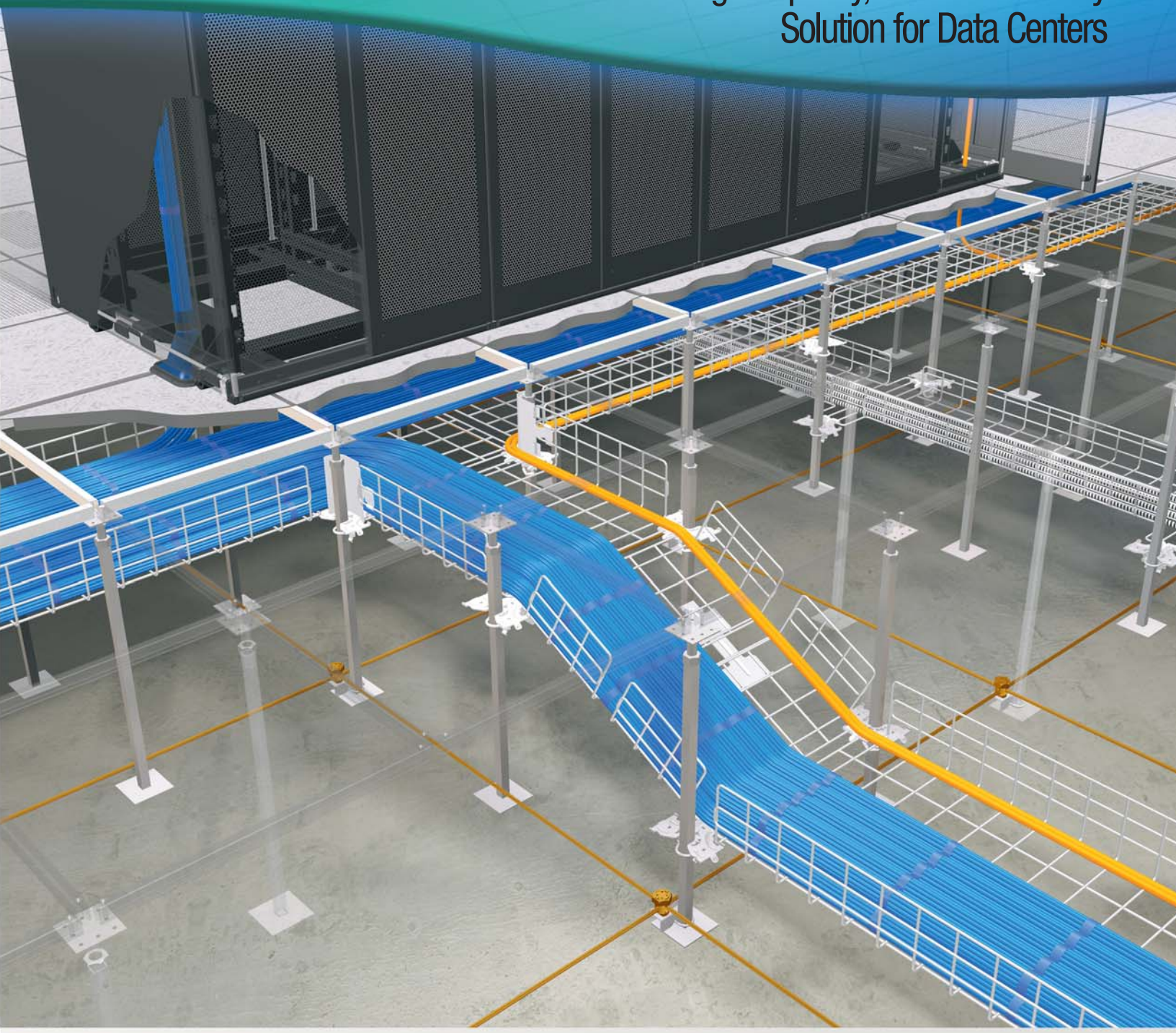
# GridRunner™ Underfloor Cable Routing System

## High Capacity, Versatile Pathway Solution for Data Centers



PANDUIT®

building a smarter,
unified business foundation

Connect. Manage. Automate.

# Cable Routing Innovation

## Designed Specifically for Underfloor Data and Power Cabling Applications

**The trend toward increased server density, more storage equipment, and higher capacity switches in today's data centers presents a unique challenge to those designing and maintaining the physical infrastructure – providing the best method to route and manage the growing amount of data and power cabling while ensuring high levels of network performance.**

Ease of deployment, safety and cable capacity are important considerations when specifying a cable pathway. Most commonly used underfloor pathway systems are labor intensive to install, offer minimal cable protection and do not include integral features that ensure a mechanical or electrical bond to the Mesh Common Bond Network (MCBN). Panduit has resolved these issues with a solution that integrates seamlessly with the access floor, cabinets, and the MCBN.

