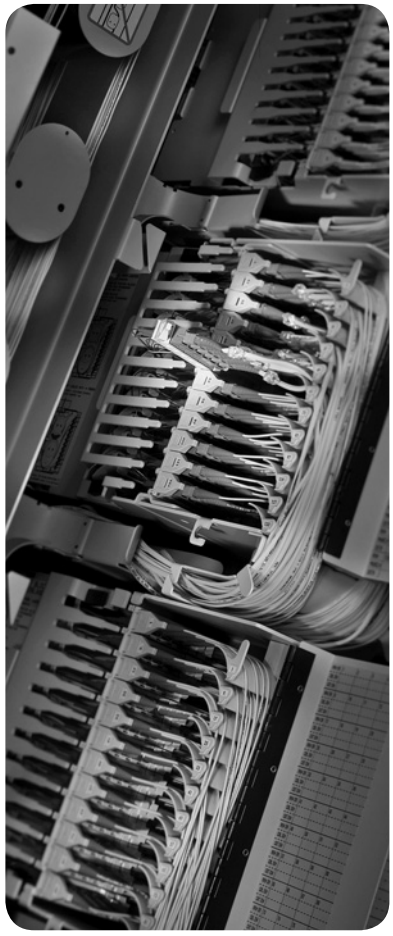
NG3 Optical Distribution Frame



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NG3® Optical Distribution Frame
Introduction

Frames

ADC's NG3® product line is Telcordia® GR-449-CORE, Issue 2 compliant and designed to meet today's high-density network needs. Each frame option is designed with an emphasis on superior cable management and ease of use, including features such as ample trough space for cable and jumpers, easy access to connectors and storage for jumpers. The frame sections are shipped from the factory fully equipped with all cable management hardware including integrated jumper slack storage.

Termination Panel

ADC's 72-position termination panel is available in configurations up to 432 terminations (stacked) with multiple adapter types and can be ordered with adapters only or preterminated with intrafacility (IFC) or outside plant (OSP) cables for ease of installation.

Value-Added Module (VAM) Chassis

Adding signal management and enhancement functions, such as splitters, couplers and wavelength division multiplexers, optimizes the value of your fiber network, by providing nonintrusive access to the optical signal for monitoring and testing signal integrity. The NG3 VAM chassis accommodates various splitter and WDM MicroVAM modules.

Fiber Optic Terminal Jumper Storage Panel

ADC's fiber optic terminal jumper storage panel is used as a storage apparatus for up to 5 meters (16-feet) of equipment (FOT) jumpers. This panel can be installed between fiber frames and at the end of a lineup.

Product Overview

Recommended applications	Medium to large fiber count applications. GR-449-CORE, Issue 2 compliant
Description	Using 72-position panels in configurations up to 432 terminations (6 stacked)
Number of fibers, future growth potential	Up to 23,000
Flexibility/ability to grow	Yes
Footprint	30" Wide x 24" Deep
Interconnect	Good
Cross-connect	Excellent
Accommodates off-frame splicing	Excellent
Rear access	Must have full access to front and rear
All front access	No
Density – terminations per frame	1,440 terminations per frame
Front access to rear connector	Yes
VAM capabilities	Yes. Uses MicroVAM. Separate panel required
Slack storage location	On-frame (integrated jumper slack storage)
Connector access	Sliding adapter pack
Horizontal trough space available	30"

NG3® Optical Distribution Frame

Things to Consider When Ordering

Frame Lineup Capacity Comparisons

	NG3 High-Density Fiber Distribution System (Generation III)	Standard ODF System (Generation I & II)
Frame termination capacity	1,440	648
Horizontal trough configuration	(6) five-inch wide rear troughs and eight-inch wide front upper and lower cable troughs	Five-inch wide front upper and lower cable troughs
Maximum number of frames in a lineup using 2.0 mm jumpers	18	6
Maximum number of frames in a lineup using 1.7 mm jumpers	26	10
Maximum number of terminations allowed in a frame lineup before exceeding two-inch pileup of 2.0 mm jumpers*	25,920	4,120
Maximum number of terminations allowed in a frame lineup before exceeding two-inch pileup of 1.7 mm jumpers*	37,440	6,422
Recommended minimum number of frames for initial installation	1	1

*Calculations based on Telcordia® GR-449-CORE, Issue 2 requirements.

