MOVING YOUR MONITOR-KEYBOARD-MOUSE FARTHER AWAY FROM YOUR COMPUTER

by Francis Chao
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Web location for this presentation:
http://aztcs.org
Click on “Meeting Notes”
SUMMARY
Using "HDMI cables with Redmere Technology" and "active "USB 3" extension cables", you can now place flatscreen monitors, mice, keyboards, and some USB devices up to 50 feet away from your computer. These technological advancements make it possible for you to place your computer in the next room by running cables through a hole in a wall.
TOPICS

• Extensions For Audio Cables
• Moving Your Keyboard, Mouse, Monitor, Etc. Farther From Your Computer
• Two New Enabling Technologies: HDMI Cables with Redmere Technology and Active USB 3 extension cables
EXTENSIONS FOR AUDIO CABLES

• The distance between your computer and your analog headsets, speakers, and/or microphones can be easily extended up to 60 feet with off-the-shelf "3.5mm plug to 3.5mm jack" audio extension cables. Use shielded audio extension cables to minimize hum:
3.5mm plug to 3.5mm jack audio cables (up to 60 feet)

headsets
speakers
microphones
EXTENSIONS FOR AUDIO CABLES

• The "GearIt" line of audio extension cables has worked well for us:
GearIt (2-Pack) 3.5mm Stereo Audio Extension Cable (15 Feet / 4.5 Meters) - 3.5mm Auxiliary Gold Plated Male to Female Audio Jack - Step Down Design for iPhone, iPod, Smartphone, Tablet and MP3 Cases, White

by GearIT

* * * * * 4 customer reviews

List Price: $39.92
Price: $18.96 & FREE Shipping on orders over $35. Details
You Save: $20.96 (53%)

Only 4 left in stock.
Want it Tuesday, Jan. 26? Order within 33 hrs 36 mins and choose One-Day Shipping at checkout. Details

Sold by PC Micro Store and Fulfilled by Amazon. Gift-wrap available.

Size: 2-Pack

Color: 15ft (White)

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GearIT (2-Pack) 3.5mm Stereo Audio Extension Cable (15 Feet / 4.5 Meters) - 3.5mm Auxiliary Gold Plated Male to Female Audio Jack - Step Down Design for iPhone, iPod, Smartphone, Tablet and MP3 Cases, White

by GearIT

4 customer reviews

List Price: $39.92
Price: $18.96 & FREE Shipping on orders over $35. Details
You Save: $20.96 (53%)

Only 4 left in stock.
Want it Tuesday, Jan. 26? Order within 33 hrs 34 mins and choose One-Day Shipping at checkout. Details
Sold by PC Micro Store and Fulfilled by Amazon. Gift-wrap available.

Size: 2-Pack

Color: 15ft (White)

- Stereo extension cables extends 3.5mm audio connection between smartphone (iPhone), MP3 player (iPod), tablets (iPad) or other audio devices with a auxiliary port (AUX) and your headphone, portable speaker, AV receiver, or car stereo
GearIt (2-Pack) 3.5mm Stereo Audio Extension Cable (15 Feet / 4.5 Meters) - 3.5mm Auxiliary Gold Plated Male to Female Audio Jack - Step Down Design for iPhone, iPod, Smartphone, Tablet and MP3 Cases, White

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MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER

• Unless you buy a "quiet" "Windows.." computer or a "Mac Mini" or a "Macbook..", your computer will have multiple fans that make a lot of noise.
MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER (continued)

- The noise that your computer makes interferes with listening to headset or speaker audio
- The noise that your computer makes interferes with the use of microphones for such activities as "Skype" and "Facetime".
One solution to dealing with the noise of a computer is to use a noise-cancelling headset. However, noise-cancellation is an imperfect technology and noise-cancelling headsets mask some but not all of the noise that is generated by your computer.
MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER (continued)

• A more effective solution to dealing with computer noise is to move your computer either to another room or behind a sound barrier. A room divider or a large item of furniture can serve as a sound barrier.
MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER (continued)

• To get the noise of a computer away from the computer user (you), you will probably need USB 2 or USB 3 cables, an HDMI cable or a DVI cable, and audio cables that are longer than the ones that you already have.
Conventional HDMI cable (up to 18 feet)

(passive) USB 3 extension cable (up to 15 feet for USB 2 devices)

Powered USB 3 hub
MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER (continued)

