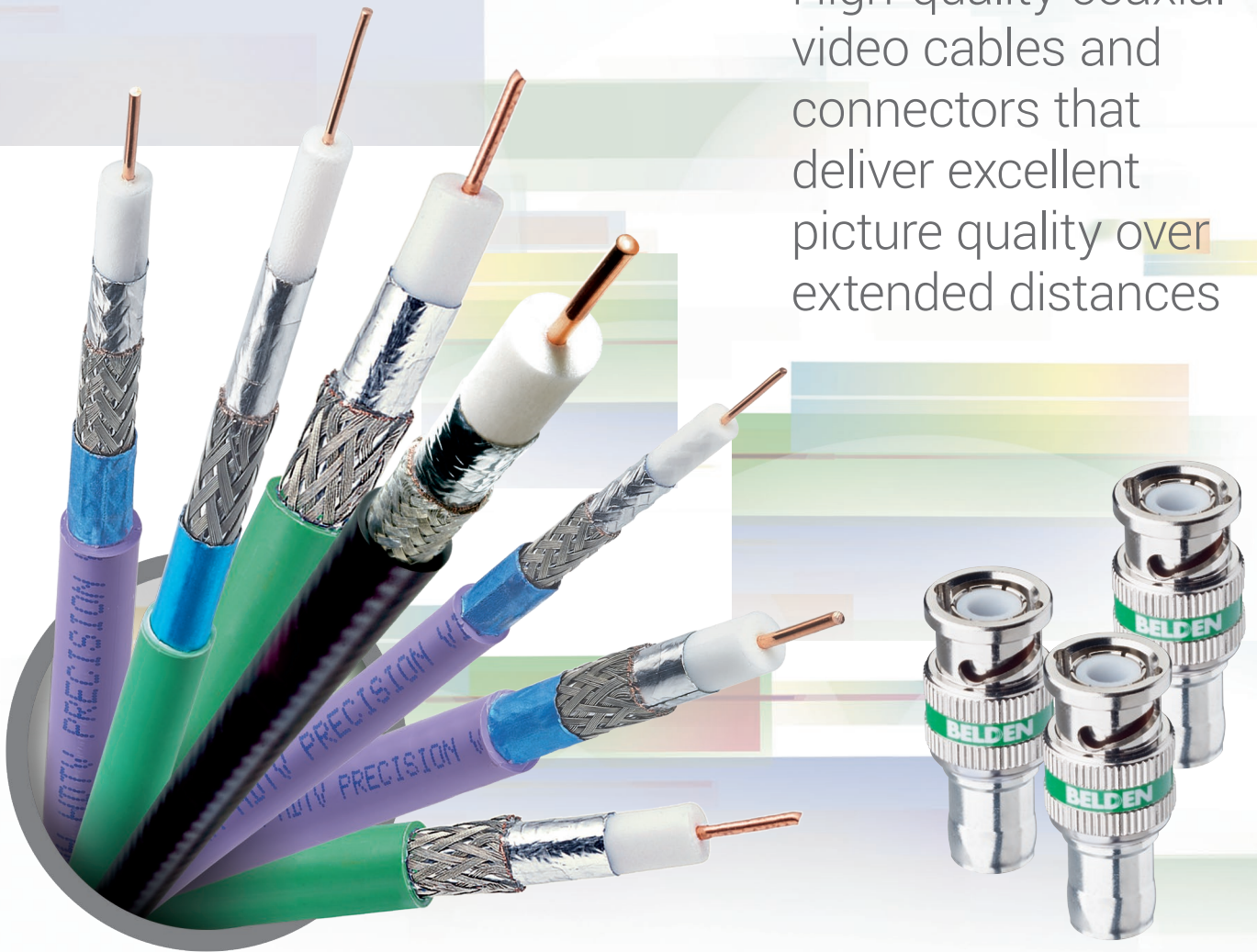


**Belden**

# Professional Video Cables and Connectors

High-quality coaxial  
video cables and  
connectors that  
deliver excellent  
picture quality over  
extended distances



**Be certain.  
Belden.**

Our End-to-End Expertise  
Your End-to-End Solution

# Belden Professional Video Cables

With a long-standing reputation for quality and reliability, Belden Professional Video Cables are engineered to meet the broadcast industry's increased demand for reliable HD video transmission.

