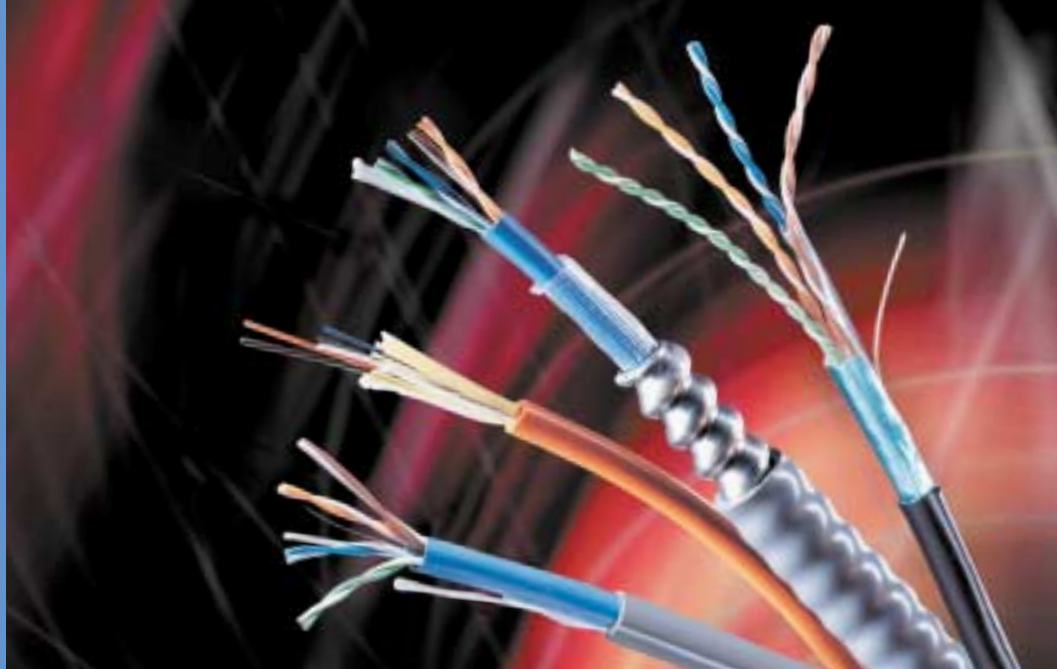


Peak network efficiency
and reliability are achieved
with Belden's DataTuff
Industrial Ethernet cables.
Bonded-Pair versions also
offer the unique advantage
of Installable Performance.™



DataTuff® Category 6 and 5e Ethernet Cables Are Made for Tough Industrial Environments

The reliability of your Industrial Ethernet network depends on the cable infrastructure: Data transmission errors can lead to interruptions in critical control functions resulting in lost production time and even safety issues. To help ensure optimum factory floor performance, Belden has consistently built both quality and reliability into each cable it manufactures. From the introduction and dominant call-out of Belden's Blue Hose® cables, to our present line of DataTuff Category 6 and 5e copper cables and TrayOptic® fiber optic Industrial Ethernet cables, Belden has always supplied the cable you need, when you need it.

And because we have been at the forefront of the industrial marketplace for decades and understand the rigors of the industrial environment, we also have the unique ability to provide top performing cables — regardless of the work environment. So, even if your cabling system is exposed to the following conditions you can turn to Belden for the right solution:

- > Oil and sunlight
- > Temperature variations
- > Abrasion and crushing
- > Presence of EMI/RFI (electromagnetic interference or radio frequency interference)

Only DataTuff Cables with Belden's Patented Bonded-Pair Technology Offer The Benefit of Installable Performance

Many versions of DataTuff cables feature Belden's patented Bonded-Pair technology. This construction feature affixes the conductors of the cable pairs along their longitudinal axes to ensure that no performance-robbing gaps can develop between the conductor pairs. Since no gaps can occur and the conductor-to-conductor spacing is always

uniform, the cable offers excellent and consistently reliable electrical performance — even after the cable has been subjected to the bending, pulling and twisting that is inherent in the installation process. Belden calls this unique after-installation performance capability Installable Performance.