Block and Frame Termination Capacity

NG3 Block Termination Capacity	NG3 Frame Termination Capacity
72	1,440

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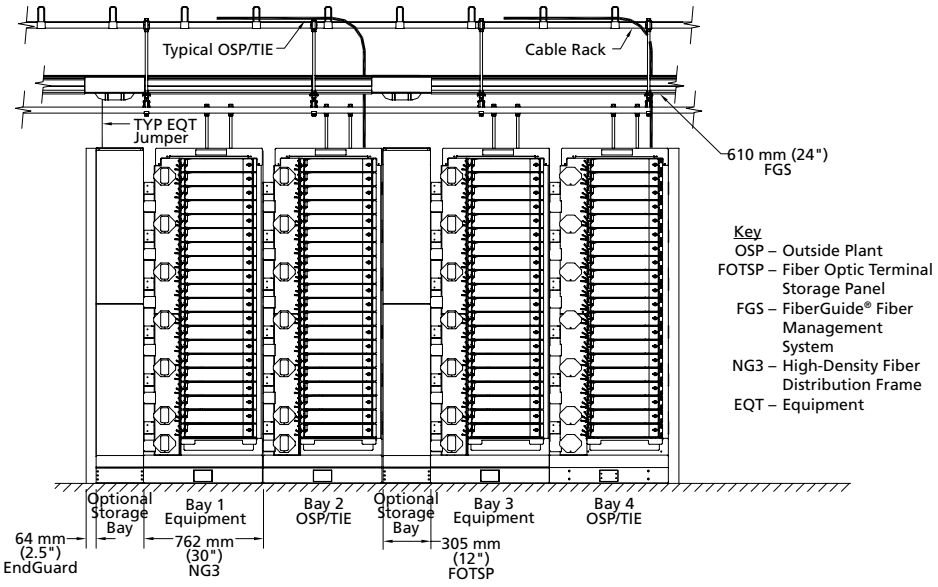
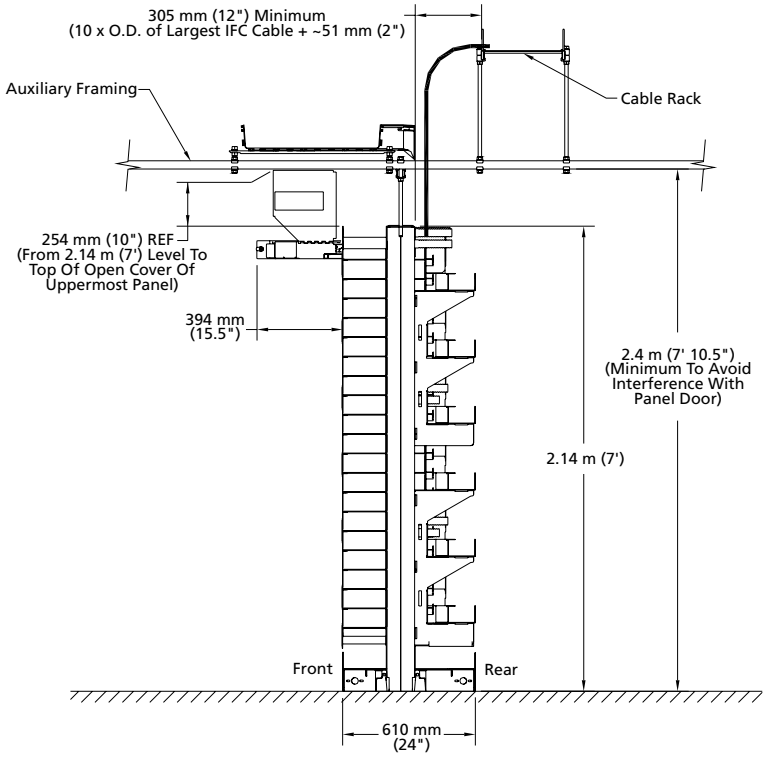
NG3® Optical Distribution Frame

Things to Consider When Ordering

Zoning Recommendations (by Frame)



Front Elevation



Side View

NG3® Optical Distribution Frame

Things to Consider When Ordering

How to Order

Main Components of the NG3® (Next Generation Fiber Frame 3)

	Catalog Number	Quantity
1) Select the desired Frame		
- Fiber Main Distributing Frame- Page 38	_____	_____
- Equipment Frame - Page 44	_____	_____
2) Select the desired Fiber Termination Panel		
- Preterminated Fiber Termination Panel with Multifiber Cable - IFC - Page 39	_____	_____
- Adapter-Only Fiber Termination Panel - Page 40	_____	_____
- IFC or OSP Cable Clamp Kit - Page 41	_____	_____
3) Fiber Optic Terminal Jumper Storage Panel (Rear Facing) - Page 43	_____	_____

Optional Equipment

4) Value-Added Module (VAM) Chassis		
- NG3 VAM Chassis - Page 42	_____	_____
- LGX Compatible VAM Chassis - Page 86	_____	_____
5) NGF to NG3 Frame Spacer Kit - Page 45	_____	_____
6) End Guard - Page 46	_____	_____
7) Work Shelf - Page 46	_____	_____
8) Writing Shelf - Page 46	_____	_____
9) Communications Panel - Page 47	_____	_____
10) Stand-Off Bracket Kit - Page 47	_____	_____
11) Frame Extender - Page 48	_____	_____
12) Grounding Kit - Page 48	_____	_____
13) AC Outlet Kit - Page 48	_____	_____
14) Frame Installation Kit - Page 49	_____	_____
15) Isolation Pad - Page 49	_____	_____
16) Lock - Page 49	_____	_____
17) Sliding Adapter Pack - Page 50	_____	_____
18) Patch Cord - Pages 122–126*	_____	_____
19) In-Line Attenuator - Page 127	_____	_____

*See page 51 for standard cross-connect patch cord lengths.