Recommended by manufacturers of professional broadcast equipment, Belden Professional Video Cables are the first choice of content providers striving to deliver flawless rich media content like HD or 3G video in production and live streaming applications. That's why these cables are setting the standard in HD applications around the world, from major sporting events to daily newscasts.

Belden Professional Video Cables are available in three different variations to help professional broadcasters achieve excellent picture quality and consistency in a variety of current and emerging applications. With guaranteed return loss performance, these coaxial video cables offer extended transmission distances and future proof capabilities for complete peace of mind. They are physically robust for maximum reliability and feature simple easy-to-use connectivity for faster, easier installations and cost savings.

## **Belden Professional Video Cables Deliver:**

- Beyond standards performance for longer lengths
- Superior HD picture quality and consistency
- Speed and ease of installation for labor savings
- Robust construction and headroom for installable performance



Our End-to-End Expertise.  
Your End-to-End Solution.



# Classics Pro Video Cables

With live broadcasters around the world now adopting HD formats that operate at higher frequencies and deliver 3G video, performance and reliability of critical video circuits is vital for ensuring a crisp, clear HD picture.

Recognized and recommended throughout the broadcast industry by equipment manufacturers, integrators and end users, Belden Classics Pro precision video cables set the standard in HD applications around the world. From major sporting events to daily news broadcasts, these cables are more than ready for 1080p.

## A Proven Track Record of Performance

With Belden being the first to introduce digital coax for SMPTE-compliant SDI interfaces, the Classics Pro range of cables has a proven 25-year track record of quality and consistency. When these video cables are specified, broadcasters know there will be no cabling issues and the system will work.

Exceeds industry standards with longer lengths possible for 3G delivery

- Measured at 75 Ohms to 4.5 GHz for 1080p/50 HD applications
- Measured at 75 Ohms to 6 GHz for UHDTV1 and UHDTV2 applications
- Better return loss, attenuation and impedance deliver true HD performance

## For a Wide Range of Environments

Available in halogen-free, direct burial and UV-resistant, Belden Classics Pro cables come in several sizes, types and colors to support a wide range of distances and applications – from bundled versions and long distance options, to smaller short distance cables that save space and weight.

From the studio and the stage, to the outdoor broadcasting vehicles, Belden Installable Performance™ ensures that Classics Pro video cables are robust to stand up to the rigors of all broadcasting environments.



# Easy Connect Pro Video Cables

Often there is a need for cost-effective video circuits that maintain superior performance and offer fast easy termination, allowing broadcast studios to get up and running as quickly as possible.

Ideal in 1080p/50 applications, Easy Connect Pro cables offer superior performance while enabling faster broadcast deployments.



