



## Technical Specifications

**Product Line:** AUDIOCAT+

### Description

Composite cable consisting of a 16 AWG 4 conductor stranded, twisted, and unshielded speaker cable and a U/UTP 24 AWG category 5e jacketed cable all under one jacket  
NEC type CM and CEC type CMG FT4. Product manufactured compliant to the requirements of UL444 for installations and applications in accordance with NEC articles 725 and 800.

### Component 1:

U/UTP category 5e  
24 AWG Solid annealed bare copper conductors  
High density polyethylene insulation  
Conductor diameter: 0.034" | 0.87mm  
Polyvinyl chloride jacket  
Wall thickness: 0.020" | 0.51mm  
Diameter: 0.197" | 5.00mm

### Electrical

Cat 5e DC resistance:  $\leq 28.6 \Omega / 1000'$  |  $93.8 \Omega/\text{KM}$   
DCR Unbalance:  $\leq 5.0\%$   
Capacitance: 14.0 pF/FT | 45.9 pF/M  
Impedance:  $100 \pm 15 \Omega$   
Propagation Delay (Skew): 45ns/100m MAX  
Velocity of Propagation: 71%  
Voltage rating: 300V  
Pair to ground capacitance Unbalance:  $\leq 330 \text{ pF}/100\text{M}$   
16 AWG DCR:  $4.11 \Omega / 1000'$  |  $13.48 \Omega/\text{KM}$   
Maximum current: 4.38A@25°C

### Component 2:

16 AWG 4 conductor speaker  
16 AWG 105-strand oxygen free copper conductors  
Diameter: 0.059" | 1.50mm  
Polyvinyl chloride insulation  
Wall thickness: 0.016" | 0.41mm  
Diameter: 0.091" | 2.32mm

### Regulatory

NEC: CMG 75°C  
CEC: CMG FT4 60°C  
EU RoHS 2002/95/EC Compliant

### Color Code

Cat 5e jacket: Blue  
Pair 1: Orange, White/orange stripe  
Pair 2: Blue, White/blue stripe  
Pair 3: Green, White/green stripe  
Pair 4: Brown, White/brown stripe  
Speaker wire: Red, Black, White, Green

### Packages

Reel: 500' | 152M  
Weight: 98 Lbs/1000' | 147 Kg/KM

### Assembly

Jacketed Cat 5e and 4 16 AWG speaker wires cabled in parallel

### Installation

Pull Tension: 110 Lbs | 490 N  
Bend radius: 3.94" | 100mm unloaded  
Bend radius: 7.88" | 200mm loaded

### Construct

100% Polyester tape binder  
Ripcord under jacket

### Applications

Smart home systems volume and room speaker control  
General purpose speaker level audio  
General purpose LAN, infrared and sensor

### Shield

N/A

### Performance

LAN: 300 feet maximum  
Speaker level audio to 50 feet





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#### Jacket

Polyvinyl chloride

Colors: Gold

Wall thickness: 0.035" | 0.90mm

Diameter: 0.394" | 10.0mm

#### Final Outside Diameter (inches)

0.394

Specification Revision Date:

July 31, 2007

#### Category 5e Performance Chart

| FREQ<br>(MHz) | Insertion<br>Loss<br>(dB/100m) | NEXT<br>(dB) | PSNEXT<br>(dB) | ACR<br>(dB/100m) | PSACR<br>(dB/100m) | ELFEXT<br>(dB/100m) | PSELFEXT<br>(dB/100m) | RL<br>(dB) |
|---------------|--------------------------------|--------------|----------------|------------------|--------------------|---------------------|-----------------------|------------|
|               | Max.                           | Min.         | Min.           | Min.             | Min.               | Min.                | Min.                  | Min.       |
| 0.772         | 1.8                            | 67.0         | 64.0           | 65.2             | 62.2               | 66.0                | 63.0                  | 19.4       |
| 1.0           | 2.0                            | 65.3         | 62.3           | 63.3             | 60.3               | 63.8                | 60.8                  | 20.0       |
| 4.0           | 4.1                            | 56.3         | 53.3           | 52.2             | 49.2               | 51.7                | 48.7                  | 23.0       |
| 8.0           | 5.8                            | 51.8         | 48.8           | 46.0             | 43.0               | 45.7                | 42.7                  | 24.5       |
| 10.0          | 6.5                            | 50.3         | 47.3           | 43.8             | 40.8               | 43.8                | 40.8                  | 25.0       |
| 16.0          | 8.2                            | 47.3         | 44.4           | 39.1             | 36.2               | 39.7                | 36.7                  | 25.0       |
| 20.0          | 9.3                            | 45.8         | 42.8           | 36.5             | 33.5               | 37.7                | 34.7                  | 25.0       |
| 25.0          | 10.4                           | 44.3         | 41.3           | 33.9             | 30.9               | 35.8                | 32.8                  | 24.3       |
| 31.25         | 11.7                           | 42.9         | 39.9           | 31.2             | 28.2               | 33.9                | 30.9                  | 23.6       |
| 62.5          | 17.0                           | 36.4         | 35.4           | 19.4             | 18.4               | 27.8                | 24.6                  | 21.5       |
| 100.0         | 22.0                           | 35.3         | 32.3           | 13.3             | 10.3               | 23.8                | 20.8                  | 20.1       |
| 200.0         | 32.4                           | 30.8         | 27.8           | -1.6             | -4.6               | 17.8                | 14.8                  | 18.0       |
| 300.0         | 41.0                           | 28.2         | 25.2           | -12.8            | -15.8              | 14.3                | 11.3                  | 16.8       |
| 350.0         | 44.9                           | 27.2         | 24.2           | -17.7            | -20.7              | 12.9                | 9.9                   | 16.3       |