TrayOptic Cables Feature Laser Certified Fiber (LCF™) and Water-Blocking Capability

When the installation demands the combination of sophisticated fiber optic technology and rugged durability, turn to Belden's line of TrayOptic indoor/outdoor fiber optic cables — now upgraded to include a water-blocking agent. All TrayOptic products also utilize Laser Certified Fiber to handle Gigabit Ethernet light sources and any expanded bandwidth requirements. For information on Belden's full line of BelOptix® fiber optic cables, including TrayOptic cables, contact Belden at 1-800-BELDEN-4 or visit www.belden.com.

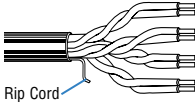
Quality You Can Trust

All Belden products are manufactured to the industry's highest standards of quality, utilizing the most advanced equipment, systems, controls and processes. In fact, Belden has long been a pioneer in production processes, such as statistical process control (SPC), that have become industry standards. And Belden was the first major designer and manufacturer of cable products to achieve ISO 9000 registration for the majority of its domestic and overseas facilities.

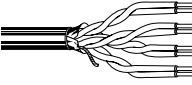
Belden Quality Means Uptime and Superior Safety Performance

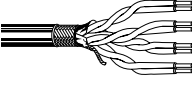
Today's critical industrial networking applications can't afford data transmission errors that can cause downtime, delays, and even safety concerns. Belden quality gives you the performance and reliability you need on a day-by-day basis.



Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nom. Insulated Conductor OD		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)			
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm										
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC • Rip Cord • See Color Code Chart																					
Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																					
	7923A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	28.0	12.7	.038	.97	.230	5.94	1	2.0	65.3	63.3	60.8	100±12	20.0			
				2000	609.6	54.0	24.5	x	x			4	4.0	56.3	52.3	48.7	100±12	23.0			
								.075	1.91			8	5.7	51.8	46.1	42.7	100±12	24.5			
												10	6.4	50.3	43.9	40.8	100±12	25.0			
												16	8.1	47.3	39.1	36.7	100±12	25.0			
												25	10.3	44.3	34.1	32.8	100±15	24.3			
												31.25	11.6	42.9	31.3	30.9	100±15	23.6			
												62.5	16.8	38.4	21.6	24.8	100±15	21.5			
												100	21.7	35.3	17.1	20.8	100±15	20.1			
												155	27.7	32.5	4.7	16.9	100±18	19.0			
												200	32.0	30.8	3.0	14.7	100±18	19.0			
												250	36.4	29.3	—	12.8	100±20	18.0			
												350	44.3	27.2	—	9.9	100±22	17.0			

RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126
Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e

Cat 5e • 24 AWG Bonded-Pairs Solid BC • Overall Beldfoil® Shield • 24 AWG Stranded TC Drain Wire • See Color Code Chart																		
Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																		
	7929A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	36.0	16.3	.045	1.14	.265	6.73	1	2.0	62.3	60.3	60.8	100±15	20.0
				2000	609.6	70.0	31.8	x	x			4	4.1	53.3	49.2	48.7	100±15	23.0
								.088	2.24			10	6.5	47.3	41.8	40.8	100±15	25.0
												16	8.2	44.3	36.0	36.7	100±15	25.0
												31.25	11.7	39.9	28.2	30.9	100±15	23.6
												62.5	17.0	35.4	18.4	24.8	100±15	21.5
												100	22.0	32.3	10.3	20.8	100±15	20.1
												200	32.4	27.8	1.0	14.7	100±25	15.0
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126 Shield is bonded to jacket inner wall for electrical stability. • Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e																		

