

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 |
|---|---|--------------------------|
| For equipment with a grounding pad (e.g. core switches), use an equipment jumper to bond the equipment to the rack or busbar. | | |
| RGEJ657PFY | Equipment jumper kit (also known as a Unit Bonding Conductor); 57" (1.4M); #6 AWG (16mm ²) 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 |
| 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. | | |
| 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.

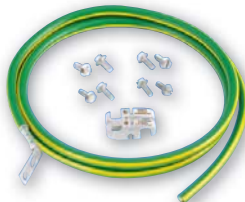
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Step 4. Bond the rack or cabinet to the Telecommunications Grounding Busbar (TGB)



| Part Number | Part Description | Quantity Required |
|---|---|-------------------|
| For small installations with only a few racks/cabinets, bond racks/cabinets directly to the TGB using a Telecommunications Equipment Bonding Conductor (TEBC). | | |
| GJ672UH | TEBC; 72" (1.8M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | 1 per rack |
| GJ696UH | TEBC; 96" (2.4M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | |
| GJ6120UH | TEBC; 120" (3.0M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | |
| GJ6144UH^ | TEBC; 144" (3.7M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | |
| GJ6168UH | TEBC; 168" (4.3M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | |
| GJ6192UH | TEBC; 192" (4.9M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | |
| GJ6216UH | TEBC; 216" (5.5M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | |
| GJ6240UH | TEBC; 240" (6.1M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | |
| GJ6264UH | TEBC; 264" (6.7M); #6 AWG (16mm ²) jumper; pre-terminated on both ends. | |
| GJ6288UH | TEBC; 288" (7.3M); #6 AWG (16mm ²) 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 |

| | | |
|---|---|---|
| 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) | | |
| RGCBNJ660P22 | RBC; 60" (1.5M); #6 AWG (16mm ²) jumper; provided with HTAP connector for #6 AWG – #2 AWG (16mm ² – 25mm ²) 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^ | 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 |

^Most popular product.

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



| Part Number | Part Description | Quantity Required |
|---|---|-------------------|
| Bond the pathway to the TGB. | | |
| 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 ²); 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 |
| Bond pathway sections together. | | |
| 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 ²); 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 |
| Bond alternate wire basket sections. | | |
| 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.