• USB 2 cables have a maximum allowable total length of about 15 feet
MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER (continued)

• USB 3 cables have a maximum allowable total length of about 15 feet if USB 2 devices are connected to them

• USB 3 cables usually have a maximum allowable total length of about 6 feet if USB 3 devices are connected to them.
MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER (continued)

• The USB 3 standard does not have a minimum allowable cable length: Some USB 3 devices will only work with USB 3 cables with a maximum total length of 1 foot. The maximum total cable length for a USB 3 device is determined by the engineer who designs the device.
MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER (continued)

• Conventional HDMI and DVI cables (for monitors) have a maximum allowable total length of about 18 feet
MOVING YOUR KEYBOARD, MOUSE, MONITOR, ETC. FARTHER AWAY FROM YOUR COMPUTER (continued)

- You can attach two conventional HDMI cables together with an HDMI jack-to-HDMI jack adapter. If you do so, you are still limited to the maximum allowable total length of 18 feet.
conventional HDMI cable #1

conventional HDMI cable #2
• The Legrand company makes a HDMI jack-to-HDMI jack adapter with a unique angled design that prevents the two connected HDMI cables from pulling apart:
OnQ / Legrand WP1234WH High Definition Multimedia Interface Keystone Insert, White

by On-Q/Legrand

7 customer reviews

Price: $13.40 & FREE Shipping on orders over $35. Details

Only 17 left in stock (more on the way).
Want it Tuesday, Jan. 26? Order within 63 hrs 22 mins and choose Two-Day Shipping at checkout. Details

Ships from and sold by Amazon.com. Gift-wrap available.

Color: White

$12.39

$12.39

$13.40
OnQ / Legrand WP1234WH High Definition Multimedia Interface Keystone Insert, White

by On-Q/Legrand

7 customer reviews

Price: $13.40 & FREE Shipping on orders over $35. Details

Only 17 left in stock (more on the way).

Want it Tuesday, Jan. 26? Order within 63 hrs 20 mins and choose Two-Day Shipping at checkout. Details

Ships from and sold by Amazon.com. Gift-wrap available.

Color: White

- HDMI (High Definition Multimedia Interface) connectors are ideal for high-definition video and audio devices
OnQ / Legrand WP1234WH High Definition Multimedia Interface Keystone Insert, White
by On-Q/Legrand

4.5 out of 5 stars - 7 customer reviews

Price: $13.40 & FREE Shipping on orders over $35. Details

On-Q/Leviton/Philips

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TWO NEW ENABLING TECHNOLOGIES FOR MOVING YOUR COMPUTER AWAY FROM YOU

• In order to move your computer farther away from your keyboard, mouse, monitor, and USB Webcam, you will probably need to extend their existing associated cables with "extension cables" that incorporate two new technologies:
TWO NEW ENABLING TECHNOLOGIES FOR MOVING YOUR COMPUTER AWAY FROM YOU (continued)

- New Technology 1: HDMI cables with Redmere Technology
- New Technology 2: Active USB 3 extension cables
TWO NEW ENABLING TECHNOLOGIES FOR MOVING YOUR COMPUTER AWAY FROM YOU (continued)

• These two new technologies double the maximum allowable cable lengths between your computer and the devices that you use for interacting with your computer:
Conventional HDMI cable (up to 18 feet)

(passive) USB 3 extension cable (up to 15 feet for USB 2 devices)

Powered USB 3 hub
Active USB 3 extension cable (up to 64 feet for USB 2 devices)

HDMI cable with Redmere Technology (up to 40 feet)

Powered USB 3 hub
• With these greater maximum allowable cable lengths, you can now put your computer in the next room or on the other side of a heavy, sound-deadening piece of furniture or on the other side of a room divider:
Active USB 3 extension cable (up to 64 feet for USB 2 devices)

HDMI cable with Redmere Technology (up to 45 feet)

Powered USB 3 hub

Wall or sound-blocking furniture
Two benefits of utilizing the two new enabling technologies:

1. The fan noise of your computer is now either gone or greatly reduced.
2. Your keyboard, monitor, mouse, and Webcam are still connected to your computer without making you dependent on blue tooth or other flaky wireless technologies.
TWO NEW ENABLING TECHNOLOGIES FOR MOVING YOUR COMPUTER AWAY FROM YOU (continued)

