

### **GameChanger Cable**

Unshielded Twisted Pair Riser Rated - CMR

258310333

US Patent No. 10,453,589



#### 1.0 Scope

1.1 This cable consists of 4 pair solid bare copper; color-coded high density polyethylene (HDPE) insulation; overall FR-PVC jacket. RoHS-2 Compliant

#### 2.0 Construction

#### 2.1 Conductor

2.1.1 Material: Bare Copper

2.1.2 Construction: Solid 22 AWG

#### 2.2 Insulation

2.1.1 Material: Ultra Low-Loss Dielectric

2.1.2 O.D.: 0.044" nom

2.1.3 Color Code

Pair 1: White/Blue

Blue

Pair 2: White/Orange

Orange

Pair 3: White/Green

Green

Pair 4: White/Brown

Brown

#### 2.3 Core Assembly:

2.3.1 4 twisted pairs cabled together to form the main core.

2.4 Jacket

2.4.1 Material: FR-PVC

2.4.2 Wall Thickness: 0.050" nom.

2.4.3 OD: .238" nom

2.4.4 Color: Yellow with a white stripe

2.4.5 Ripcord under jacket

2.4.6 Markings: "PAIGE GAMECHANGER PATENT NO 10,453,589 (UL) CMR --- C(UL) FT4 E191596XX ROHS SUN RES" (Ascending/ Descending length marking)

#### 2.5 Electrical Properties

2.5.1 Conductor Resistance: ≤6.35Ω/100m2.5.2 Insulation Resistance: ≥5000MΩKm

(DC500V Charged 1 Min)

2.5.3 Voltage Endurance: DC 1500V/min

2.5.4 Mutual Capacitance: ≤7.0nF/100m

2.5.5 Core-Core Resistance Unbalance: ≤5%

#### 2.6 Temperature Rating

2.6.1 -20°C to +75°C

#### 2.7 Power over Ethernet Support

2.7.1 Class 1 - 8

#### 3.0 Weights and Dimensions

#### 3.1 Put Up

3.1.1 Length: 1,000 ft box

3.1.2 Weight: 29 lbs

3.1.3 Dimensions: 15" x 12" x 15"



<b>Frequency</b> MHz	<b>Return Loss</b> ≥dB/100m	Insertion Loss ≤dB/100m	<b>NEXT</b> ≥dB/100m	<b>PSNEXT</b> ≥dB/100m
1	24	1.5	90	87
10	31	4.8	75	72
20	32	7.0	64	61
100	26	16.1	50	47
200	24	23.2	48	45
250	21	26.1	47	44
350	20	31.4	45	42
500	19	38.3	43	40
550	18	40.4	42	39

<sup>\*</sup>Values above 250 MHz are for engineering information only

GameChanger cabling is designed specifically for transmitting Ethernet and can support all 8 classes of Power over Ethernet.

Maximum transmission distance exceeds Category Rating limits, but varies with equipment and settings used. If you have any questions about the maximum recommended distance for a particular installation, please contact us.

#### Connectors

GameChanger cabling works with most Cat 6 jacks and patch cords, but is only recommended to work with Platinum Tools ezEX44 or ezEX48 RJ45 modular plugs.

#### **Alternate Constructions**

GameChanger cabling is also available with:

- 258310333 Riser, Yellow w/ White Stripe
- 258300336 Plenum, Blue w/ White Stripe
- 258300310 Plenum, White
- 258330804 OSP, Black
- 258340804 OSP Shielded, Black
- 258802404 Class I, Division 1 Armored

#### **Frequently Asked Questions**

For FAQ and best practices please visit: www.paigedatacom.com/gamechanger

We want to hear from you!

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### **GameChanger Cable**

Unshielded Twisted Pair Plenum Rated - CMP

258300310

US Patent No. 10,453,589



#### 1.0 Scope

1.1 This cable consists of 4 pair solid bare copper; color-coded FEP insulation; overall LSFR-PVC jacket. RoHS-2 Compliant

#### 2.0 Construction

#### 2.1 Conductor

2.1.1 Material: Bare Copper

2.1.2 Construction: Solid 22 AWG

#### 2.2 Insulation

2.1.1 Material: Ultra Low-Loss Dielectric

2.1.2 O.D.: 0.044" nom

2.1.3 Color Code

Pair 1: White/Blue

Blue

Pair 2: White/Orange

Orange

Pair 3: White/Green

Greer

Pair 4: White/Brown

Brown

#### 2.3 Core Assembly:

2.3.1 4 twisted pairs cabled together to form the main core.