## Competitive Performance

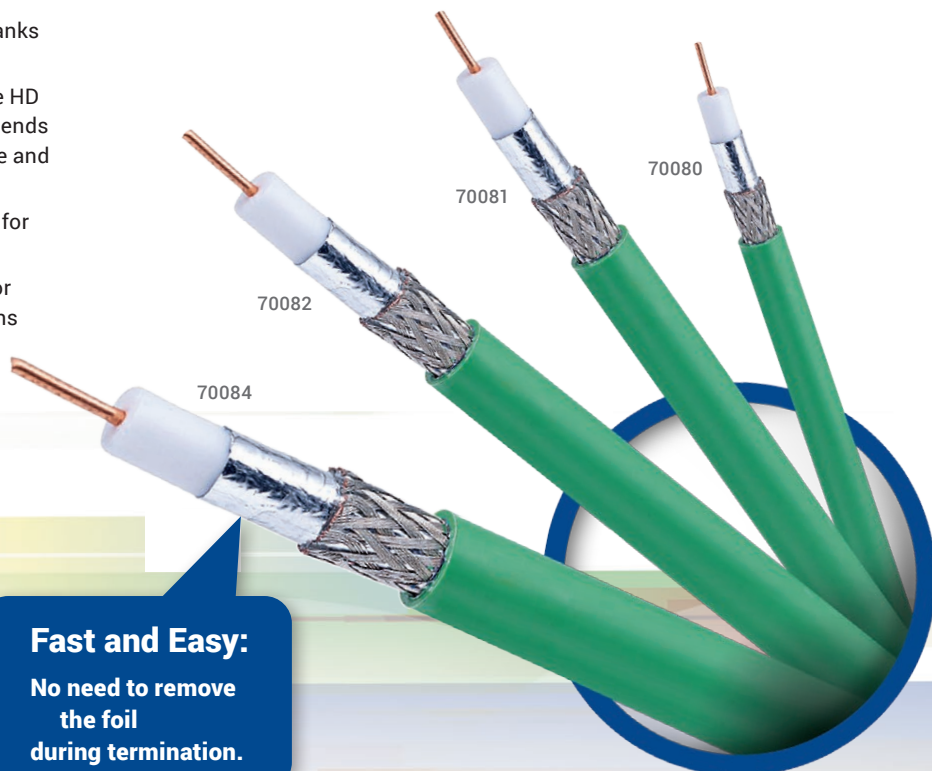
Ideal for use in 1080p/50 applications, Belden Easy Connect Pro cables feature our Duobond® II shield technology with laminated shielding tape and an extra layer of heat-sensitive adhesive that bonds the foil shield to the dielectric core for 100% coverage and superior shield protection against interference.

- Easy, faster cable termination thanks to Duobond® II Technology
- Compatibility with Belden 1-piece HD compression connectors at both ends saves significant installation time and costs.
- Measured at 75 Ohms to 4.5 GHz for 1080p/50 HD applications
- Measured at 75 Ohms to 6 GHz for UHDTV1 and UHDTV2 applications

## Faster Deployment

The bonded foil construction of the Easy Connect Pro cables offers quick and easy terminations for faster broadcast deployments while maintaining optimum tensile strength.

UV-resistant for indoor and outdoor use, Easy Connect Pro cables are available in standard low-smoke, no halogen versions or to meet IEC 60332-3-24 standards for flame spread. They come in 14, 18, 20 and 22 AWG sizes for a variety of distances.



**Fast and Easy:**  
No need to remove  
the foil  
during termination.

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Your End-to-End Solution.



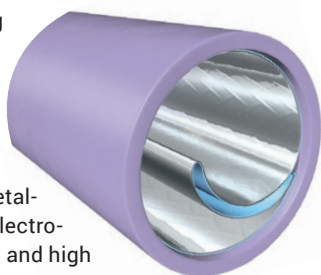
# EMC Pro Video Cables

With radio frequency signal quality declining by roughly one decibel per year as the spectrum becomes increasingly crowded, cancelling out electro-magnetic noise from external sources has become more vital than ever.

For use in high-quality analog and digital video circuits, Belden EMC Pro range of low loss video cables is the first and only in the professional broadcast market with Class A+ screening performance.

## Exclusive Duobond Plus® Shielding

Engineered for high screening attenuation and low transfer impedance, EMC Pro cables feature Belden's innovative Duobond Plus® design – an outer foil layer with a unique shorting fold that provides metal-to-metal contact to improve electro-magnetic compatibility (EMC) and high frequency performance.