• If you run cables through a hole in a wall, inside a wall, in an attic, or in a crawl space, the cables should have either a "CL2" fire safety rating or a "plenum" rating
TWO NEW ENABLING TECHNOLOGIES FOR MOVING YOUR COMPUTER AWAY FROM YOU (continued)

• If you run cables through a hole in a wall, the electrical codes of most jurisdictions recommend or mandate the use of either UL-listed "fire pillows" or UL-listed fire proofing materials to impede the spread of fire at the hole where the cables enter the wall.
• The 3M company makes excellent fire barrier materials for plugging up holes that you put in walls for cables:
3M™ Fire Barrier Packing Material PM4

UPC# 00051115187643

An easy-to-dispense, non-asbestos, inorganic material designed to be used as an alternative packing material to mineral wool, fiberglass and backer rod in through-penetration firestop systems. With excellent strength and flexibility characteristics it is an ideal through-penetration packing material.

- Non-combustible material (ASTM E 136)
- Approved for use in all UL-listed through penetration 3M firestop systems
- Easy to transport and carry
- Convenient, hand-tear dispensing
An easy-to-dispense, non-asbestos, inorganic material designed to be used as an alternative packing material to mineral wool, fiberglass and backer rod in through-penetration firestop systems. With excellent strength and flexibility characteristics it is an ideal through-penetration packing material.

- Non-combustible material (ASTM E 136)
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- Convenient, hand-tear dispensing
TWO NEW ENABLING TECHNOLOGIES FOR MOVING YOUR COMPUTER AWAY FROM YOU (continued)

- See
  http://multimedia.3m.com/mws/media/435680O/3mtm-fire-barrier-packing-material.pdf
  and
  http://multimedia.3m.com/mws/media/435679O/3mtm-fire-barrier-packing-material.pdf
• Any exposed cabling that you install can be neatly enclosed in "Electriduct" split loom corrugated tubing:
2" Split Wire Loom Tubing (Polyethylene) - 25FT - White
by Electriduct

43 customer reviews

Price: $50.00 & FREE Shipping

Only 5 left in stock.
Estimated Delivery Date: Feb. 2 - 5 when you choose Expedited at checkout.
Ships from and sold by Electriduct Inc.

Size:
2" Dia - 25 Feet

Color: White

- Size: 2" Outside Diameter | Length: 25 Feet | Color: White
- Material: Polyethylene | Flexible and Durable | Split Design
- Use to protect electrical wiring in automotive, marine, hydraulic applications
- RoHS Compliant
- Sizes are approximate
2" Split Wire Loom Tubing (Polyethylene) - 25FT - White

by Electriduct

43 customer reviews

Price: **$50.00** & FREE Shipping
Color: **White**

- Size: 2” Outside Diameter | Length: 25 Feet | Color: White
- Material: Polyethylene | Flexible and Durable | Split Design
- Use to protect electrical wiring in automotive, marine, hydraulic applications
- RoHS Compliant
• For sizes, lengths, and colors, see http://www.electriduct.com/Colored-Wire-Loom.html
ACTIVE USB 3 EXTENSION CABLES

• The cables for your keyboard, mouse, and Webcam can be extended with an "active USB 3 extension cable".

• These devices became available in 2013. (Prior to that year, only "active USB 2 extension cables" were available and they are too slow and not as reliable.)
Active USB 3 extension cable (up to 64 feet for USB 2 devices)

HDMI cable with Redmere Technology (up to 40 feet)

wall or sound-blocking furniture

Powered USB 3 hub
ACTIVE USB 3 EXTENSION CABLES

- The "Cable Matters" active USB 3 extension cable has worked well for us:
Cable Matters SuperSpeed USB 3.0 Type A Male to Female Active Extension Cable 10 Meters/32.8 Feet
by Cable Matters

List Price: $89.99
Price: $35.01 & FREE Shipping. Details
You Save: $54.98 (61%)

In Stock.
Want it Tuesday, Jan. 26? Order within 66 hrs 45 mins and choose Two-Day Shipping at checkout. Details
Sold by Cable Matters and Fulfilled by Amazon. Gift-wrap available.

Size: 10m
Cable Matters SuperSpeed USB 3.0 Type A Male to Female Active Extension Cable 10 Meters/32.8 Feet
by Cable Matters

⭐⭐⭐⭐⭐ 235 customer reviews  |  20 answered questions

List Price: $89.99
Price: $35.01 & FREE Shipping. Details
You Save: $54.98 (61%)

In Stock.
Want it Tuesday, Jan. 26? Order within 66 hrs 44 mins and choose Two-Day Shipping at checkout. Details
Sold by Cable Matters and Fulfilled by Amazon. Gift-wrap available.