The Panduit® GridRunner™ Underfloor Cable Routing System is a versatile pathway designed to route and manage network data and power cabling beneath the raised floor in a data center, delivering numerous benefits to designers and installers.

## Panduit's Unified Physical Infrastructure (UPI): a Guiding Approach

A unified approach to physical and logical systems architecture is imperative for solutions to fully address the need for availability, agility, integration, and security.

Panduit has developed the industry's most comprehensive and holistic approach to a Unified Physical Infrastructure and can help enterprises align, converge, and optimize critical systems – communication, computing, control, power, and security – to build a smarter, unified business foundation.

**Mitigate Risk –** Efficient physical infrastructure management enables seamless integration to reduce risks which can occur throughout core systems.

**Lower Cost –** Panduit physical infrastructure solutions drive financial advantages to reduce energy and occupancy costs, and help secure competitive advantage.

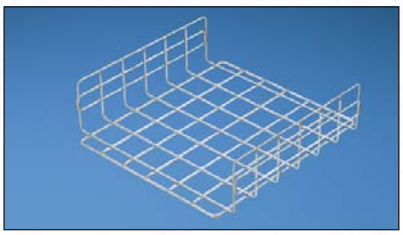
**Increase Agility –** A high level of integration within the physical infrastructure enables flexibility and improved business agility.

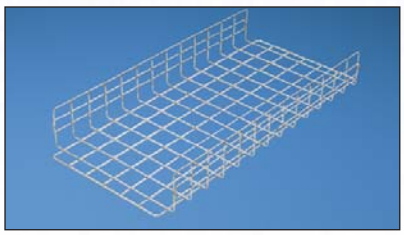
**Enhance Sustainability –** UPI-based solution offerings enable organizations to meet sustainability goals by driving resource and energy efficiencies across the physical infrastructure.

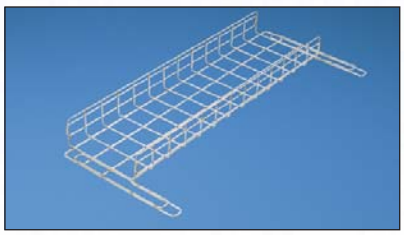
### Unified Physical Infrastructure

## Robust Construction

Cable pathways need to route and manage growing cable densities. The GridRunner™ System offers multiple widths and depths to accommodate high-density switch applications and power cabling distribution. The unique wire basket design provides a durable underfloor infrastructure that resists deflection over the lifetime of the application. A pre-galvanized finish helps prevent corrosion and will not promote the growth of zinc whiskers that can potentially damage sensitive electronic equipment.

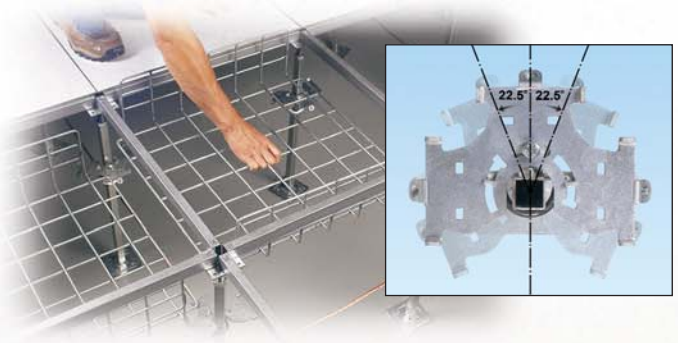






## Quick Installation

Typical underfloor cable pathway installations often require cutting basket sections and removing stringers. The GridRunner™ Wire Basket sections simply drop in between the floor stringers and attach to GridRunner™ Pedestal Brackets for fast assembly. The brackets provide secure mechanical connection to round and square raised floor pedestals with the use of a single tool and a single captive fastener. An integrated, rotating support plate feature allows the pedestal bracket to easily adapt to square pedestals that are not square to the grid.