Cat 5e • 24 AWG Bonded-Pairs Solid BC • Overall Beldfoil + 70% TC Braid • 24 AWG Solid Spiral Drain Wire • See Color Code Chart																			
Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																			
	7921A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	55.0	24.9	.047	1.19	.330	8.38	1	2.0	62.3	60.3	60.8	100±15	20.0	
				2000	609.6	108.0	49.0	x	x	4	4.1	53.3	49.2	48.7	100±15	23.0			
								.091	2.31	10	6.5	47.3	41.8	40.8	100±15	25.0			
										16	8.2	44.3	36.0	36.7	100±15	25.0			
										31.25	11.7	39.9	28.2	30.9	100±15	23.6			
										62.5	17.0	35.4	18.4	24.8	100±15	21.5			
										100	22.0	32.3	10.3	20.8	100±15	20.1			
-25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126 • Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e																			

Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC • Rip Cord • See Color Code Chart												
Non-Plenum • Polyolefin Insulation • PVC Inner Jacket • .035" Industrial Grade Black or Gray PVC Outer Jacket												
Upjacketed	11700A	NEC:	4	1000	304.8	39.0	17.7	.038	.97	.285	7.24	(Same as 7923A above)
		CMR		3000	914.4	117.0	53.2	x	x			
		CEC:						.075	1.91			
		CMR FT4										
										Nominal Core OD:		
										.200	5.08	
Rip Cord												
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126 • Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e • Outer jacket is sunlight- and oil-resistant.												

Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC • Mylar® Wrap • Rip Cord • See Color Code Chart												
Non-Plenum • Polyolefin Insulation • PVC Inner Jacket • .045" Industrial Grade Black or Gray PVC Outer Jacket												
Interlocked AL Armor 	121700A	NEC:	4	1000	304.8	155.0	70.5	.038	.97	.530	13.46	(Same as 7923A above)
		CMG:		3000	914.4	465.0	211.4	x	x			
		CEC:						.075	1.91			
		HL										
		CMG FT4										
										Nominal Core OD:		
										.200	5.08	
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126 • Jacket sequentially marked at 1 meter intervals. • Verified to TIA/EIA-568-B.2, Category 5e • Outer jacket is sunlight- and oil-resistant.												

Enhanced Cat 5e • 24 AWG Bonded-Pairs Stranded TC (7x32) • See Color Code Chart				
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Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nom. Insulated Conductor OD		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm							
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC • See Color Code Chart																		
FEP Insulation • Sunlight-, Oil- and Gas-resistant Black FEP Jacket																		
High & Low Temp Oil Res I & II Gas Res	7928A new	NEC: Limited Combustible FHC 25/50 CMP CEC: CMP FT6	4	1000	304.8	24.0	10.9	.036 x .071	.91 x 1.80	.187	4.75	1 4 8 10 16 25 31.25 62.5 100 155 200 250 350	2.0 4.0 5.7 6.4 8.1 10.3 11.6 16.8 21.7 27.7 32.0 36.4 44.3	65.3 56.3 51.8 50.3 47.3 44.3 42.9 38.4 35.3 32.5 30.8 29.3 27.2	63.3 52.3 46.1 43.9 39.1 34.1 31.3 21.6 17.1 4.7 3.0 — —	60.8 48.7 42.7 40.8 36.7 32.8 30.9 24.8 20.8 16.9 14.7 12.8 9.9	100±12 100±12 100±12 100±12 100±12 100±15 100±15 100±15 100±15 100±18 100±18 100±20 100±22	20.0 23.0 24.5 25.0 25.0 24.3 23.6 21.5 20.1 19.0 19.0 18.0 17.0
RJ-45 Compatible • -70°C • U.S. Patents 5,606,151 and 5,734,126 Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e																		

Cat 5e • 24 AWG Solid BC • Twisted Pairs • Rip Cord • See Color Code Chart

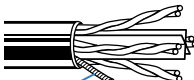
Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																		
 Rip Cord	7918A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	28.0	12.7	.037	.94	.230	5.84	1	2.0	62.3	60.3	60.8	100±15	20.0
				2000	609.6	54.0	24.5					4	4.1	53.3	49.2	48.7	100±15	23.0
												10	6.5	47.3	41.8	40.8	100±15	25.0
												16	8.2	44.3	36.0	36.7	100±15	25.0
												31.25	11.7	39.9	28.2	30.9	100±15	23.6
												62.5	17.0	35.4	18.4	24.8	100±15	21.5
												100	22.0	32.3	10.3	20.8	100±15	20.1
												200	32.4	27.8	1.0	14.7	100±25	15.0
RJ-45 Compatible • -25°C Cold Bend • Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e																		

