

Overview

The Shielded CATV Balun (500306) allows RG6 coaxial cable to be replaced by Cat 5e/6/7 STP or UTP cable in the terrestrial RF environment. Used in pairs, the Shielded CATV Balun allows broadband CATV equipment to be integrated into a structured cabling system thereby allowing CATV equipment to be moved or added to any convenient modular wall outlet. When used with Cat 5e/6/7 shielded twisted pair cable, the connection supports greater RF amplification and therefore greater distance with less EMI/RFI egress versus other UTP CATV baluns. The Shielded CATV Balun also works in conjunction with MuxLab's CATV Hub (500300/303) for a total cabling solution.

Applications

Schools, government, offices, hospitals, financial institutions, hotels and residential complexes.



Features

- Bandwidth up to 900 MHz including Internet, digital cable
- Supports Cat5e/6/7 STP and UTP
- Fits side-by-side on most RF splitters
- Lower EMI /RFI egress when STP is used
- Cast aluminum enclosure for maximum EMI/RFI shielding
- Low insertion loss

| Specifications | |
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| Environment: | Private and public broadband CATV, VHF and FM networks. |
| Devices: | Terrestrial CATV, satellite receivers, DVD players, RF modulators, splitters, cable modems and other broadband video equipment. |
| Transmission: | Transparent to the user |
| 3dB bandwidth: | 5 MHz to 900 MHz. |
| Video Channels Supported: | CATV 2-142, VHF channels 2-13, FM broadcast band. |
| Insertion Loss Per Pair: | <3 dB: 5 – 295 MHz, 510 – 725 MHz. <4.2 dB: 295 – 510 MHz, 725 – 900 MHz. |
| Return Loss: | >10 dB: 5 – 245 MHz, 493 – 900 MHz. >9.6 dB: 245 – 493 MHz. |
| Common Mode Rejection (CMMR): | -20dB or higher at 5 MHz to 900 MHz. |
| Cable – UTP: | 24-AWG or lower solid copper twisted pair. Impedance: 100-120-ohms |
| Cable – Coax: | Impedance: 75-ohms at 1MHz (RG6) |
| Connector – Input: | “F” connector – male |
| Connector - Output: | RJ45S – female |
| RJ45 Pin Configuration: | RJ45 Pins 7&8. |
| Maximum distance: | Up to 100m (330ft) via Cat 5 UTP depending on channel frequency and input power. Maximum 100m at CATV Channel 2. May require tilt amplifiers at higher frequencies. |
| Temperature: | Operating: 0° to 40°C. Storage: -10° to 70°C. |
| Enclosure: | Aluminum cast. |
| Humidity: | Maximum 95% (non-condensing) |
| Dimensions: | 0.8" x 1.85" x 1.05" (2 x 2.6 x 4.7 cm) L x H x W + extended F conn. |
| Weight | 1.5 oz (44 gms) |
| Regulatory Approval: | FCC, CE |
| Warranty: | Lifetime |
| Order Information | 500306 Shielded CATV Balun |

Typical Application

In a point-to-point scenario for CATV (superband and hyperband), VHF and FM, cable lengths of up to 50 meters may be achieved without amplification if the nominal input is about 15dB. In some applications, a "tilt" amplifier may be required since the STP/UTP losses are higher than coax at the higher frequencies. Linear gain compensation of up to 20-25dB at 750MHz is usually adequate. Conversely, if amplification is used to compensate for losses at higher frequencies and long distances, it may be necessary to attenuate the lower frequency, shorter distance signals to avoid over-driving the TV monitors.