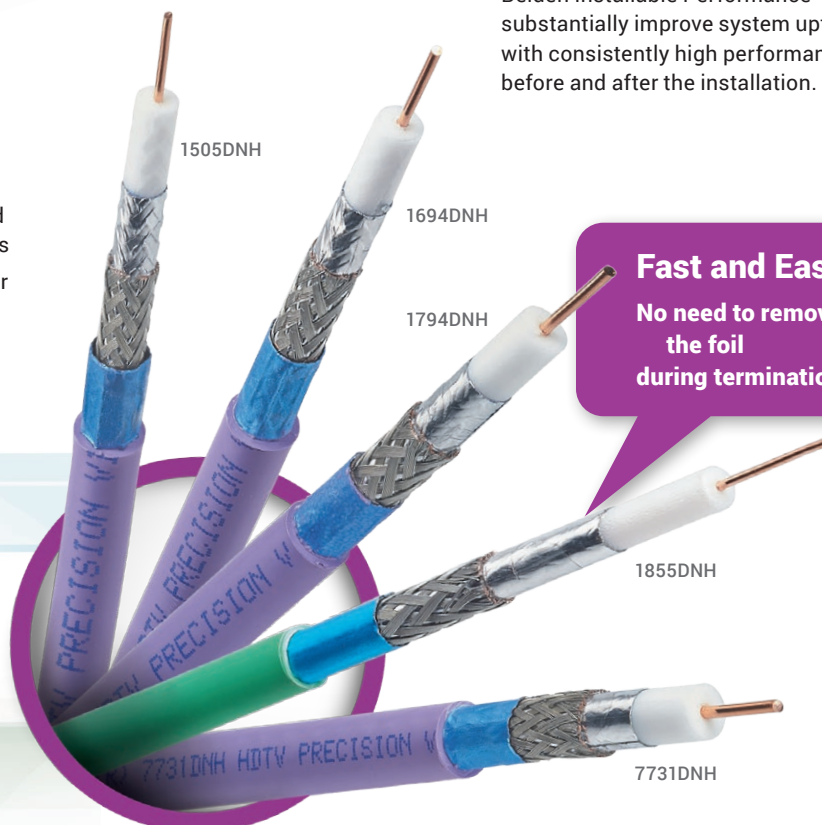
- Allows for higher frequencies and increased speeds to support the latest HD applications
- Delivers the effects of a solid metal conduit to cancel out noise from external sources
- Prevents slot openings in the shield to eliminate signal egress or ingress
- Measured at 75 Ohms to 4.5 GHz for 1080p/50 HD applications
- Measured at 75 Ohms to 6 GHz for UHDTV1 and UHDTV2 applications

## Cost Savings and ROI

Belden EMC Pro video cables are easy to deploy with simple connectivity. Compatibility with Belden 1-piece HD compression connectors at both ends saves significant installation time and costs.

Physically robust for a longer life span, EMC Pro cables offer improved ROI and superior future proof capabilities. With Belden Installable Performance™, they substantially improve system uptime with consistently high performance both before and after the installation.

**Fast and Easy:**  
No need to remove the foil during termination.



EMC  
Pro  
Range



# Belden's High-Definition BNC Broadcast Connectors

For professional broadcast video circuits, connectors should be invisible to the signal performance. Designed specifically for Belden Professional Video Cables, our HD Brilliance Connectors maximize broadcast signal integrity with unsurpassed return loss that exceeds SMPTE standards, providing excellent headroom and true 75 ohm performance for those instances when Broadcasters need to push the limits.



Belden HD Brilliance Connectors also offer the fastest, easiest installation in the broadcast industry and feature a durable brass construction with patented compression rings that offer excellent holding force.

- Superior return loss through 4.5 GHz
- Holding force exceeding 45 kg, depending on cable type
- Fast installation with 1-piece design
- Easy identification and installation



**With three HD Brilliance Connector platforms to choose from, it's easy to find the right solution for your professional broadcast needs.**

## **BEST** – 1-Piece Locking HD Brilliance BNC Compression Connectors

Our 1-piece locking HD Brilliance connectors feature a patent-pending locking design with a screwlock collar to physically “lock” the bayonet nut of the BNC in position. This limits movement of the BNC head and creates coaxial alignment from the cable through the BNC center pin, delivering superior return loss performance.