Size: 10m

10m  5m
• High performance active USB 3.0 extension cable extends the connection between a computer or Windows tablet and both USB 3.0 and USB 2.0 peripherals including hard drives, USB hubs, mice, keyboards, flash drives, printers, and more
• Upgrade to SuperSpeed USB 3.0 and future-proof your data transfer rate while maintain backwards compatibility with your existing USB 2.0 devices. Enjoy SuperSpeed USB 3.0 data transfer rate at up to 5 Gbps, 10x faster than USB 2.0
• Active extension cable is bus powered with an integrated amplification chipset to ensure the SuperSpeed USB 3.0 performance at longer lengths than a normal USB extension cable
• Premium USB 3.0 repeater cable engineered with molded strain relief connectors for durability and grip treads for easy plugging and unplugging
• The combination of gold-plated connectors, bare copper conductors, and foil & braid shielding provides superior cable performance and error-free data transmission
ACTIVE USB 3 EXTENSION CABLES
• The "Cable Matters" USB 3 extension cable works better when you also install a generic AC power adapter for it:
Generic Premium External Power Supply 5v 1A 2A (1000mA - 2000mA) AC/DC Adapter, Plug Tip: 1.35mm x 3.5mm x 7mm, for USB HUB and 2.5-inch HDD Enclosure

by Generic

🌟🌟🌟🌟🌟 252 customer reviews | 42 answered questions

List Price: $66.99
Price: $4.89 & FREE Shipping on orders over $35. Details
You Save: $61.10 (93%)

In Stock.
Want it Tuesday, Jan. 26? Order within 47 hrs 41 mins and choose Two-Day Shipping at checkout. Details
Sold by New cam and Fulfilled by Amazon. Gift-wrap available.
Generic Premium External Power Supply 5v 1A 2A (1000mA - 2000mA) AC/DC Adapter, Plug Tip: 1.35mm x 3.5mm x 7mm, for USB HUB and 2.5-inch HDD Enclosure

by Generic

4.5 stars • 252 customer reviews | 42 answered questions

List Price: $65.99
Price: **$4.89** & FREE Shipping on orders over $35. Details
Total price: $39.90

- This item: Generic Premium External Power Supply 5v 1A 2A (1000mA - 2000mA) AC/DC Adapter, Plug Tip: 1.35mm x 3...
  $4.89

- Cable Matters SuperSpeed USB 3.0 Type A Male to Female Active Extension Cable 10 Meters/32.8 Feet $35.01
ACTIVE USB 3 EXTENSION CABLES (continued)

- You can use two of these "Cable Matters" 32-foot "USB 3" cables together for a total cable length of 64-feet
• At the end of an "active USB 3 extension cable", you should install an "powered USB 3" hub so that you can attach your keyboard, mouse, and/or USB Webcam to a single "active USB 3 extension cable".
Active USB 3 extension cable (up to 32 feet for USB 2 devices)

HDMI cable with Redmere Technology (up to 40 feet)

wall or sound-blocking furniture

Powered USB 3 hub
ACTIVE USB 3 EXTENSION CABLES (continued)

• Here is an example of an active USB 3 hub:
Plugable 7-Port Aluminum USB 3.0 SuperSpeed Hub with 20W Power Adapter

by Plugable

⭐⭐⭐⭐⭐ 220 customer reviews | 23 answered questions

Price: $35.00 & FREE Shipping. Details

In Stock.
Want it Tuesday, Jan. 26? Order within 66 hrs 56 mins and choose Two-Day Shipping at checkout. Details

Sold by Plugable Technologies and Fulfilled by Amazon. Gift-wrap available.

