

# Panduit® StructuredGround™ Telecommunications Bonding

- Increases reliability by minimizing the risk to network equipment and interconnecting cabling from electrical hazards
- Facilitates communications by improving immunity from electromagnetic interference (EMI)
- Complete solution available, designed for flexibility and ease of installation with virtually any racks or cabinets



## Five Steps to Bonding Data Centers and Telecommunications Spaces

### Step 1. Protect against electrostatic discharge (ESD)



Part Number	Part Description	Quantity Required
RGESD2-1	ESD wrist strap docking port kit for threaded rail racks and cabinets (#12-24 and M6).	1 per rack with active equipment*
RGESD2B-1	ESD wrist strap docking port kit for cage nut rail racks and cabinets.	1 per rack with active equipment*
RGESDWS	Wrist strap with 6' (2M) coil cord.	1 per ESD wrist strap docking port kit*

\*One ESD wrist strap port can be used effectively for up to three open-faced racks, however it is recommended to use one port for each enclosed cabinet because the doors may interfere.

### Step 2. Bond the equipment to the rack or cabinet



Part Number	Part Description	Quantity Required
<b>For equipment with a grounding pad (e.g. core switches), use an equipment jumper to bond the equipment to the rack or busbar.</b>		
RGEJ657PFY	Equipment jumper kit (also known as a Unit Bonding Conductor); 57" (1.4M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on one end.	1 per piece of equipment
CNBK	Bonding cage nut for cage nut rail racks and cabinets.	1 per piece of equipment
<b>For equipment that bonds through its mounting flanges (no grounding pad) (e.g. top of rack switches), use bonding hardware to connect the equipment to the rack.</b>		
RGTBSG-C	Bonding screw for threaded rail racks.	1 per piece of equipment
CNBK	Bonding cage nut for cage nut rail racks and cabinets.	1 per piece of equipment

### Step 3. Ensure the rack or cabinet is electrically continuous

Use a busbar to bond the vertical equipment mounting rails together to create continuity in racks/cabinets. A busbar can also be used to bond multiple equipment jumper kits to a single rack unit (RU).



Part Number	Part Description	Quantity Required
RGRB19Y	Busbar for threaded rail racks and cabinets; provided with thread-forming screws.	1 per rack
RGRB19CN	Busbar for cage nut rail racks and cabinets; provided with bonding studs for cage nut applications.	1 per rack

All Panduit racks and cabinets are designed to be electrically continuous, so they do not require a busbar bonded to the rails.

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## Step 4. Bond the rack or cabinet to the Telecommunications Grounding Busbar (TGB)



Part Number	Part Description	Quantity Required
<b>For small installations with only a few racks/cabinets, bond racks/cabinets directly to the TGB using a Telecommunications Equipment Bonding Conductor (TEBC).</b>		
GJ672UH	TEBC; 72" (1.8M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	1 per rack
GJ696UH	TEBC; 96" (2.4M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
GJ6120UH	TEBC; 120" (3.0M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
GJ6144UH <sup>^</sup>	TEBC; 144" (3.7M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
GJ6168UH	TEBC; 168" (4.3M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
GJ6192UH	TEBC; 192" (4.9M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
GJ6216UH	TEBC; 216" (5.5M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
GJ6240UH	TEBC; 240" (6.1M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
GJ6264UH	TEBC; 264" (6.7M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
GJ6288UH	TEBC; 288" (7.3M); #6 AWG (16mm <sup>2</sup> ) jumper; pre-terminated on both ends.	
HDW1/4-KT	Stainless steel hardware for the TGB and thread-forming screws for the rack.	1 per TEBC
CNBK	Bonding cage nut for cage nut rail racks and cabinets.	2 per jumper
GB2B0306TPI-1	TGB; 1/4" x 2" x 12".	1 per room

<b>For large installations, like a computer room, use Rack Bonding Conductors (RBC) for bonding individual racks and cabinets to a Supplemental Bonding Grid (SBG, a.k.a. MCBN)</b>		
RGCBNJ660P22	RBC; 60" (1.5M); #6 AWG (16mm <sup>2</sup> ) jumper; provided with HTAP connector for #6 AWG – #2 AWG (16mm <sup>2</sup> – 25mm <sup>2</sup> ) SBG.	1 per rack
CNBK	Bonding cage nut for cage nut rail racks and cabinets.	2 per jumper
HTCT250-2-1	HTAP for bonding 1/0 TGB conductor to #6 AWG – #2 AWG SBG.	1 per TGB
LCC1/0-14AW-X	Two-hole copper compression lug for bonding 1/0 conductor to TGB.	1 per TGB
HDW1/4-KT	Stainless steel hardware for bonding the two-hole copper compression lug to the TGB.	1 per TGB
GPQC07-1/0	Access floor bonding clamp; works with round pedestals: 3/4" (19.1) – 7/8" (22.2mm).	Use one connector wherever SBG conductors cross one another
GPQC10-1/0 <sup>^</sup>	Access floor bonding clamp; works with square pedestals: 7/8" (22.2mm), works with round pedestals: 1" (25.4mm) – 1 1/8" (28.6mm).	
GPQC15-1/0	Access floor bonding clamp; works with square pedestals: 7/8" (22.2mm), works with round pedestals: 1 1/2" (38.1mm).	
GB2B0306TPI-1	TGB; 1/4" x 2" x 12".	1 per room

<sup>^</sup>Most popular product.

## Step 5. Bond nearby conductive items, such as pathways, to the TGB



Part Number	Part Description	Quantity Required
<b>Bond the pathway to the TGB.</b>		
GACB-2	Bonding bracket; 1.63" (41.4mm) width, 3.95" (100.3mm) height, 5.22" (132.6mm) depth; provided with one mounting screw.	1 per pathway
GACB-3	Bonding bracket; 1.88" (47.6mm) width, 4.58" (116.3mm) height, 5.29" (134.4mm) depth; provided with one mounting screw.	
GACBJ618U	Jumper for bonding bracket to the TGB; 18.0" (457mm) length; #6 AWG (16mm <sup>2</sup> ); pre-terminated on both ends with straight, two-hole, long barrel compression lugs; provided with .16 oz. (5cc) of antioxidant and four mounting screws.	1 per pathway
HDW1/4-KT	Stainless steel hardware for bonding the GACBJ618U to the TGB.	1 per pathway
<b>Bond pathway sections together.</b>		
GACB-2	Bonding bracket; 1.63" (41.4mm) width, 3.95" (100.3mm) height, 5.22" (132.6mm) depth; provided with one mounting screw.	2 per bond
GACB-3	Bonding bracket; 1.88" (47.6mm) width, 4.58" (116.3mm) height, 5.29" (134.4mm) depth; provided with one mounting screw.	
GACBJ618U	Jumper for bonding pathway sections; 18.0" (457mm) length; #6 AWG (16mm <sup>2</sup> ); pre-terminated on both ends with straight, two-hole, long barrel compression lugs; provided with .16 oz. (5cc) of antioxidant and four mounting screws.	1 per bond
<b>Bond alternate wire basket sections.</b>		
SBC3-C	Copper split bolt #4 STR – #8 STR.	2 per bond

All Panduit pathway systems are designed to be electrically continuous, so they do not require bonding of sections.

For more information

Visit us at [www.panduit.com](http://www.panduit.com)

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Printed in the U.S.A.  
GRFL02--SA-ENG  
7/2013

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