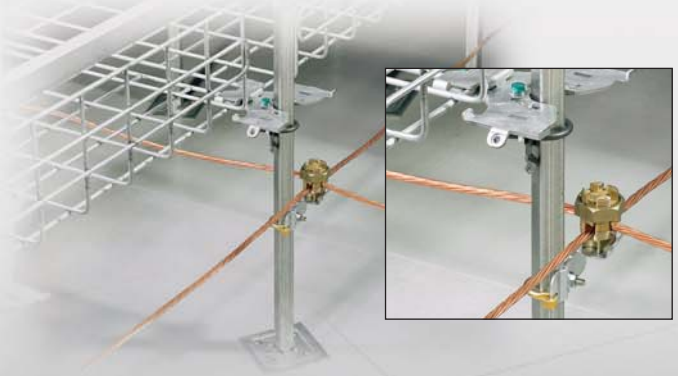


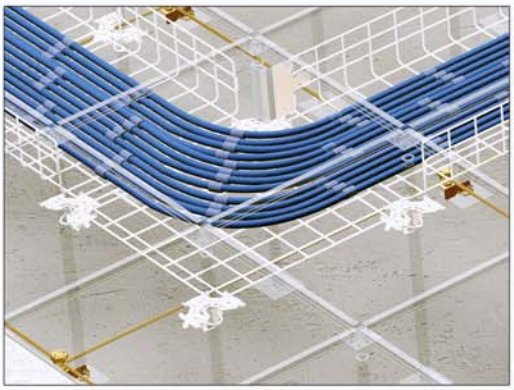

## Safety and Protection

Sharp edges on typical wire basket trays can damage cables and injure installers. All rounded edges on GridRunner™ Wire Basket sections eliminate the possibility of damaging cables during the initial installation, ensuring cabling integrity and network reliability. Snap-in bend radius control corners protect cabling from physical damage when routed around directional changes encountered in underfloor systems.

## Integral Bonding and Grounding

Most underfloor cable pathways require bonding or grounding jumpers to ensure the system provides a continuous ground path. The integral bonding feature of the GridRunner™ System ensures that all components are electrically bonded to each other as they are installed. This ensures full continuity between system components to protect equipment and personnel. It also reduces cost by eliminating the need for extra grounding components and the time required to install them.



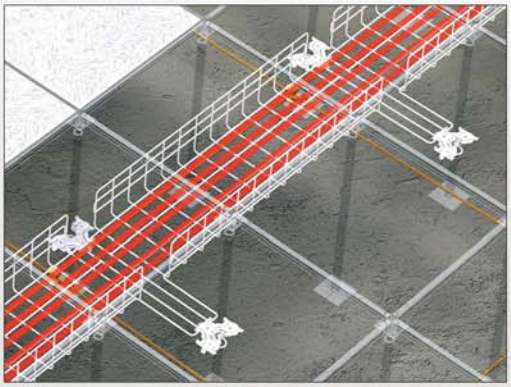


## 1 Drop-In Wire Basket Sections

- All rounded edges protect cables from damage and installers from injury
- Twelve sizes to provide optimum design flexibility and system scalability
- Wire basket sections provide capacity for high-density applications

