



Cambridge Electronic Industries

Connector Solutions

12GHz Micro BNC and BNC Coaxial Connectors for Vision Broadcast Applications

- Optimised for 4K/Quad HD and Ultra HD Broadcast Applications
- Only one connection required for each 12GHz channel
- Right Angle, End Launch and Top Entry PCB Mounting Sockets Styles
- Cable Ended BNC Plug for Belden 1694A



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CoaxVision™

IBC15



Cambridge Electronic Industries Ltd

Cambridge Connectors Division

12GHz Micro BNC and BNC Coaxial Connectors for High Speed High Definition Video Applications

Until now, to communicate at the Bitrates associated with 12G-SDI ("UHD", "UHDTV", "4K UHD") it has been necessary to employ 2 or even 4 channels. With this new range of BNC/Micro BNC connectors from Cambridge Connectors it is now possible to achieve 6 and 12 Gbits/s Bitrates utilising a **single channel**. Specifically designed for 6G UHD-SDI and 12G UHD-SDI High Speed, High Definition Video Applications this new range of precision 75 ohm connectors is presently offered in Right Angle, Top Entry and Card Edge PCB mounted sockets; a Belden 1694A cable terminated plug style is also available. Although mate-able with standard BNC connectors the peak designed performance is achieved when both halves are Cambridge Connectors 12GHz CoaxVision™ BNC connectors.

- Bitrates of 12 Gbits/s
- Only one connection required for each 12GHz channel
- Right Angle, End Launch and Top Entry PCB Mounting Sockets Styles
- Cable Ended BNC Plug Style for Belden 1694A



C-SX-144

Right Angle
PCB Mount



C-SX-141

Edge Card Mount



C-SX-152

Top Entry PCB Mount



XBT-1068-BGxx

Cable Ended Plug

12 GHz BNC Connectors



C-SX-142

Right Angle PCB
Mount



C-SX-147

Edge Card Mount



C-SX-153

3 Pin Top Entry PCB
Mount Short / Long
Body



C-SX-140



XPT-D001-NGxx

Cable Ended Plug

12 GHz Micro BNC

Specification BNC Sockets

Electrical

Impedance	75 Ohm
Frequency Range	0 – 12.0 GHz
Working Voltage	500 V _{rms} (250 V _{rms} Edge Card Mount)
Dielectric Withstanding Voltage	1500 V _{rms} (750 V _{rms} Edge Card Mount)

Reflection Factor (VSWR)	R/A	E/Launch	Top Entry	(Max) DC - 6.0GHz
	1.10	1.12	1.04	(Max) 6.0 -12.0GHz
	1.14	1.12	1.11	(Max) 6.0 -12.0GHz
Contact Resistance	1.5	4.0	1.5	m ohm (Centre)
	1.0	2.5	1.0	m ohm (Outer)
Insulation Resistance	>5000	>5000	>5000	Meg Ohm

Materials

Centre Pin	Phos Bronze / 10µ " Au
Metal Parts	Brass /Ni (R/A Die Cast Zinc / Ni
Insulators	PTFE
Temp Range	-65 to+85°C
Mating Cycles	250 (200 Edge Card Mount)

Specification Micro BNC Sockets

Electrical

Impedance	75 Ohm
Frequency Range	0 – 12.0 GHz
Working Voltage	170 V _{rms}
Dielectric Withstanding Voltage	500 V _{rms}

Reflection Factor (VSWR)	R/A	E/Launch	Top Entry	(Max) DC - 6.0GHz
	1.08	1.05	1.04	(Max) 6.0 -12.0GHz
	1.14	1.09	1.08	(Max) 6.0 -12.0GHz
Contact Resistance	5.0	5.0	5.0	m ohm (Centre)
	2.5	2.5	2.5	m ohm (Outer)
Insulation Resistance	>1000	>1000	>1000	Meg Ohm