Cat 5e • 24 AWG Solid BC • Twisted Pairs • Overall Beldfoil® Shield • 24 AWG Stranded TC Drain Wire • See Color Code Chart

Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																		
	7919A new	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	36.0	16.3	.042	1.07	.265	6.73	(Same as 7918A above)						
				2000	609.6	70.0	31.8											

RJ-45 Compatible • -25°C Cold Bend • Shield is bonded to jacket inner wall for electrical stability. • Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2, Category 5e

Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC • Patented E-Spline Center Member • Rip Cord • See Color Code Chart

Non-Plenum • Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																					
 Rip Cord	7927A new	NEC: CMR CEC: CMR FT4	4	1000	304.8	44.0	20.0	.042	1.07	.251	6.38	1	1.9	80.3	78.5	70.8	100±12	20.0			
				2000	609.6	88.0	39.9			x	x	10	5.7	65.3	59.6	50.8	100±12	25.0			
										.339	8.61	31.25	10.2	57.9	47.7	40.9	100±15	25.0			
												62.5	14.7	53.4	38.7	34.9	100±15	25.0			
												100	18.9	50.3	31.4	30.8	100±15	25.0			
												155	23.9	47.5	23.5	27.0	100±15	22.8			
												200	27.5	45.8	18.3	24.8	100±15	21.7			
												250	31.2	44.3	13.2	22.8	100±20	20.5			
												350	37.7	40.2	4.5	19.9	100±22	19.8			
												400	40.6	39.3	0.6	18.8	100±22	19.5			
												500	46.2	37.8	>0*	16.8	100±22	18.4			
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151; 5,734,126; 5,789,711 and 6,297,454-B1																					
Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2-1, Category 6																					
*PSUM ACR >0 is guaranteed to 460 MHz.																					
												550	48.8	37.2	—	16.0	100±22	18.0			
												600	51.4	36.6	—	15.2	100±22	17.6			

Cat 6 • 23 AWG Bonded-Pairs Solid BC • See Color Code Chart

FEP Insulation • Sunlight-, Oil- and Gas-resistant Black FEP Jacket																				
High & Low Temp Oil Res I & II Gas Res 	7931A new	NEC: Limited Combustible FHC 25/50 CMP CEC: CMP FT6	4	1000	304.8	35.0	15.9	.038	.97	.214	5.44	1	2.0	72.3	70.3	64.8	100±15	20.0		
														10	6.0	57.3	51.3	44.8	100±15	25.0
														20	8.5	52.8	44.3	38.7	100±15	25.0
														31.25	10.7	49.9	39.2	34.9	100±15	23.6
														62.5	15.4	45.4	30.0	28.8	100±15	21.5
														100	19.8	42.3	22.5	24.8	100±15	20.1
RJ-45 Compatible • -70°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126																				
Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2-1, Category 6																				
												200	29.0	37.8	8.8	18.7	100±22	18.0		
												250	32.8	36.3	3.5	16.8	100±32	17.3		

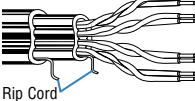
RJ-45 Compatible • -70°C Cold Bend • U.S. Patents 5,606,151 and 5,734,126
Jacket sequentially marked at 2 ft. intervals. • Third party verified to TIA/EIA-568-B.2-1, Category 6

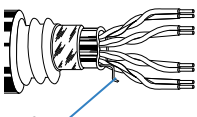
ACR = Attenuation Crosstalk Ratio • AL = Aluminum • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper