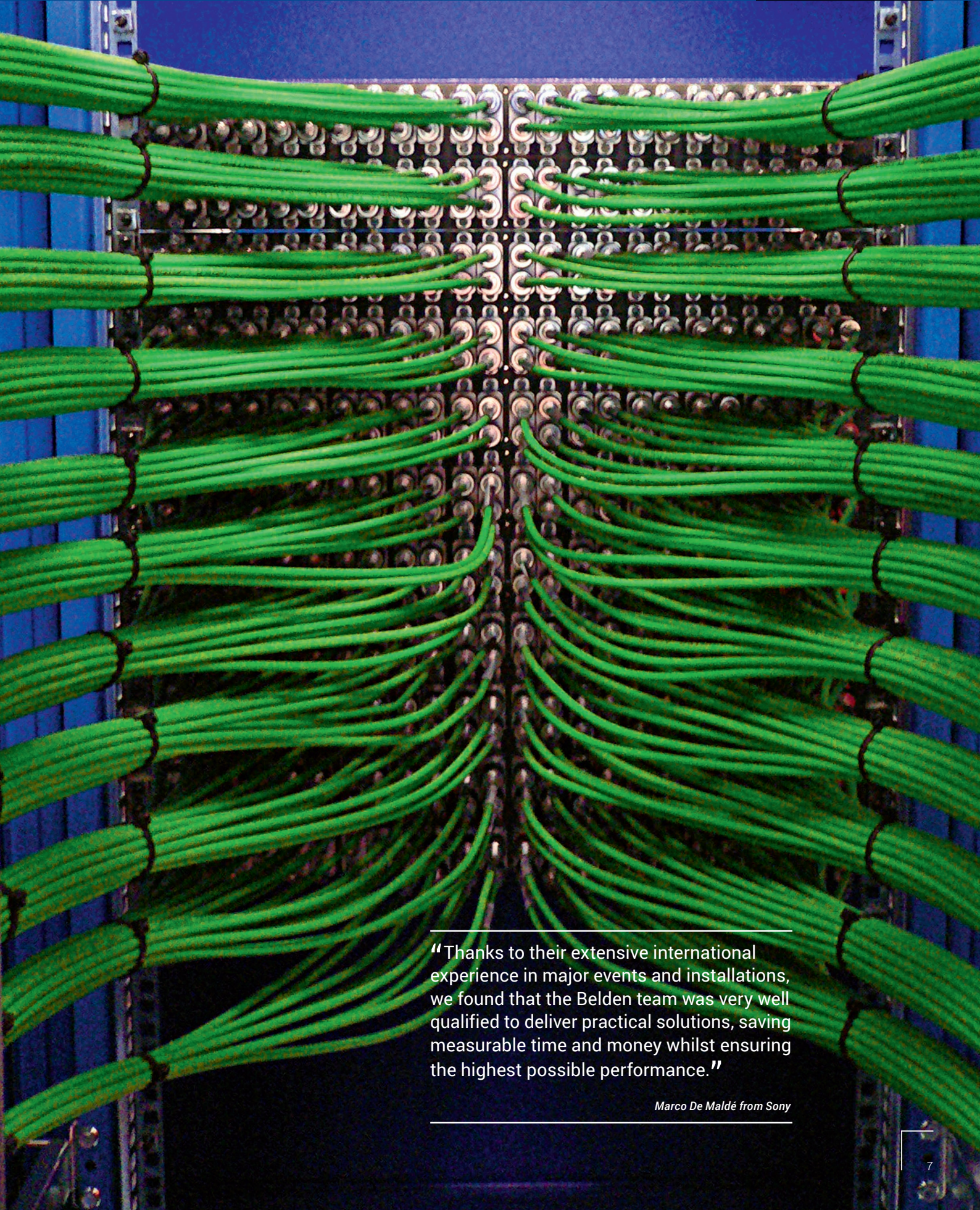
## **BETTER** – 1-Piece HD Brilliance BNC Compression Connectors

The 1-piece design simplifies and speeds the installation by eliminating loose pins and sleeves. This allows for repeatable and consistent installations every time while delivering return loss performance on par with more time consuming, traditional 3-piece designs.

## **GOOD** – 3-Piece HD Brilliance BNC Crimp Connectors

The traditional 3-piece design many have come to know over the years, enhanced to fit perfectly with Belden Professional Video Cables, for strong and dependable signal delivery and performance.

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Your End-to-End Solution.



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“Thanks to their extensive international experience in major events and installations, we found that the Belden team was very well qualified to deliver practical solutions, saving measurable time and money whilst ensuring the highest possible performance.”