Materials

Centre Pin	Be/Cu / 10µ " Au
Metal Parts	Brass /Au
Insulators	PTFE
Temp Range	-65 to+85°C
Mating Cycles	500

advanced
layout solutions



PCB Design & Signal Integrity Analysis

To ensure that the high performance of its connector range is maintained throughout the system, Cambridge Connectors is partnered with **Advanced Layout Solutions** (ALS), one of the largest printed circuit board design bureaux in the UK. ALS is able to take on the most challenging projects whilst still meeting tight deadlines and is the only PCB design bureau in the UK that verifies its designs using in-house signal integrity analysis. For more information - www.alspcb.com ; info@alspcb.com

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Cambridge Electronic Industries Ltd

System Connections Division

12GHz RF Coaxial Adaptors and Patch Cables for High Definition High Speed Video Broadcast Applications.

System Connections has been manufacturing professional quality coaxial cable assemblies for high speed data transfer for over 25 years. The transition from analogue to HD digital and UHD digital in Broadcasting has placed a premium on the skills, knowledge and the materials employed in the production of interconnection systems. To ensure signal integrity over the 12G-SDI transmission path it is **essential** for interconnection systems to be constructed with 12G-SDI compliant components. System Connections, in partnership with Cambridge Connectors, and using high quality cables from world leading branded manufacturers has created this new range of 12 GHz RF Coaxial Cabling Systems to meet the requirements of 12G-SDI standards. The range includes Cable Assemblies, Coaxial Cable Adaptors and Patch Leads. Used for connecting, interfacing and patching equipments to high speed 12G-SDI networks, they meet the needs of the Broadcast, HDTV and other High Speed, High Definition Vision Applications.

Available in many combinations of BNC, Micro BNC, Plugs and Jacks, assemblies are made to customer order with no minimum order quantity for special lengths. Cable can also be further customised by colour coding, bespoke labelling and special marking to suit custom applications.

- Optimised for 12G-SDI Broadcast Applications
- BNC, Micro BNC combinations available
- Straight, Right Angle, Bulkhead Jack and Plug terminations
- Cable Types include Belden 1694A, 1855A, 1505A and 1505F
- Special Colour Coding, Labelling and Identification Symbols available

Cable assemblies for 12GHz application

The following combinations are available: -

	BNC Plug	Micro BNC Plug
BNC Bulk Head Jack	X	X
BNC Cable Jack	X	X
BNC Plug	X	X
Micro BNC Plug	X	X



Description	Part Number Belden 1855A	Part Number Belden 1694A	Part Number Belden 1505A	Part Number Belden 1505F
BNC Plug to BNC Plug	CA-BZPBZP-MO-xxxxx	CA-BZPBZP-RO-xxxxx	CA-BZPBZP-UO-xxxxx	CA-BZPBZP-SO-xxxxx
BNC Plug to Micro BNC Plug	CA-BZPHBP-MO-xxxxx	CA-BZPHBP-RO-xxxxx	CA-BZPHBP-UO-xxxxx	CA-BZPHBP-SO-xxxxx
BNC Plug to BNC B/head Jack	CA-BZPBCB-MO-xxxxx	CA-BZPBCB-RO-xxxxx	CA-BZPBCB-UO-xxxxx	CA-BZPBCB-SO-xxxxx
Micro BNC Plug to Micro BNC Plug	CA-HBPHBP-MO-xxxxx	CA-HBPHBP-RO-xxxxx	CA-HBPHBP-UO-xxxxx	CA-HBPHBP-SO-xxxxx
BNC B/Head Jack to Micro BNC Plug	CA-BCBHBP-MO-xxxxx	CA-BCBHBP-RO-xxxxx	CA-BCBHBP-UO-xxxxx	CA-BCBHBP-SO-xxxxx
BNC Jack to Micro BNC Plug	CA-BCJHBP-MO-xxxxx	CA-BCJHBP-RO-xxxxx	CA-BCJHBP-UO-xxxxx	CA-BCJHBP-SO-xxxxx
BNC Jack to BNC Plug	CA-BCJBPC-MO-xxxxx	CA-BCJBPC-RO-xxxxx	CA-BCJBPC-UO-xxxxx	CA-BCJBPC-SO-xxxxx