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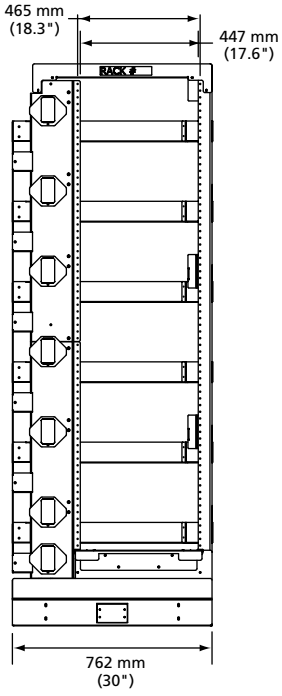
NG3® Optical Distribution Frame

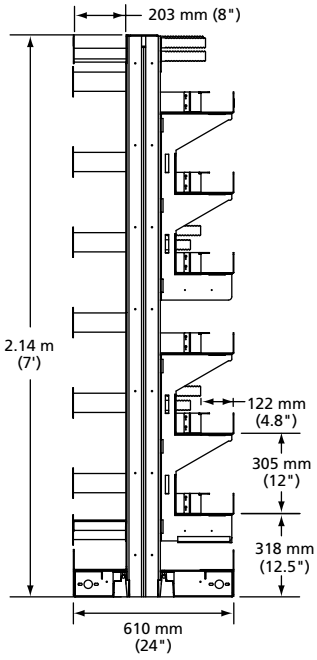
Fiber Main Distributing Frame

The high-density fiber main distributing frame (FMDF) is the cornerstone of the NG3® product line. This seismic zone 4 rated frame utilizes an industry-standard base frame and has six horizontal rear troughs and front upper and lower troughs. This abundant trough space minimizes fiber pileup and congestion, leading to easier jumper traceability and removal. The frame has mounting positions for 20 NG3 72-position, high-density fiber termination panels for a total of 1,440 terminations. The vertical cable guide and slack storage system are designed to accommodate 1,440 terminations using 2.0 mm patch cords while maintaining a 1.5-inch bend radius protection at all bending locations. For additional flexibility in cable routing, the frame also includes a built-in jumper storage panel on the left side. The open design of this panel allows for nearly direct routing and shorter patch cord lengths.

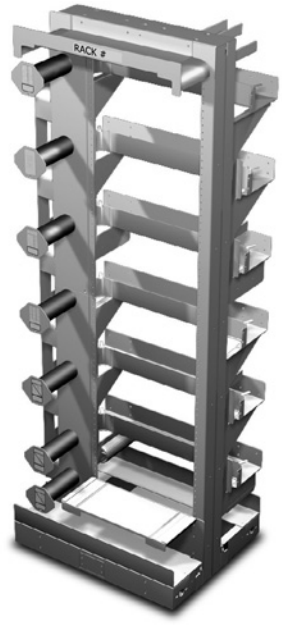
The NG3 frame system meets interoperability standards covered in GR-449-CORE, Issue 2 and accommodates standard 19-inch wide frame mount equipment.



Front View



Side View



ISO View

Ordering Information

Description	Dimensions (HxWxD)	Maximum Termination Capacity	Catalog Number
NG3 fiber main distributing frame	2.14 m x 762 mm x 610 mm (7' x 30" x 24")	1,440 terminations per frame	NG3-MFTWN7A00

The frame does not include a frame installation kit.
Order the appropriate kit (FDF-ACC146 or RINST-FLR) on page 49.

NG3® Optical Distribution Frame

Preterminated Fiber Termination Panels with Multifiber Cable – IFC

Preterminated NG3 panels are available with either indoor or outdoor rated cable in ribbon or stranded configurations. All panels are 100% factory tested to guarantee continuity and reliable connections. Preterminated NG3 panels decrease the time required for installation and reduces labor costs. Panels can be configured with cable counts of 72, 144, 216 and 432. Panels loaded with 144, 216 and 432 cables are built using multiple 72-position panels that are preassembled and are installed as one unit.