Capacity: 7-Port
Plugable 7-Port Aluminum USB 3.0 SuperSpeed Hub with 20W Power Adapter

by Plugable

220 customer reviews | 23 answered questions

Price: $35.00 & FREE Shipping. Details
• Expand USB connectivity by connecting up to seven USB 3.0, 2.0, or 1.1 devices to any USB 2.0 or 3.0 capable computer. Fully plug and play, devices can be hot-plugged, supports USB over-current protection. Robust 5 volt 4 amp 20 watt power supply included. (US AC Wall Outlet Plug, 100-240V 50/60Hz)

• Compatible with most Windows 10, 8.1, 8, 7, Vista, XP, Mac OS X, and Linux / Unix systems. Microsoft Windows systems should install latest manufacturer USB 3.0 host controller drivers and Windows Updates. Apple Mac OS X and Linux / Unix systems require latest operating system updates for best compatibility.
## Product Information

**Capacity:** 7-Port

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<td>Manufacturer</td>
<td>Plugable Technologies</td>
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<td>USB3-HUB7A</td>
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<tr>
<td>Customer Reviews</td>
<td>★★★★★☆☆☆☆☆ 220 customer reviews 3.9 out of 5 stars</td>
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ACTIVE USB 3 EXTENSION CABLES
(continued)

• When you have an active USB 3 hub at the end of an active USB 3 extension cable, you can attach any USB 2 device such as a USB keyboard, a USB mouse, a USB 2 flash drive device, or an external USB 2 hard drive
• When you have an active USB 3 hub at the end of an active USB 3 extension cable, you can attach some USB 3 devices such as USB 3 flash drives. However most USB 3 external hard drives and USB 3 external hard drive enclosures will not work from the far end of an active USB 3 extension cable.
Active USB 3 extension cable (up to 64 feet for USB 2 devices)

HDMI cable with Redmere Technology (up to 40 feet)

Powered USB 3 hub

wall or sound-blocking furniture

USB 2 external hard drive or drive enclosure
Active USB 3 extension cable (up to 64 feet for USB 2 devices)

HDMI cable with Redmere Technology (up to 40 feet)

Wall or sound-blocking furniture

Powered USB 3 hub

USB 3 external hard drive or drive enclosure will not work
HDMI CABLES WITH REDMERE TECHNOLOGY

• If you want to extend an monitor to a total cable length of up to 40 feet, you can use a single HDMI cable with Redmere Technology", or a conventional HDMI cable connected to a single HDMI cable with Redmere Technology or two "HDMI cables with Redmere Technology:
Active USB 3 extension cable (up to 64 feet for USB 2 devices)

HDMI cable with Redmere Technology (up to 40 feet)

wall or sound-blocking furniture

Powered USB 3 hub
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• These cables have an integrated circuit chip at the TV or monitor end that cleans up and repeats the signal:
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• Source for previous illustration: http://www.edn.com/Pdf/ViewPdf?contentItemId=4137634
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- If you open up the end of the "Redmere Technology" cable that is marked as "TV", you will find a small printed circuit board with an integrated circuit chip:
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• Source for the previous photo: http://www.audiogurus.com/learn/cables/redmere-active-hdmi-cables-technology/510
Type A receptacle HDMI (female)

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<td>16</td>
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<tr>
<td>17</td>
<td>DDC/CEC/ARC/HEC Ground</td>
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<tr>
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<td>+5 V (min 0.055 A)[3]</td>
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<tr>
<td>19</td>
<td>Hot Plug detect (all versions) and HEC/ARC (Optional, HDMI 1.4+ with HDMI Ethernet Channel and Audio Return Channel)</td>
</tr>
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</table>
Pin 17  DDC/CEC/ARC/HEC  Ground

Pin 18  +5 V (min. 0.055 A)\textsuperscript{[3]}
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• Source for the previous diagram: https://en.wikipedia.org/wiki/HDMI
Figure 1. HDMI System Block Diagram
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• Source for the previous diagram: http://www.ti.com/general/docs/lit/getliterature.tsp?baseLiteratureNumber=snva412&fileType=pdf
Fig 2: HDMI Active Cable Block Diagram
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- Source for the previous diagram: http://www.edn.com/Pdf/ViewPdf?contentItemId=4137634
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- The "TV" end of the "HDMI cable with Redmere Technology" runs hot so make sure that you use cable ties and/or cabling support hard to make sure that there is good air flow around this end of the cable.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- "Redmere Technology" comes from Ireland. "HDMI cables with Redmere Technology" are directional with one end labeled "Source" and the other end labeled "TV".
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- The end labeled "TV" has to be attached to or towards the monitor or television set.
- Then end labeled "Source" or the end that has no markings has to be attached to or towards the HDMI jack of the computer.
Source side connects to an HDMI port on your computer. It is either labeled as "Source" or has no label.