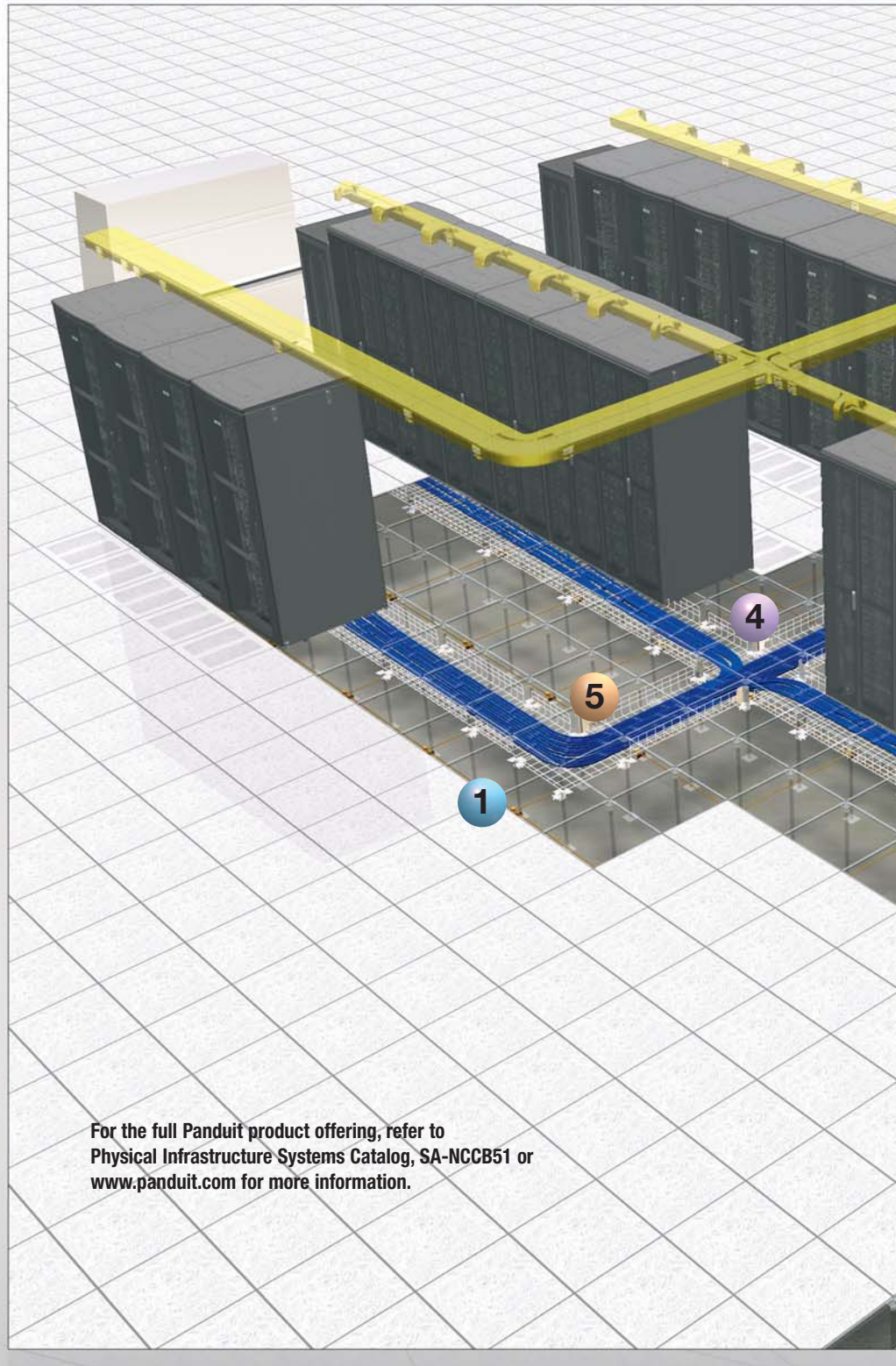
## 2 Offset Wire Basket Sections

- Position 12" wide basket to one side
- Provide greater access to area beneath the pathway system for more efficient utilization of underfloor space

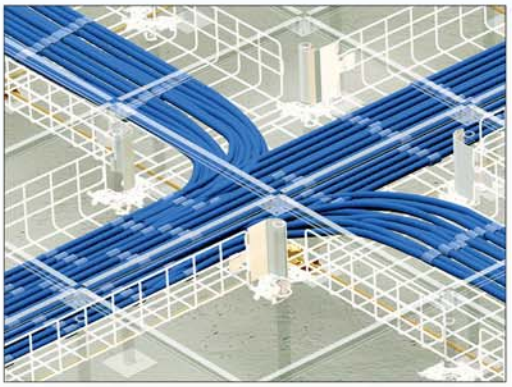


## 3 Versatile Pedestal Brackets

- Electrically bond to the pedestals and wire basket sections creating a continuous ground path to protect equipment and personnel
- Assemble at any height on the pedestal with a single tool for fast, easy installations
- Rotating support plate allows wire basket sections to be easily adapted to square pedestals that are not square to the raised floor grid reducing installation time