#### 2.4 Jacket

2.4.1 Material: LSFR-PVC

2.4.2 OD: 0.248" nom

2.4.3 Color: Whitte

2.4.4 Ripcord under jacket

2.4.5 Markings: "PAIGE GAMECHANGER PATENT NO. 10,453,589 (UL) CMP --- C(UL) FT6 EXXXXX ROHS SUN RES" (Ascending/Descending length marking)

#### 2.5 Electrical Properties

2.5.1 Conductor Resistance: ≤6.35Ω/100m

2.5.2 Insulation Resistance: ≥5000MΩKm (DC500V Charged 1 Min)

2.5.3 Voltage Endurance: DC 1500V/min

2.5.4 Mutual Capacitance: ≤7.0nF/100m

2.5.5 Core-Core Resistance Unbalance: ≤5%

#### 2.6 Temperature Rating

2.6.1 -20°C to +75°C

#### 2.7 Power over Ethernet Support

2.7.1 Class 1 - 8

#### 3.0 Weights and Dimensions

#### 3.1 Put Up

3.1.1 Length: 1,000 ft box

3.1.2 Weight: 32 lbs

3.1.3 Dimensions: 15" x 12" x 15"



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<b>Frequency</b> MHz	<b>Return Loss</b> ≥dB/100m	Insertion Loss ≤dB/100m	<b>NEXT</b> ≥dB/100m	<b>PSNEXT</b> ≥dB/100m
1	24	1.5	90	87
10	31	4.8	75	72
20	32	7.0	64	61
100	26	16.1	50	47
200	24	23.2	48	45
250	21	26.1	47	44
350	20	31.4	45	42
500	19	38.3	43	40
550	18	40.4	42	39

<sup>\*</sup>Values above 250 MHz are for engineering information only

GameChanger cabling is designed specifically for transmitting Ethernet and can support all 8 classes of Power over Ethernet.

Maximum transmission distance exceeds Category Rating limits, but varies with equipment and settings used. If you have any questions about the maximum recommended distance for a particular installation, please contact us.

#### Connectors

GameChanger cabling works with most Cat 6 jacks and patch cords, but is only recommended to work with Platinum Tools ezEX44 or ezEX48 RJ45 modular plugs.

#### **Alternate Constructions**

GameChanger cabling is also available with:

- 258310333 Riser, Yellow w/ White Stripe
- 258300336 Plenum, Blue w/ White Stripe
- 258300310 Plenum, White
- 258330804 OSP, Black
- 258340804 OSP Shielded, Black
- 258802404 Class I, Division 1 Armored

#### **Frequently Asked Questions**

For FAQ and best practices please visit: www.paigedatacom.com/gamechanger

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### **GameChanger Cable**

Unshielded Twisted Pair Plenum Rated - CMP

258300336 46224PPBLW (legacy part no)

US Patent No. 10,453,589



#### 1.0 Scope

1.1 This cable consists of 4 pair solid bare copper; color-coded FEP insulation; overall LSFR-PVC jacket. RoHS-2 Compliant

#### 2.0 Construction

#### 2.1 Conductor

2.1.1 Material: Bare Copper

2.1.2 Construction: Solid 22 AWG

#### 2.2 Insulation

2.1.1 Material: Ultra Low-Loss Dielectric

2.1.2 O.D.: 0.044" nom

2.1.3 Color Code

Pair 1: White/Blue

Blue

Pair 2: White/Orange

Orange

Pair 3: White/Green

Croon

Pair 4: White/Brown

Brown

#### 2.3 Core Assembly:

2.3.1 4 twisted pairs cabled together to form the main core.

#### 2.4 Jacket

2.4.1 Material: LSFR-PVC

2.4.2 OD: 0.248"nom

2.4.3 Color: Blue with a white stripe

2.4.4 Ripcord under jacket

2.4.5 Markings: "PAIGE GAMECHANGER

PATENT NO. 10,453,589 (UL) CMP --- C(UL) FT6 EXXXXX ROHS SUN RES" (Ascending/Descending length marking)

#### 2.5 Electrical Properties

2.5.1 Conductor Resistance: ≤6.35Ω/100m

2.5.2 Insulation Resistance: ≥5000MΩKm

(DC500V Charged 1 Min)

