

Hughes Electronics lead the industry in understanding the major impact of 'noise' factor losses resulting from poor NEXT and FEXT performance at channel level. Clients deploying Hughes Electronics balun products can now confidently meet Cat 5 and Cat 6 data bandwidth standards in these critical areas of performance.

Mini Baluns

Hughes individual mini balun connectors have been developed specifically for LTE advanced (e.utra) and Wimax advanced (IEEE 802.16m) applications. The new baluns deploy brand new IDC connections that ensure a gas tight fit for stranded cables, reducing insertion losses at the connection point, plus an innovative designed ferule that stabilises pitching on twisted pair cable and decreased core tolerances to help provide unprecedented performance.

Hughes Part Number		Description
Male	Female	
40-164570	40-2120	Mini Balun BNC
40-174570	40-2220	Mini Balun Type 43
40-2310	40-2320	Mini Balun HDC Type 43
40-2410	40-2420	Mini Balun 1.0/2.3
40-2510	40-186570	Mini Balun 1.6/5.6



Dual Baluns

Hughes have improved their dual balun offering to include front and rear bulkhead mounting. The new versatile design, a beautifully compact balun converts 75 ohm unbalanced coaxial signal to 120 ohm balanced twisted pairs. The Dual baluns can be used as free standing unit or be mounted into a panel. The redesign makes it possible to mount from the RJ45 side or coaxial side allowing either RJ45 or coaxial presentations on the front.

Hughes Part Number		Description
Male	Female	
40-1112	40-1132	Dual Balun BNC
40-1212	40-1312	Dual Balun Type 43
40-1222	40-1322	Dual Balun HDC Type 43
40-1421	40-1422	Dual Balun 1.6/5.6



DDF Baluns

Hughes Type 20 HDC Type 43 DDF Baluns fit into DDF frames and B2 Blocks, extensively used in Telecom applications.

- Specification:**
1. Matching Impedance: 75ohm unbalanced coaxial to 120ohm balanced twisted pair
 2. Bit Rate: 2Mbit/s and 8Mbit/s - G703
 3. Return Loss: $\geq 12\text{dB}$
 4. Insertion Loss: $\leq 1.3\text{dB}$
 5. Cross Talk: $> 50\text{dB}$ from 51kHz to 10Mhz between two channels
 6. Pulse Shape: 2Mbit/s and 8Mbit/s - G703
 7. Isolation Voltage: 250V DC between input and output

Hughes Part Number		Description
Male	Female	
40-1222/DDF		Type 20 HDC Type 43 DDF Balun



Balun Panels

Hughes Balun panel matches multiple sets of dual 75 ohm coax connections to multiple 120 ohm twisted pair connections. Supporting data stream to three speed versions, 2-8 Mbit/s for E1/T1 and E2/T2, 2-8-34 Mbit/s for E1/T1 to E3, 34 to 155 Mbit/s for E3 and higher, the patch panel bi-directionally matches not only signal impedance but also the pulse shapes of the signals according to the G.703 standards.



Hughes Part Number	Description
37-G81001321	16 Port BNC Balun Panel
37-G81002321	24 Port BNC Balun Panel
37-G91001321	16 Port HDC Type 43 Balun Panel

Balun Assemblies

Designed especially for 4G applications, G703 balun leads consisting of coaxial mini baluns to 1 RJ45 connector perform in all environments from E1 to E3, they can be manufactured in any length and are designed to connect coaxial outputs from MUX (multiplexer) equipment to the E1 network and replace balun panels entirely.



Hughes Part Number		Description
2 Way Split	4 Way Split	
25-BL0313B13X2/XX	25-BL0313B13X4/XX	BNC to RJ45 plug
25-BL0414B13X2/XX	25-BL0414B13X4/XX	HDC Type 43 to RJ45 plug

*XX replace with Length required i.e 01 for 1M

Hughes in-house manufacturing facility located in Cental London can design and manufacture any cable assembly required. All cables are tested and conform to all relevant standards. Please call our sales team with your specific requirement.