Color Codes

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown



Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nom. Insulated Conductor OD		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)		
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm									
Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC • Rip Cord • See Color Code Chart																				
Non-Plenum • Polyolefin Insulation • PVC Inner Jacket • .035" Industrial Grade Black or Gray PVC Outer Jacket																				
Upjacketed	11872A	NEC: CM CEC: CM FT1	4	1000	304.8	66.0	30.0	.041 x .080	1.04 x 2.03	.475 x .265	12.07 x 6.73	1 4 10 16 31.25 62.5 100 155	1.9 3.7 5.9 7.5 10.6 15.4 19.8 25.1	72.3 63.3 57.3 54.3 49.9 45.4 42.3 39.5	70 59 51 46 39 30 25 14	64.8 52.7 44.8 40.7 34.9 28.8 24.8 20.9	100±12 100±12 100±12 100±12 100±15 100±15 100±15 100±15	20.0 23.0 25.0 25.0 23.6 21.5 21.0 21.0		
											Nominal Core OD:	200 310 350 400*	29.0 31.7 39.8 43.0	37.9 34.9 34.2 33.3	10 — — —	18.7 14.9 13.9 12.7	100±15 100±20 100±22 100±25	21.0 18.0 17.0 14.0		
RJ-45 Compatible • -25°C Cold Bend • U.S. Patents 5,606,151, 5,734,126 and 5,821,467												.365	9.27							
Jacket sequentially marked at 2 ft. intervals. • Verified to TIA/EIA-568-B.2-1, Category 6												.165	4.19							
Value provided for information only.														500	49.0	31.8	—	10.8	100±25	14.0

Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC • Mylar® Wrap • Rip Cord • See Color Code Chart													
Non-Plenum • Polyolefin Insulation • PVC Inner Jacket • .055" Industrial Grade Black or Gray PVC Outer Jacket													
	121872A	NEC: CMG CEC: HL CMG FT4	4	1000	304.8	293.0	133.2	.041 x .080	1.04 x 2.03	.684	17.37	(Same as 11872A above)	
												Nominal Core OD:	
												.365	9.27
												x	x
												.165	4.19
RJ-45 Compatible • -40°C • U.S. Patents 5,606,151, 5,734,126 and 5,821,467 • Jacket sequentially marked at 1 meter intervals. • Verified to TIA/EIA-568-B.2-1, Category 6													
ACR = Attenuation Crosstalk Ratio • AL = Aluminum • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper													

DataTuff® Industrial Ethernet Cable Selection Guide

Part No.	Category	Shielding		Conductor		Installation	Environmental Issues				Industrial Grade Jacket		
		Unshielded	Shielded*	Solid	Stranded** Flexibility	Installation Stress Resistance†	Oil Resistance	UV Sunlight Resistance	Gasoline Resistance	HI/LO Temp	Heavy	Upjacket	Armored
7923A	Cat 5e	●		●		●	●	●			●		
7929A	Cat 5e		●	●		●	●	●			●		
7921A	Cat 5e		●	●		●	●	●			●		
11700A	Cat 5e	●		●		●	●	●				●	
121700A	Cat 5e	●		●		●	●	●					●
7924A	Cat 5e	●			●	●	●	●			●		
7928A	Cat 5e	●		●		●	●	●	●	●	●		
7918A	Cat 5e	●		●			●	●			●		
7919A	Cat 5e		●	●			●	●			●		
7927A	Cat 6	●		●		●	●	●			●		
7931A	Cat 6	●		●		●	●	●	●	●	●		
11872A	Cat 6	●		●		●						●	
121872A	Cat 6	●		●		●		●					●

* Shielded products are recommended for high-noise environments.

** Stranded products are recommended where more flexibility is needed.

† Products with Bonded-Pair technology provide Installable Performance™ advantages — refer to Belden Bonded-Pair Cable Bulletin #BP02.

This chart is meant to help the user select the right cable. Refer to cable specifications for details. See www.belden.com for fiber optic cable recommendations and technical data sheets.

Color Codes:

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

For More Information:

www.belden.com/ienp197.pdf

Belden Electronics Division Technical Support 1- 800-BELDEN-1 or 1- 800-BELDEN-3

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9