2.5.3 Voltage Endurance: DC 1500V/min

2.5.4 Mutual Capacitance: ≤7.0nF/100m

2.5.5 Core-Core Resistance Unbalance: ≤5%

#### 2.6 Temperature Rating

2.6.1 -20°C to +75°C

#### 2.7 Power over Ethernet Support

2.7.1 Class 1 - 8

#### 3.0 Weights and Dimensions

#### 3.1 Put Up

3.1.1 Length: 1,000 ft box

3.1.2 Weight: 32 lbs

3.1.3 Dimensions: 15" x 12" x 15"



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Tel: 888.423.8947 gamechanger@paigeelectric.com



<b>Frequency</b> MHz	<b>Return Loss</b> ≥dB/100m	Insertion Loss ≤dB/100m	<b>NEXT</b> ≥dB/100m	<b>PSNEXT</b> ≥dB/100m
1	24	1.5	90	87
10	31	4.8	75	72
20	32	7.0	64	61
100	26	16.1	50	47
200	24	23.2	48	45
250	21	26.1	47	44
350	20	31.4	45	42
500	19	38.3	43	40
550	18	40.4	42	39

<sup>\*</sup>Values above 250 MHz are for engineering information only

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#### Connectors

GameChanger cabling works with most Cat 6 jacks and patch cords, but is only recommended to work with Platinum Tools ezEX44 or ezEX48 RJ45 modular plugs.

#### **Alternate Constructions**

GameChanger cabling is also available with:

- 258310333 Riser, Yellow w/ White Stripe
- 258300336 Plenum, Blue w/ White Stripe
- 258300310 Plenum, White
- 258330804 OSP, Black
- 258340804 OSP Shielded, Black
- 258802404 Class I, Division 1 Armored

#### **Frequently Asked Questions**

For FAQ and best practices please visit: www.paigedatacom.com/gamechanger

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## GameChanger LSZH OSP Cable

Unshielded Twisted Pair I SZH OSP Direct Burial

258330804

US Patent No. 10,453,589



#### 1.0 Scope

1.1 This cable consists of 4 pair solid bare copper; color-coded high density polyethylene (HDPE) insulation; water-proof gel; overall LSZH / OSP Direct Burial jacket. RoHS-2 Compliant

#### 2.0 Construction

#### 2.1 Conductor

2.1.1 Material: Bare Copper

2.1.2 Construction: Solid 22 AWG

#### 2.2 Insulation

2.1.1 Material: Ultra Low-Loss Dielectric

2.1.3 O.D.: 0.044" nom

2.1.4 Color Code

Pair 1: White/Blue

Blue

Pair 2: White/Orange

Orange

Pair 3: White/Green

Green

Pair 4: White/Brown

Brown

#### 2.3 Core Assembly:

2.3.1 4 twisted pairs cabled together and fully flooded with a waterproof gel to form the main core.

#### 2.4 Jacket

2.4.1 Material: PE

2.4.2 Wall Thickness: 0.050" nom.

2.4.3 OD: 0.305" nom.

2.4.4 Color: Black

2.4.5 Ripcord under jacket

2.4.6 Markings: "PAIGE® GAMECHANGER™ PATENT NO. 10,453,589) OSP C(UL) CM-LS E191596XX ROHS SUN RES" (Ascending/Descending length marking)

#### 2.5 Electrical Properties

2.5.1 Conductor Resistance: ≤6.35Ω/100m

2.5.2 Insulation Resistance: ≥5000MΩKm (DC500V Charged 1 Min)

2.5.3 Voltage Endurance: DC 1500V/min

2.5.4 Mutual Capacitance: ≤7.0nF/100m

2.5.5 Core-Core Resistance Unbalance: ≤5%

#### 2.6 Temperature Rating

2.6.1 -20°C to +75°C (installation)

2.6.2 -40°C to +75°C (operating)

#### 2.7 Power over Ethernet Support

2.7.1 Class 1 - 8

#### 3.0 Weights and Dimensions

#### 3.1 Put Up

3.1.1 Length: 1,000 ft box

3.1.2 Weight: 52 lbs

3.1.3 Dimensions: 16" x 12" x 16"



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<b>Frequency</b> MHz	<b>Return Loss</b> ≥dB/100m	<b>Insertion Loss</b> ≤dB/100m	<b>NEXT</b> ≥dB/100m	<b>PSNEXT</b> ≥dB/100m
1	24	1.5	90	87
10	31	4.8	75	72
20	32	7.0	64	61
100	26	16.1	50	47
200	24	23.2	48	45
250	21	26.1	47	44
350	20	31.4	45	42
500	19	38.3	43	40
550	18	40.4	42	39

<sup>\*</sup>Values above 250 MHz are for engineering information only

GameChanger cabling is designed specifically for transmitting Ethernet and can support all 8 classes of Power over Ethernet.