Sink side connects to your monitor or TV. It is always labeled as "TV".
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- The length of the HDMI plug at the "TV" end, which is called the "sink end" is usually longer than the length of the HDMI plug at the "source" or unlabeled side:
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- "Redmere Technology" enables longer cable runs on significantly thinner cables relative to conventional HDMI cables. The reduction in the required amount of copper and steel results in a cost savings that makes HDMI cables cheaper to make and a lower price is reflected in the retail price of the cables.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• If you install a "HDMI Cable with Redmere Technology" backwards, no video and audio signal is transmitted to the TV or monitor.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• You can use a HDMI jack-to-HDMI jack adapter to connect a "..Redmere Technology" cable to a "conventional HDMI" cable.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• If you connect a "..Redmere Technology" cable to a "conventional HDMI" cable, "conventional HDMI" cable needs to be nearer to the computer and the "..Redmere Technology" cable needs to be nearer to the TV or flatscreen monitor:
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- The HDMI port of the computer connects to the "conventional HDMI" cable which connects to an "HDMI jack to HDMI jack" adapter which connects to the "Source" end of the Redmere Technology cable.
Finally, the "TV" end of the "Redmere Technology" cable connects to the HDMI jack of the flatscreen monitor:
conventional HDMI cable

HDMI cable with Redmere Technology
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• Polarity remains critical for "HDMI cables with Redmere Technology" when you combine them with conventional HDMI cables:
conventional HDMI cable (no polarity) -> "Source" or unlabeled end

HDMI cable with Redmere Technology

"TV end"
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• The following might be a cost-effective configuration for you:
HDMI cable with Redmere Technology (30 feet)

conventional HDMI cable (15 feet)
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• All of the manufacturers of "HDMI cables with Redmere Technology" advise against connecting two HDMI cables with Redmere Technology together.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• However, we have successfully used a HDMI-to-HDMI adapter to connect up to two "..Redmere Technology" cables together with no degradation of the video or audio portions of the HDMI signal for a total cable length of up to 45 feet:
First HDMI cable with Redmere Technology

Second HDMI cable with Redmere Technology
• However, connecting **three** "Redmere Technology" cables together does not work, resulting in degraded or non-existent video and audio at the "TV" end of the three interconnected cables.
Connecting three HDMI cables with Redmere Technology together does not work.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- Polarity remains critical for "HDMI cables with Redmere Technology" when you combine of them together:
First HDMI cable with Redmere Technology

Second HDMI cable with Redmere Technology
Second HDMI cable with Redmere Technology

First HDMI cable with Redmere Technology

"Source" or unlabeled end

"TV end"

"Source" or unlabeled end

"TV end"
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- You can connect one or more conventional HDMI cables to one or two "HDMI cables with "Redmere Technology" as follows:
Second conventional HDMI cable

First conventional HDMI cable

First HDMI cable with Redmere Technology

Second HDMI cable with Redmere Technology

119
Second conventional HDMI cable

First HDMI cable with Redmere Technology

Up to 18 feet total for the two or more conventional HDMI cables

Second conventional HDMI cable

First HDMI cable with Redmere Technology

Second HDMI cable with Redmere Technology

120
Second conventional HDMI cable

First HDMI cable with Redmere Technology

Second conventional HDMI cable

The length of the two "HDMI cables with Redmere Technology" cannot exceed a total of 47 feet
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- When you mix conventional and "Redmere Technology" HDMI cables: The conventional HDMI cables cannot exceed a total of 18 feet. The "Redmere Technology" cables have to be closer to the "TV" end relative to the conventional HDMI cables. You cannot use more than two "Redmere Technology" HDMI cables.
When you mix conventional and "Redmere Technology" HDMI cables: The conventional HDMI cables do not have any polarity requirements but you must follow the polarity requirements for the "Redmere Technology" HDMI cables:
No polarity requirements for the two conventional HDMI cables.
First conventional HDMI cable

Second conventional HDMI cable

First HDMI cable with Redmere Technology

Second HDMI cable with Redmere Technology

Polarity requirements for the two HDMI cables with Redmere Technology
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• If your computer only has a DVI port (and it does not have a HDMI port), you can use a DVI-to-HDMI adapter or a DVI-to-HDMI cable in order to take advantage of the length-enhancing capabilities of "..Redmere Technology":

126
HDMI cable with Redmere Technology

conventional HDMI cable

DVI-to-HDMI adapter or cable

HDMI cable with Redmere Technology

Computer with DVI port
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• The following is an example of a DVI-to-HDMI adapter that has worked well for us:
DVI Male to HDMI Female Adapter Gold Plate
by Okina
32 customer reviews | 5 answered questions

Price: $5.50 & FREE Shipping on orders over $35. Details

In Stock.
Want it Tuesday, Feb. 2? Order within 32 hrs 53 mins and choose One-Day Shipping at checkout. Details

Sold by SHOP NET and Fulfilled by Amazon. Gift-wrap available.