*Marco De Maldé from Sony*

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# Belden Advantages

## Superior Quality



Like all our products, Belden Professional Video Cables are designed and manufactured to strict quality standards, ensuring consistently high performance that is true to specification. And while some only spot check, Belden tests every meter of cable as it is produced. To ensure best-in-class performance, each and every spool of Belden's Professional Video Cable is 100% sweep tested before it leaves our facility.

### Installable Performance™

The specified performance of a cable should hold true even after it's installed, but when cables are pulled, bent or crushed during installation, its physical properties can change and degrade the electrical performance. Careful attention to the following attributes ensures that cable a customer receives from Belden will meet performance specifications after installation.

**That's what we call Installable Performance™**



Sony Selects Belden to Meet SKY Italia's HD Needs



Belden Prepares Spartak's New Stadium to Broadcast 2018 World Cup

- **Conductor Adhesion** – With low conductor adhesion, the rigors of installation can break the bond between conductor and insulation, potentially causing the center pin of the BNC connector to be pushed out of the casing. Belden uses a skin/foam insulation process that ensures a high degree of conductor adhesion, and all cables are tested for conductor adhesion to ensure performance.
- **Crush Resistance** – Foam dielectrics are softer than their solid counter parts, and improper handling can cause crushing and deformation of the dielectric, thereby changing the impedance and causing return loss. Belden uses a special proprietary formulation that is more crush-resistant than standard foam polyethylene, making it far less prone to deformation.
- **Return Loss Headroom** – To maintain the SMPTE minimum level of 15 dB for return loss after the rigors of installation, cables must start out with plenty of headroom. Belden's guaranteed minimum level of 21 dB for return loss delivers 6 dB of return loss headroom to account for potential inconsistencies and bad terminations or improper patch bay connections that can also degrade RL.



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### Belden (Limited) Lifetime Warranty

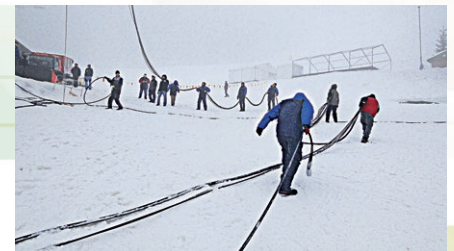
When Belden BNC High-Definition Broadcast Brilliance® Connectors are used in conjunction with Belden Professional Video Cables in fixed installations by an approved and certified Belden partner, Belden guarantees that these products will be free from manufacturing and/or material defects during the useable life (maximum 25 years) of the installation.



Belden Speeds Norwegian Broadcasting Corporation's Upgrade to HD



2014 World Junior Alpine Skiing Championships



### Secure Supply Chain

As a leader in signal transmission solutions, Belden does not just deliver products of the highest quality; it also meets the needs of its customers around the globe through secure and seamless supply chains. To provide you with our best at all times, our select group of Preferred Partners successfully supply, deploy and optimize Belden solutions for your mission critical broadcast applications.

- Secure supply chain sourced direct from the manufacturer and delivered to your doorstep
- Local access and high availability of Belden inventory
- Fully manufacturer-backed warranty on genuine Belden products
- Trusted Partner with the technical competence to select the right solution for your needs
- World-class pre- and post-sales support by trained and certified service providers