Maximum transmission distance exceeds Category Rating limits, but varies with equipment and settings used. If you have any questions about the maximum recommended distance for a particular installation, please contact us.

#### Connectors

GameChanger cabling works with most Cat 6 jacks and patch cords, but is only recommended to work with Platinum Tools ezEX44 or ezEX48 RJ45 modular plugs.

#### **Alternate Constructions**

GameChanger cabling is also available with:

- 258310333 Riser, Yellow w/ White Stripe
- 258300336 Plenum, Blue w/ White Stripe
- 258300310 Plenum, White
- 258330804 OSP, Black
- 258340804 OSP Shielded, Black
- 258802404 Class I, Division 1 Armored

#### **Frequently Asked Questions**

For FAQ and best practices please visit: www.paigedatacom.com/gamechanger

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# GameChanger Shielded OSP Cable

Shielded Twisted Pair



US Patent No. 10,453,589



1.1 This cable consists of 4 pair solid bare copper; color-coded high density polyethylene (HDPE) insulation; water-proof gel; inner and outer FRPE jacket with a aluminum/polyester tape shield with 24 AWG tinned copper drain wire in between the two jackets . RoHS-2 Compliant

#### 2.0 Construction

#### 2.1 Conductor

2.1.1 Material: Bare Copper

2.1.2 Construction: Solid 22 AWG

#### 2.2 Insulation

2.1.1 Material: Ultra Low-Loss Dielectric

2.1.3 O.D.: 0.044" nom

2.1.4 Color Code

Pair 1: White/Blue

Blue

Pair 2: White/Orange

Orange

Pair 3: White/Green

Green

Pair 4: White/Brown

Brown

#### 2.3 Core Assembly:

2.3.1 4 twisted pairs cabled together and fully f looded with a waterproof gel to form the main core which is then jacketed with a

FRPE inner jacket.

#### 2.4 Jackets

2.4.1 Material: FRPE

2.4.2 Inner Wall Thickness: 0.025" nom.

2.4.3 Outer Wall Thickness: 0.025" nom

#### 2.4.3 Total OD: 0.380" nom.

2.4.4 Color: Black

2.4.5 Ripcord under jacket

2.4.6 Markings: "PAIGE® GAMECHANGER CABLE™ SHIELDED OSP PATENT NO. 10,453,589 DIRECT BURIAL ROHS SUN RES" Ascending/Descending length marking)

#### 2.5 Electrical Properties

2.5.1 Conductor Resistance: ≤6.35Ω/100m

2.5.2 Insulation Resistance: ≥5000MΩKm

(DC500V Charged 1 Min)

2.5.3 Voltage Endurance: DC 1500V/min

2.5.4 Mutual Capacitance: ≤7.0nF/100m

2.5.5 Core-Core Resistance Unbalance: ≤5%

#### 2.6 Temperature Rating

2.6.1 -20°C to +75°C (installation) 2.6.2 -40°C to +75°C (operating)

#### 2.7 Power over Ethernet Support

2.7.1 Class 1 - 8

#### 3.0 Weights and Dimensions

#### 3.1 Put Up

3.1.1 Length: 1,000 feet reel

3.1.2 Weight: 74 lbs

3.1.3 Dimensions: 16" x 12" x 16"



Connecting You To More

<b>Frequency</b> MHz	<b>Return Loss</b> ≥dB/100m	<b>Insertion Loss</b> ≤dB/100m	<b>NEXT</b> ≥dB/100m	<b>PSNEXT</b> ≥dB/100m
1	24	1.5	90	87
10	31	4.8	75	72
20	32	7.0	64	61
100	26	16.1	50	47
200	24	23.2	48	45
250	21	26.1	47	44
350	20	31.4	45	42
500	19	38.3	43	40
550	18	40.4	42	39

<sup>\*</sup>Values above 250 MHz are for engineering information only

GameChanger cabling is designed specifically for transmitting Ethernet and can support all 8 classes of Power over Ethernet.

Maximum transmission distance exceeds Category Rating limits, but varies with equipment and settings used. If you have any questions about the maximum recommended distance for a particular installation, please contact us.