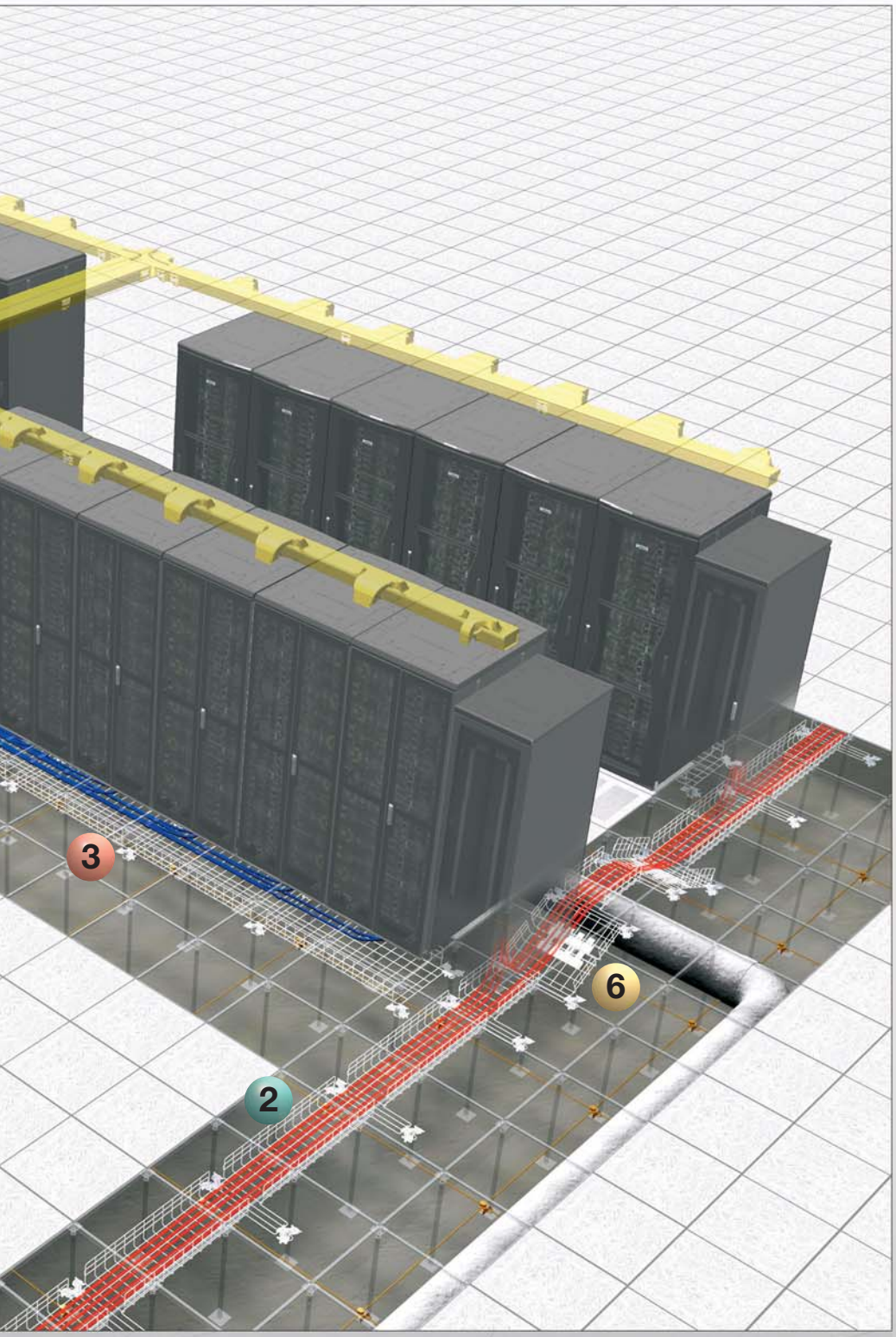



**For the full Panduit product offering, refer to Physical Infrastructure Systems Catalog, SA-NCCB51 or www.panduit.com for more information.**



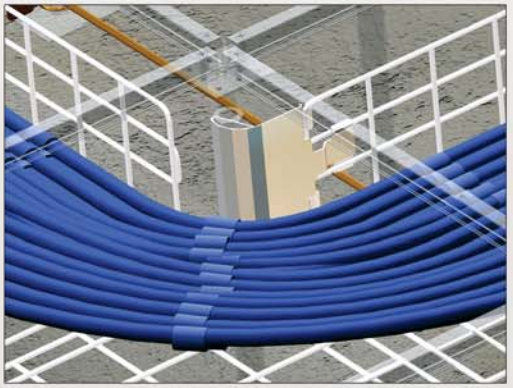
### 4 Universal Intersection

- Creates horizontal directional changes eliminating the need to field fabricate fittings for reduced installation cost
- Single component design simplifies specification and ordering



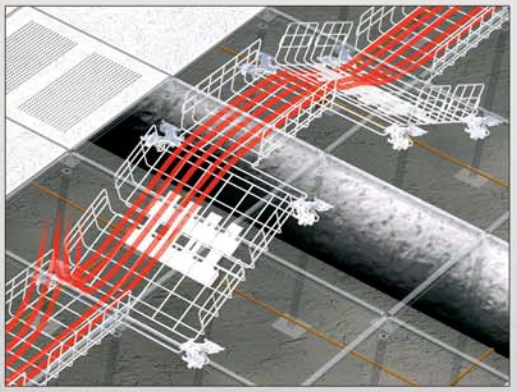

### 5 Bend Radius Control Corners

- Protect cables from physical damage enhancing network reliability
- Quick snap-in design eliminates need for tools or fasteners



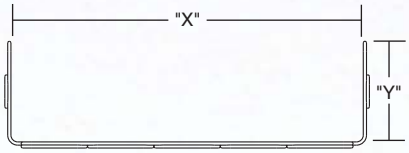
### 6 Adjustable Level Change Section

- Single component design enables up to 12" vertical directional change to increase installation flexibility
- Telescoping design eliminates need for cutting and field fabrication reducing installation time



# GridRunner™ Underfloor Cable Routing System Components

## Cable Fills for Grid-Runner™ Underfloor Cable Routing System

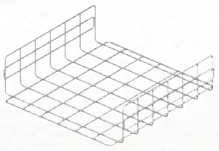



| "X" | "Y" | Internal Area | Category 6A (SD) Diameter 6.1mm 0.24" | Category 6A Diameter 7.6mm 0.30" | Category 6 Diameter 6.1mm 0.24" |
|---|---|---|---|---|---|
| | | | 50% Fill | 50% Fill | 50% Fill |
| 12.0 | 4.0 | 48.0 in² | 531 | 340 | 531 |
| 12.0 | 6.0 | 72.0 in² | 796 | 509 | 796 |
| 21.7 | 4.0 | 86.8 in² | 959 | 614 | 959 |
| 21.7 | 6.0 | 130.3 in² | 1440 | 922 | 1440 |

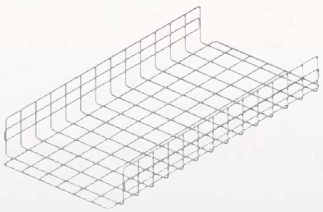
The above cable dimensions represent the nominal Panduit cable diameter per performance level.