- Connectors: HDMI Female to DVI-D (24+1) Male
- Type: Molded Adapter Gold Plated
- Convert a HDMI Male to DVI Male.
- 28 AWG and Fully molded and protect against unwanted EMI/RFI.
- See more product details

6 new from $4.20
DVI Male to HDMI Female Adapter Gold Plate

by Okina

4.8 out of 5 stars 32 customer reviews | 5 answered questions

Price: $5.50 & FREE Shipping on orders over $35. Details
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- If you use a DVI-to-HDMI adapter or cable, you will transmit the video portion of the HDMI signal to the monitor or TV. However the audio portion of the HDMI signal will not be transmitted to the monitor or TV.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- When purchasing "HDMI cables with Redmere Technology", the word "Redmere" has to be in the manufacturer's description of the cable. Otherwise, you will inadvertently buy a conventional (passive) HDMI cable.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- Most of the manufacturers of "HDMI cables with Redmere Technology" also make "(conventional) HDMI cables", "boosted HDMI cables", "high speed HDMI cables", and "HDMI cables with boosters" so be careful when buying to make sure that you are getting a "HDMI cable with Redmere Technology".
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• When buying an "HDMI cable with Redmere Technology", check to make sure that the "Redmere Technology" is explicitly stated on the packaging material.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- The shorter (<25 feet) "..Redmere.." cables have super-thin, super-flexible formats
- The longer (>25 feet) "..Redmere.." cables have thicker, less flexible formats
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- For any specific length "..Redmere.." cables are thinner and more flexible than "conventional HDMI cables" of the same length
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• "C & E" makes this 15-foot "Ultra Slim" "HDMI cable with Redmere Technology" that has worked well for us with one exception:
C&E CNE77413 15-Feet Ultra Slim Series High Performance HDMI Cable with RedMere Technology, White

by C&E

Price: $22.77 & FREE Shipping on orders over $35. Details

Only 4 left in stock (more on the way).
Want it Tuesday, Jan. 26? Order within 36 hrs 32 mins and choose One-Day Shipping at checkout. Details
Ships from and sold by Amazon.com. Gift-wrap available.

Style: pack of 1

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<th>pack of 1</th>
<th>pack of 2</th>
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<tbody>
<tr>
<td>$22.77</td>
<td>$43.38</td>
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</table>
C&E CNE77413 15-Feet Ultra Slim Series High Performance HDMI Cable with RedMere Technology, White

by C&E

1 customer review

Price: $22.77 & FREE Shipping on orders over $35. Details
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• When we connected two of these 15-foot cables together, some of our older flat-screen monitors were unable to display the video signal.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• When we connected either a conventional HDMI cable or a thicker "..Redmere.." cable made by another company to a 15-foot "C&E" "Ultra Slim"..Redmere.." cable, older flat-screen monitors worked fine.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- The "C&E" company's cables are only labeled on the monitor end with a label marking of "TV".
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• The unlabeled cable end is the end that plugs into the HDMI port of the computer.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• The "Sewell" line of "HDMI cables with Redmere Technology" has worked well for us. This is the 30-foot "Sewell" cable that we are demonstrating today:
Sewell Direct SW-30999 Redhead Premium Thin HDMI Cable, with Redmere Technology, High Speed, 4K, 1080p, 3D, HDMI 2.0, UHD, 30-Feet

by Sewell Direct

Price: $41.95 & FREE Shipping. Details

Only 14 left in stock.
Want it tomorrow, Feb. 11? Order within 17 hrs 10 mins and choose Same-Day Delivery at checkout. Details

Sold by Sewell Direct Corp and Fulfilled by Amazon. Gift-wrap available.