(xxxxx=cable length in mm e.g. 00300 = 30 cm)

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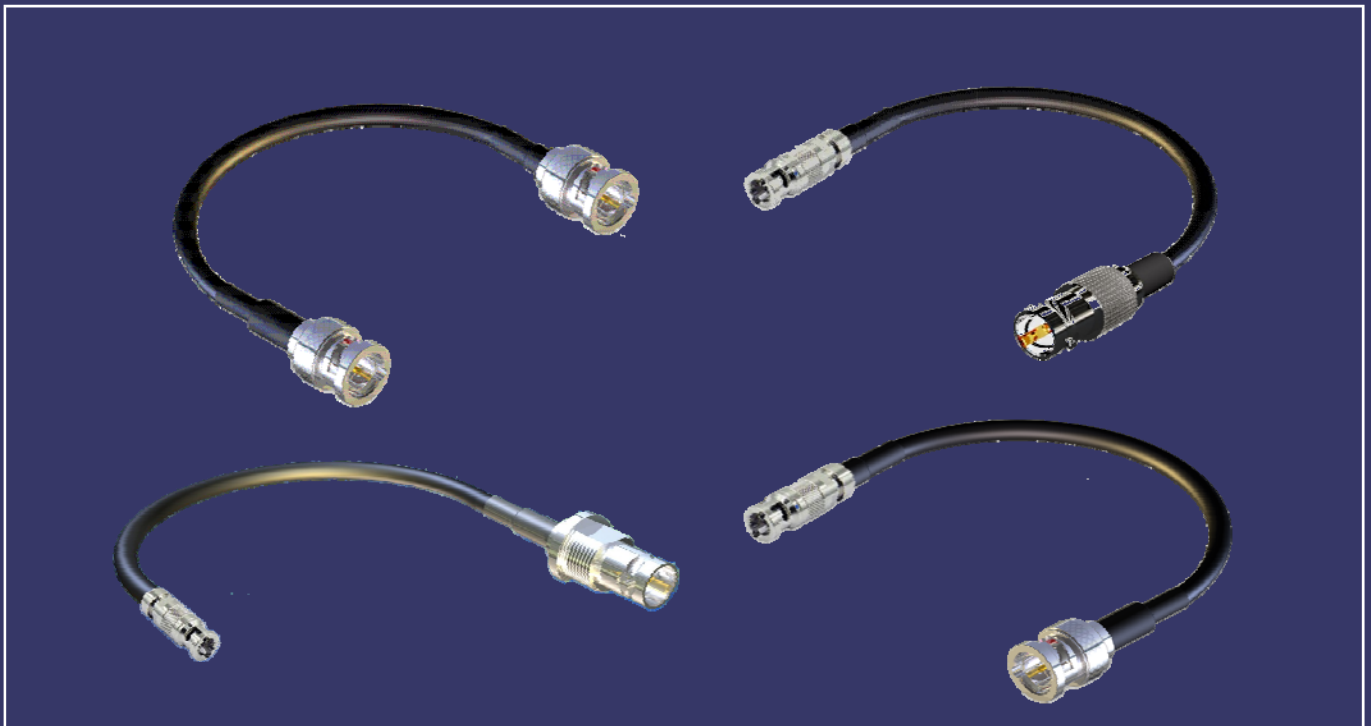


Cambridge Electronic Industries

Interconnection Solutions

12GHz RF/Coaxial Adaptors and Patch Cables for Vision Broadcast Applications

- Optimised for 12G-SDI Broadcast Applications
- BNC, Micro BNC combinations available
- Straight, Right Angle, Bulkhead Jack and Plug terminations
- Cable Types include Belden 1694A and 1855A
- Special Colour Coding, Labelling and Identification Symbols available



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CoaxVision™

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