0115  
**E-mail:** sales@oriontelecom.com  
**Website:** <http://www.oriontelecom.com>

### Regional Office: Miami, Florida

#### Orion Telecom Networks Inc.

4000 Ponce de Leon Blvd. Suite 470,  
Coral Gables, FL 33146 U.S.A.  
Phone: 1-305-777-0419,  
**Fax:** 1-305-777-0201  
**E-mail:** sales@oriontelecom.com  
**Website:** <http://www.oriontelecom.com>