# Belden Professional Video Cables and

			SD			HD		2K		4K		4K	
Data Rate			143 Mb/s	177 Mb/s	270 Mb/s	1.5 Gb/s		3.0 Gb/s		3 Gb/s Single Link, 6 Gb/s Dual Link, 12 Gb/s Quad Link, 24 Gb/s Octa Link (3 Gb/s per link)	6 Gb/s Single Link, 12 Gb/s Dual Link, 24 Gb/s Quad Link (6 Gb/s per link)	12 Gb/s Single Link, 24 Gb/s Dual Link (12 Gb/s per Link)	
Application			Composite NTSC	Composite PAL	Component SDI	720p-1080i		1080p		UHDTV1, UHDTV2		UHDTV1, UHDTV2	
Spec			SMPTE 259M	ITU-R BT.601	SMPTE 259M	SMPTE 292M		SMPTE 424M		SMPTE ST 425, ST 2081, ST 2082, ST 2083		SMPTE ST 2081, ST 2082, ST 2083	
½ clock in MHz			71.5	88.5	135	750		1500		1500	3000	6000	
Max. Attenuation			30	30	30	20		20		40	40	40	
Product Type	Product Range	Product Number				Standard	Independent Testing	Standard	Independent Testing (Trinix Router)				
0.3/1.4	Belden Classics Pro	179DT	165	152	125	35	40	25	–	49	–	–	
0.4/1.9	Belden Classics Pro	70078	233	208	169	47	–	33	–	66	46	–	
0.6/2.6	Belden Classics Pro	1855A	312	233	233	65	80	45	78	91	–	–	
0.6/2.8	Belden Classics Pro	1855E	349	316	261	74	100	52	–	103	71	–	
0.6/2.8	Belden Easy Connect Pro	70080	349	316	261	74	100	52	–	103	71	–	
0.6/2.8	Belden EMC Pro	1855DNH	349	316	261	74	100	52	–	103	71	–	
0.8/3.7	Belden Classics Pro	1505F	358	323	256	67	90	45	–	90	–	–	
0.8/3.7	Belden Classics Pro	1505A	439	401	330	92	120	64	–	127	87	–	
0.8/3.7	Belden Easy Connect Pro	70081	439	401	330	92	120	64	–	127	87	–	
0.8/3.7	Belden EMC Pro	1505DNH	439	401	330	92	120	64	–	127	87	–	
1.0/4.6	Belden Classics Pro	1694F	445	400	319	85	110	57	–	115	–	–	
1.0/4.6	Belden Classics Pro	1694A	546	503	408	113	140	78	140	155	105	–	
1.0/4.6	Belden Easy Connect Pro	70082	546	503	408	113	140	78	140	155	105	–	
1.0/4.6	Belden EMC Pro	1694DNH	546	503	408	113	140	78	140	155	105	–	
1.3/5.7	Belden Classics Pro	1794A	694	633	519	143	200	97	–	194	132	–	
1.3/5.7	Belden EMC Pro	1794DNH	694	633	519	143	200	97	–	194	132	–	
1.3/5.7	Belden EMC Pro	4794R	687	635	523	146	200	100	–	201	137	93	
1.6/7.2	Belden Classics Pro	7731A	851	796	637	177	230	119	188	238	161	–	
1.6/7.2	Belden Easy Connect Pro	70084	851	796	637	177	230	119	188	238	161	–	
1.6/7.2	Belden EMC Pro	7731DNH	851	796	637	177	230	119	188	238	161	–	

- All cables are available in 10 colors:
  - BLACK
  - BLUE
  - BROWN
  - GRAY
  - GREEN
  - ORANGE
  - PURPLE
  - RED
  - WHITE
  - YELLOW

- Flex versions of Belden Classics Pro range feature a stranded conductor and double braid for more flexibility.