## GridRunner™ Wire Baskets

- Drop-in wire basket sections are supplied in two widths (21" and 12"), two depths (4" and 6"), and two lengths (24" and 48")
- Feature all rounded edges
- Require no cutting or deburring of sharp edges
- Accommodate 24" x 24" and 600mm x 600mm raised floor grids
- Made from pre-galvanized steel wire



**GR21X6X24PG**



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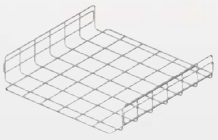
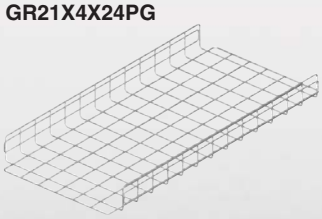


**GR21X4X24PG**

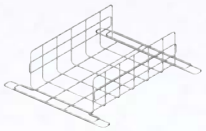


**GR21X4X48PG**

| Part Number | Part Description | Std. Pkg. Qty.* |
|---|---|---|
| **21" Wide Wire Basket Sections** | | |
| **GR21X6X24PG** | 21" wide x 6" deep x 24" long section used to carry cables horizontally throughout the system. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR21X6X48PG** | 21" wide x 6" deep x 48" long section used to carry cables horizontally throughout the system. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR21X4X24PG** | 21" wide x 4" deep x 24" long section used to carry cables horizontally throughout the system. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR21X4X48PG** | 21" wide x 4" deep x 48" long section used to carry cables horizontally throughout the system. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |

*Order number of pieces required, in multiples of Standard Package Quantity.

# GridRunner™ Wire Baskets (continued)



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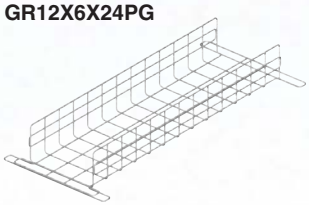

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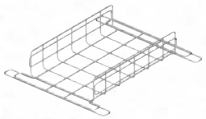

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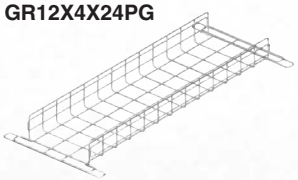

GR12X4X48PG

| Part Number | Part Description | Std. Pkg. Qty.* |
|---|---|---|
| **12" Wide Wire Basket Sections** | | |
| **GR12X6X24PG** | 12" wide x 6" deep x 24" long section used to carry cables horizontally throughout the system. Centers the basket between pedestal supports. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR12X6X48PG** | 12" wide x 6" deep x 48" long section used to carry cables horizontally throughout the system. Centers the basket between pedestal supports. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR12X4X24PG** | 12" wide x 4" deep x 24" long section used to carry cables horizontally throughout the system. Centers the basket between pedestal supports. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR12X4X48PG** | 12" wide x 4" deep x 48" long section used to carry cables horizontally throughout the system. Centers the basket between pedestal supports. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |

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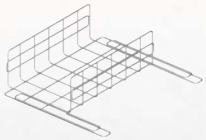

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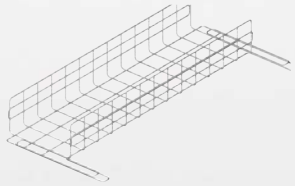

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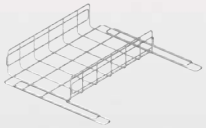

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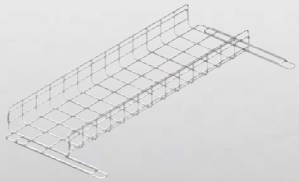


GR12X4X48OSPG

| Part Number | Part Description | Std. Pkg. Qty.* |
|---|---|---|
| **12" Wide Offset Wire Basket Sections** | | |
| **GR12X6X24OSPG** | 12" wide x 6" deep x 24" long section used to carry cables horizontally throughout the system. Offsets 12" basket towards one side. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR12X6X48OSPG** | 12" wide x 6" deep x 48" long section used to carry cables horizontally throughout the system. Offsets 12" basket towards one side. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR12X4X24OSPG** | 12" wide x 4" deep x 24" long section used to carry cables horizontally throughout the system. Offsets 12" basket towards one side. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |
| **GR12X4X48OSPG** | 12" wide x 4" deep x 48" long section used to carry cables horizontally throughout the system. Offsets 12" basket towards one side. Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor pedestal. | 2 |

*Order number of pieces required, in multiples of Standard Package Quantity.