Length: 30 ft
Sewell Direct SW-30999 Redhead Premium Thin HDMI Cable, with Redmere Technology, High Speed, 4K, 1080p, 3D, HDMI 2.0, UHD, 30-Feet

by Sewell Direct

★★★★★  173 customer reviews  |  3 answered questions
Price: $41.95 & FREE Shipping.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- The "Sewell" company's "..Redmere.." cables are only faintly-labeled on the monitor end with a label marking of "TV".
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• The "Source" end of a "Sewell" cable only has a label that says "HDMI":

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HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• This generically-labelled cable end is the end that plugs into the HDMI port of the computer.
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- The Monoprice company's line of "..Redmere Technology" cables has worked well for us. The thicker cables that they make have a good plastic covering. However their thinner, more flexible cables have a cotton covering that we do not like since they seem to gather and hang on to dirt:
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• Unlike "C & E" and "Sewell", the Monoprice company sells "..Redmere Technology" cables that are labeled at both ends: the computer end is labeled as "Source" and the monitor end is labeled as "TV":

Select Active Series High Speed HDMI® Cable w/ RedMere® Technology, 25ft

$29.88

Quantity:

Add to Cart  Add to Wishlist

In Stock This item should ship tomorrow (2/7/2016) if ordered within 21 hours 19 minutes

Volume Pricing (Log in to see More)
Select Active Series High Speed HDMI® Cable w/ RedMere® Technology, 25ft

Product # 12611

$29.88
This High Speed HDMI Cable supports the following general features:

- Active signal regeneration to ensure accurate reproduction over longer distances
- 10.2Gbps data throughput
- CL2 in-wall fire safety rating
- 28AWG copper conductors
- Gold plated connectors

It supports the following HDMI features:

- 1080p resolution at 60Hz
- 4K resolution at 24Hz
- 3D video
- HDMI Ethernet Channel
- Audio Return Channel
- Deep Color up to 16-bits per channel
- x.v.Color™
- High Definition Audio, including SA-CD, DVD-Audio, DTS-HD Master Audio™, and Dolby TrueHD™
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

• The technical details for Monoprice's 25-foot "HDMI with Redmere Technology" cables can be found at http://www.monoprice.com/product?p_id=12611 :
"Belkin" and "Cable Matters" make conventional 12-foot HDMI cables which work well with the newer "HDMI cables with Redmere Technology":
HDMI CABLES WITH REDMERE TECHNOLOGY (continued)

- Belkin makes a tried-and-true conventional 12-foot HDMI cable that has worked well for us. (At the present time, Belkin does not make "..Redmere.." cables.)
Experience high-definition digital video and multichannel digital audio in one cable. Connect your HDTVs, Blu-ray disc players, DVD players, DVRs, cable/satellite boxes, and AV receivers.

Works with:
- HDTVs
- Blu-ray Disc Players
- Digital Video Recorders/Players
- Video Game Consoles
- Digital Set-Top Boxes

Please recycle

Lifetime Warranty
HDMI™ Audio Video Cable
CONNECT PLAY IMAGINE
High-definition digital video and multichannel audio—all-in-one cable
12 FEET
High-definition digital video and multichannel audio—all-in-one cable

12 FEET
SUPPORTS

1080P

HDMI 1.3
"Cable Matters" also makes a tried-and-true conventional HDMI cable that has worked well for us. (At the present time, "Cable Matters" does not make "...Redmere.." cables.)
Cable Matters High Speed HDMI Cable with Ethernet in White 15 Feet - 3D and 4K Resolution Ready
by Cable Matters

List Price: $24.99
Price: **$9.99 & FREE Shipping** on orders over $35. Details
You Save: $15.00 (60%)

In Stock.

**Want it tomorrow, Feb. 1?** Order within 1 hr 8 mins and choose One-Day Shipping at checkout.
Details

Sold by Cable Matters and Fulfilled by Amazon. Gift-wrap available.

- Foil aluminum shielding protects against EM and RF interference
- Gold connectors resist corrosion and provide rigidity
- HDCP and ROHS Compliant
- Supported Resolutions: Up to 4096 x 2048
- Comes with Cable Matters Lifetime Warranty
Cable Matters High Speed HDMI Cable with Ethernet in White 15 Feet - 3D and 4K Resolution Ready

by Cable Matters

4.5 stars based on 86 customer reviews  |  3 answered questions

List Price: $24.99
Price: $9.99 & FREE Shipping on orders over $35. Details
Sold by Cable Matters and Fulfilled by Amazon. Gift-wrap available.

- Foil aluminum shielding protects against EM and RF interference
- Gold connectors resist corrosion and provide rigidity
- HDCP and ROHS Compliant
- Supported Resolutions: Up to 4096 x 2048
- Comes with Cable Matters Lifetime Warranty