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# Connectors

Halogen-Free		Advanced EMC	Duobond® Foil	Bundled Versions	BNC Connectors				Tools			
(IEC6332-1) Single Flame Test	(IEC6332-3-25) Bundled Flame Test				Locking 1-Piece	1-Piece	3-Piece	Boot for 1-Piece	Strip Tool for 1-Piece	Strip Tool for 3-Piece	Crimp Tool for 1-Piece	Crimp Tool for 3-Piece
179DTNH	–	–	–	✓	179DTBHDL	179DTBHD1	179DTBHD3	–	LDT-MINI-1	BB3PST	CPLCRBC-BR	BB3PHCT
70078NH	70078CH	–	–	–	–	70078CHBHD1	–	–	LDT-MINI-1	–	CPLCRBC-BR	–
–	–	–	–	✓	1855ABHDL	1855ABHD1	1855ABHD3	SLS-RGB-color	LDT-MINI	BB3PST	CPLCRBC-BR	BB3PHCT
1855ENH	1855ECH	–	–	✓	1855ABHDL	1855ABHD1	1855ABHD3-ENH	SLS-RGB-color	LDT-MINI	BB3PST	CPLCRBC-BR	BB3PHCT
70080NH	70080CH	–	✓	–	1855ABHDL	1855ABHD1	1855ABHD3-ENH	SLS-RGB-color	LDT-MINI	BB3PST	CPLCRBC-BR	BB3PHCT
✓	✓	✓	✓	–	1855ABHDL	1855ABHD1	1855ABHD3-ENH	SLS-RGB-color	LDT-MINI	BB3PST	CPLCRBC-BR	BB3PHCT
–	–	–	–	–	1505ABHDL*	1505ABHD1*	1505ABHD3	SLS-59/6-color	LDT596-250	BB3PST	CPLCRBC-BR	BB3PHCT
1505ANH	1505ANH	–	–	✓	1505ABHDL	1505ABHD1	1505ABHD3	SLS-59/6-color	LDT596-250	BB3PST	CPLCRBC-BR	BB3PHCT
70081NH	70081CH	–	✓	–	1505ABHDL	1505ABHD1	1505ABHD3	SLS-59/6-color	LDT596-250	BB3PST	CPLCRBC-BR	BB3PHCT
✓	✓	✓	✓	–	1505ABHDL	1505ABHD1	1505ABHD3	SLS-59/6-color	LDT596-250	BB3PST	CPLCRBC-BR	BB3PHCT
–	–	–	–	–	1694ABHDL*	1694ABHD1*	1694ABHD3	SLS-59/6-color	LDT596-250	BB3PST	CPLCRBC-BR	BB3PHCT
1694ANH	1694ANH	–	–	✓	1694ABHDL	1694ABHD1	1694ABHD3	SLS-59/6-color	LDT596-250	BB3PST	CPLCRBC-BR	BB3PHCT
70082NH	70082CH	–	✓	–	1694ABHDL	1694ABHD1	1694ABHD3	SLS-59/6-color	LDT596-250	BB3PST	CPLCRBC-BR	BB3PHCT
✓	✓	✓	✓	–	1694ABHDL	1694ABHD1	1694ABHD3	SLS-59/6-color	LDT596-250	BB3PST	CPLCRBC-BR	BB3PHCT
–	–	✓	–	–	–	1794ABHD1	–	–	SDT7-250	–	CPLCRBC1794	–
✓	✓	✓	✓	–	–	1794ABHD1	–	–	SDT7-250	–	CPLCRBC1794	–
✓	✓	✓	✓	–	–	1794ABHD1	–	–	SDT7-250	–	CPLCRBC1794	–
7731ANH	7731ANH	–	–	–	–	FSNS11QBNC	–	–	SDT11-250	–	SNSUNI	–
70084NH	70084CH	–	✓	–	–	FSNS11QBNC	–	–	SDT11-250	–	SNSUNI	–
✓	✓	✓	✓	–	–	FSNS11QBNC	–	–	SDT11-250	–	SNSUNI	–

## SMPTTE standards for Serial Digital Interface:

<b>1989:</b>	SD-SDI (SMPTE 259M)	143, 177, 270, 360 Mbit/s
<b>1989:</b>	ED-SDI (SMPTE 344M)	540 Mbit/s
<b>1998:</b>	HD-SDI (SMPTE 292M)	1.485 Gbit/s
<b>2002:</b>	Dual Link HD-SDI (SMPTE 372M)	2.97 Gbit/s
<b>2006:</b>	3G-SDI (SMPTE 424M)	2.97 Gbit/s
<b>2015:</b>	6G UHD-SDI (SMPTE ST-2081)	6 Gbit/s [QFHD]
<b>2016:</b>	12G UHD-SDI (SMPTE ST-2082)	12 Gbit/s [4K]
<b>Future:</b>	24G UHD-SDI (SMPTE ST-2083)	24 Gbit/s [8K]

\* Attention to keep the (compacted) stranded conductor round, when inserting into center pin

## GLOBAL LOCATIONS

For more information, please visit us at:  
[www.beldensolutions.com](http://www.beldensolutions.com)



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you stay  
in touch.

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