## GridRunner™ Pedestal Bracket

- Allows the wire basket sections to be supported on three sides of a single support bracket
- Forms a mechanical electrical bond to the raised floor pedestal
- Optimized for use with both 7/8" square and 1" diameter raised floor pedestals
- Made from pre-galvanized steel

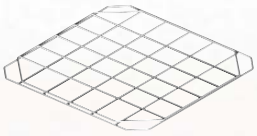
GRPBPG

GRCLAMPPG-X

| Part Number | Part Description | Std. Pkg. Qty.* | Std. Ctn. Qty. |
|---|---|---|---|
| **Pedestal Bracket** | | | |
| **GRPBPG** | Pre-assembled bracket quickly attaches to all 7/8" square and 1" diameter raised floor pedestals. Provides secure mounting point on three sides of the pedestal for all basket sections and an electrical bond to the pedestal. Use 7/16" nut driver to assemble to pedestal. Requires use of pedestal clamp GRCLAMPPG-X to attach wire baskets, universal intersection, and level change sections to pedestal bracket. | 1 | 10 |
| **Pedestal Clamp** | | | |
| **GRCLAMPPG-X** | Used in conjunction with pedestal bracket GRPBPG to fasten wire basket sections to the pedestal. | 10 | 100 |

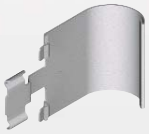
*Order number of pieces required, in multiples of Standard Package Quantity.

## GridRunner™ Accessories



GRFWC21PG

GRBRC6PG



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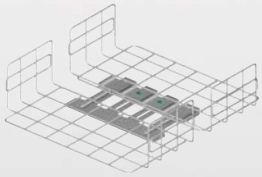


GRLC21X6PG

GPQC1/0

| Part Number | Part Description | Std. Pkg. Qty.* | Std. Ctn. Qty. |
|---|---|---|---|
| **Universal Intersection** | | | |
| **GRFWC21PG** | Mounts to GRPBPG pedestal bracket. Use to create four way cross, horizontal tee, right angles and transitions to other size basket sections. Use 7/16" nut driver to assemble. | 1 | — |
| **Bend Radius Control Corners** | | | |
| **GRBRC6PG** | Bend radius control corner for 6" deep basket sections. Snaps into corners to provide 1.5" (38mm) bend radius control. Sheet metal construction. | 1 | 10 |
| **GRBRC4PG** | Bend radius control corner for 4" deep basket sections. Snaps into corners to provide 1.5" (38mm) bend radius control. Sheet metal construction. | 1 | 10 |
| **21" Wide Level Change Sections** | | | |
| **GRLC21X6PG** | 21" wide x 6" deep level change section used to create vertical offsets up to 12". Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor support pedestal. | 1 | — |
| **GRLC21X4PG** | 21" wide x 4" deep level change section used to create vertical offsets up to 12". Attaches to GRPBPG pedestal bracket to provide secure connection and electrical bond to raised floor support pedestal. | 1 | — |
| **Access Floor Grounding Clamp** | | | |
| **GPQC1/0** | Access floor grounding clamp accepts up to two conductors in sizes #6 -1/0 AWG; 3.5" (88.9mm) length, 1.75" (44.5mm) width, 3.5" (88.9mm) height; works with 3/4" (19.1mm) to 7/8" (22.2mm) square and 3/4" (19.9mm) to 1" (25.4mm) round pedestals. | 1 | 10 |

*Order number of pieces required, in multiples of Standard Package Quantity.

## Design Tools

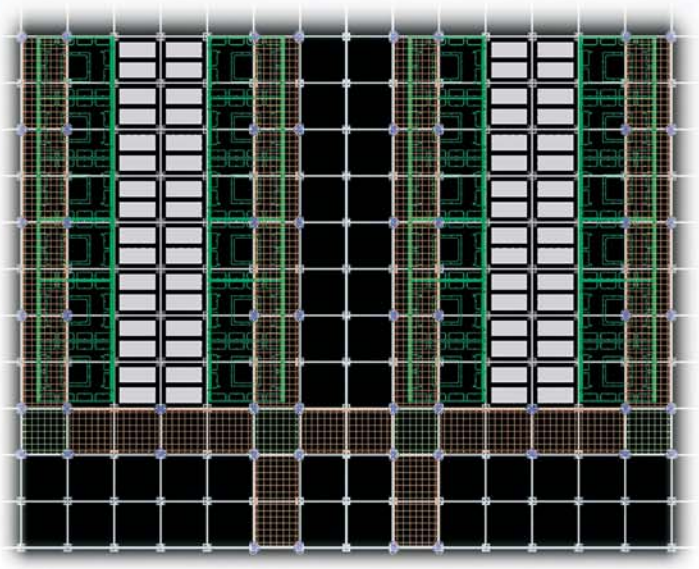
The GridRunner™ Underfloor Cable Routing System is offered with two different design tools that allow accurate system drawings to be created which speeds overall system design, specification, and implementation.