#### Connectors

GameChanger cabling works with most Cat 6 jacks and patch cords, but is only recommended to work with Platinum Tools ezEX44 or ezEX48 RJ45 modular plugs.

#### **Alternate Constructions**

GameChanger cabling is also available with:

- 258310333 Riser, Yellow w/ White Stripe
- 258300336 Plenum, Blue w/ White Stripe
- 258300310 Plenum, White
- 258330804 OSP, Black
- 258340804 OSP Shielded, Black
- 258802404 Class I, Division 1 Armored

#### **Frequently Asked Questions**

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# GameChanger Hazardous Location Cable

## ITC-HL Class I Division 1 Armored

258802404

US Patent No. 10.453.589



#### 1.0 Scope

1.1 This cable consists of 4 pair solid bare copper; color-coded Fluorinated Ethylene Propylene (FEP) insulation; inner FEP and PVC jacket, Coninuously Corrugated Welded (CCW) Armor and outer PVC jacket. RoHS-2 Compliant, Sunlight Resistant, Direct Burial. Suitable for Class I Div 1, Class II Div 1 installations

UL2250 Listed Type ITC 300V UL2225 Listed Type ITC-HL 300V for use in Class 1 Div 1 Hazardous locations.

#### 2.0 Construction

#### 2.1 Conductor

2.1.1 Material: Bare Copper2.1.2 Construction: Solid 22 AWG

#### 2.2 Insulation

2.2.1 Material: FEP 2.2.3 O.D.: 0.0425" nom

2.2.4 Color Code

Pair 1: White/Blue

Blue

Pair 2: White/Orange

Orange

Pair 3: White/Green

Green

Pair 4: White/Brown

Brown

#### 2.3 Core Assembly:

2.3.1 4 twisted pairs cabled together to form the main core which is then jacketed with FEP and PVC inner jackets.

#### 2.4 Jackets

2.4.1 Material: FEP/PVC/PVC

2.4.2 Natural FEP, 0.218" nom. diameter

2.4.3 Black, PVC, 0.568" nom. diameter

2.4.4 Outer OD: 0.95" nom.

2.4.5 Color: Black

2.4.6 Continuously Corrugated Welded Aluminum Armor between jackets.

2.4.7 Markings: PAIGE GAMECHANGER

CABLE™ PATENT # 10,453,589 22 AWG

4 Pair (UL) Type ITC-HL Sun Res ROHS

(Ascending/Descending length marking)

#### 2.5 Electrical Properties

2.5.1 Conductor Resistance: ≤9.38Ω/100m
2.5.2 Max DC Resistance Unbalance: ≤5%
2.5.3 Nom. Velocity of Propagation 68%

#### 2.6 Physical Properties

2.6.1 Nominal Cable Weight: .331Lbs / ft 2.6.2 Bend Radius: Min: 14"

#### 2.7 Temperature Rating

2.7.1 -20°C to +60°C (installation) 2.7.2 -50°C to +90°C (operating)

#### 3.0 Weights and Dimensions

3.1 Package: Ordered by the foot, shipped on a

reel

3.2 Weight: .34 lbs/ft (without reel)

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Tel: 888.423.8947 gamechanger@paigeelectric.com



Frequency MHz	Return Loss ≥dB/100m	Attenuation ≤dB/100m	NEXT ≥dB/100m	PSNEXT ≥dB/100m
1	28	1.5	77	75
4	31	3.0	68	66
10	33	4.8	62	60
16	33	6.2	59	57
20	33	6.2	58	56
25	32	7.8	56	54
31.25	31	8.8	55	53
62.50	29	8.8	50	48
100	28	16.3	47	45

GameChanger cabling is designed specifically for transmitting Power over Ethernet and IP video and control traffic. Any use other use is not covered under the warranty.

Maximum transmission distance exceeds Category Rating limits, but varies with equipment and settings used. If you have any questions about the maximum recommended distance for a particular installation, please contact us.

#### **HL-Glands**

ITC-HL GameChanger Cable works well with Crouse-Hinds Terminator™ TMCX Cable Glands

#### Connectors

GameChanger cabling works with most Category 6 connectors. For best results, Paige recommends Platinum Tools ezEX connectors.

#### **Alternate Constructions**

GameChanger cabling is also available with:

- 258310333 Riser, Yellow w/ White Stripe
- 258300336 Plenum, Blue w/ White Stripe
- 258300310 Plenum, White
- 258330804 OSP (non shielded), Black
- 258340804 OSP (Shielded), Black

#### **Frequently Asked Questions**

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