**Data Center VISIO* Layout Tool includes:**

- Drag & Drop Functionality
- Ability to design in 2D (stencils for three different views are provided)
- Automated BOM Generator
- Free download from www.panduit.com/gridrunner/visio

**GridRunner™ Design Tool for AutoCAD** includes:**

- Drag & Drop Functionality
- Ability to design in 2D and 3D
- Versions compatible with AutoCAD** and AutoCAD LT**
- Automated BOM Generator
- Available on CD, SA-FRCD02 free through Customer Service



*VISIO is a registered trademark of Microsoft Corporation in the United States and/or other countries.
**AutoCAD and AutoCAD LT are registered trademarks of Autodesk, Inc.

## Standards Compliance

Classification to these standards helps ensure both electrical safety and loading performance safety of the GridRunner™ Underfloor Cable Routing System for those individuals working in and around the system.

| | |
|---|---|
| **UL Underwriters Laboratories, Inc.**<br>Underwriters Laboratories, Inc. is an independent, not-for-profit safety testing and certification organization based in the United States. | UL Classified as an Equipment Grounding Conductor<br>Classification to this standard provides a 100 maximum fuse ampere rating, circuit breaker ampere trip setting, or circuit breaker protective relay ampere trip setting for ground-fault protection of any cable circuit within the wire basket system.<br><br>This system provides a bolted mechanical bond between system components eliminating the need for bonding jumpers between wire basket sections. |
| **NEMA National Electrical Manufacturers Association**<br>NEMA provides a forum for the standardization of electrical equipment, enabling consumers to select from a range of safe, effective, and compatible electrical products.<br><br>**CSA Canadian Standards Association**<br>Canadian Standards Association is a not-for-profit membership based association serving business, industry, government, and consumers in Canada and the global marketplace. CSA works in Canada and around the world to develop standards that enhance public safety and health. | NEMA VE1/CSA 22.2 (Metal Cable Tray Systems)<br>Certification to this standard ensures that electrical continuity exists between wire basket sections when connected to the pedestal bracket clamping mechanism complying with the electrical resistance requirements of the standard. Furthermore, the load rating has been identified ensuring the wire basket sections will not fail when utilized for its intended application. Reference UL File #E316431. |
| **RoHS** | All GridRunner™ Underfloor Cable Routing System components are RoHS compliant. |

# Real-World Solutions to Ensure the Success of Our Customers

*With a proven reputation for excellence and technology innovation, a robust ecosystem of global partners, and long-term alliances with top industry leaders, Panduit is a valuable, trusted partner offering strategic vision and real-world solutions to ensure the success of our customers.*

## Innovative Technology Leadership

Panduit is an industry leader in developing innovative technology solutions that meet the rapidly evolving needs of our customers around the world. Our commitment to continued leadership is supported by significant ongoing investment, dedicated manufacturing facilities, strategic technology alliances, and collaborative R&D with other industry leaders.

## Global Business & Commitment

Panduit's ongoing commitment to excellence and our technology alliances with key industry leaders such as Cisco Systems, EMC, Emerson, and IBM, enables our highly skilled and knowledgeable global sales, systems engineering, and technical support teams to engage with critical customer challenges that range from initial problem determination all the way to resolution. Local specialists, trained to global standards and competencies, provide consistent regional support that brings value to local business. Our global value chain, which combines manufacturing, distribution, and service, provides prompt responses to customer-related issues, and streamlines procurement and delivery to any global destination.

## Best-in-Class Partner Ecosystem

Panduit employs a consultative approach to identify customer needs and engage appropriate partners in a collaborative fashion to serve our customers. Panduit's robust ecosystem of architects, consultants, engineers, designers, systems integrators, contractors, and distributors offer a full portfolio of lifecycle services. Our partners are trained on relevant services to Plan & Design, Build & Deploy, and Maintain & Operate to deliver predictable and measurable results.

## Worldwide Alliances

Panduit has established long-term strategic alliances with top global industry leaders such as Cisco Systems, EMC, HP, IBM, Liebert, and Rockwell Automation to develop and integrate innovative, holistic solutions for our customers. We continually invest in relationships and resources for solving our customers' greatest business challenges.

## Eco-Sustainability & Global Citizenship

With a long-standing commitment to environmental excellence, Panduit continually develops and implements solutions designed to protect, replenish, and restore the world in which we live and operate. This commitment is demonstrated by Panduit's LEED-certified new world headquarters and future sustainable building plans using its own revolutionary Unified Physical Infrastructure℠ vision to enable convergence of critical systems for driving energy efficiency.

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