Definition of Variables	
1	**Connector and Adapter Type #1** Specific adapter/connector type required at the FTB
2	**Connector Type #2** Specific connector type required at the far end opposite the FTB
3	**Cable Type** Type of cable to be terminated to the FTB
4	**Cable Length** Required length of the cable terminated to the FTB

Catalog Number

NG3-TPA ____ ____ ____ ____ ____

1 Connector and Adapter Type #1

Singlemode	
7	SC ultra polish
L	SC angled polish
2	FC ultra polish
K	LC ultra polish
M	LC angled polish
Multimode (62.5/125 µm)	
9	SC
P	LC

2 Connector Type #2

Singlemode	
0	No connector/stub end
7	SC ultra polish
L	SC angled polish
2	FC ultra polish
K	LC ultra polish
M	LC angled polish
Multimode (62.5/125 µm)	
0	No connector/stub end
9	SC
P	LC

3 Cable Type (IFC Riser)

Singlemode	
KA	72-fiber ribbon
ZB	72-fiber stranded
FJ	144-fiber ribbon[2]
ZD	144-fiber stranded[2]
K3	216-fiber ribbon[2]
M8	432-fiber ribbon[2]
Multimode (62.5/125 µm)	
VM	72-fiber stranded
YM	144-fiber stranded

4 Cable Length[1]

Standard Single-Ended	
016	16 m (50')
023	23 m (75')
031	31 m (100')
046	46 m (150')
061	61 m (200')
077	77 m (250')
092	92 m (300')
122	122 m (400')
153	153 m (500')
Non-Standard	
Use XXX for non-standard length in meters	

[1] Panels using ADC's standard cable offering have a shorter lead time than panels using a specific cable manufacturer. ADC only provides GR-409 compliant cable that meets or exceeds our high quality standards. Standard cable offering above will use Corning SMF28-e, Sumitomo, Alcatel, Bertek, Pirelli or similar singlemode fiber based on current market availability.

[2] All panels are loaded with 72 adapters. 144 fiber (stranded and ribbon) cables are attached to 2 panels. 216 fiber (ribbon) cables are attached to 3 panels. 432 fiber (ribbon) cables are attached to 6 panels.

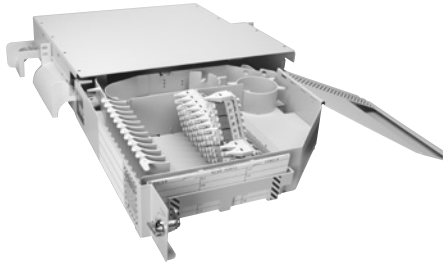
Other configurations are available upon request. Please contact ADC Technical Assistance Center.

NG3® Optical Distribution Frame

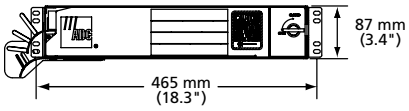
Adapter-Only Fiber Termination Panels

Fiber termination panels without fiber can be ordered fully loaded with adapters. All panels with adapters only are configured to terminate single or dual jumpers on the rear of the panel. If a multifiber breakout style cable (i.e., OSP/IFC) is to be terminated to the rear of the panel, a separate cable clamp kit is required (see page 41). ADC does not recommend mounting the NG3 fiber termination panel in any frame except ADC's NG3® high-density frame.

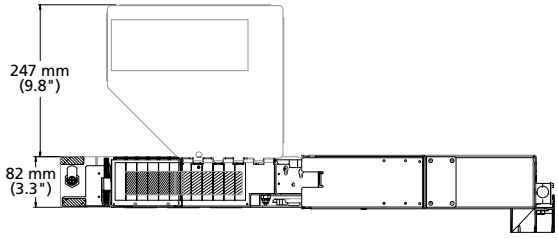
Shown Closed



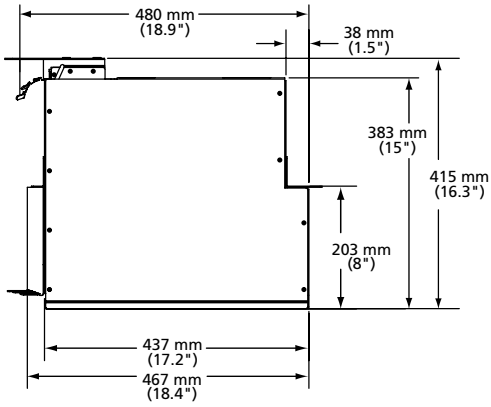
Shown Open



Front View



Right Side View
(Shown with Tray Open and Tray Cover at Tallest Position for Simplicity, Labels not Shown)



Top View

Catalog Number
NG3-TPA __00

Adapter Type

Singlemode	
7	SC ultra polish
L	SC angled polish
2	FC ultra polish
K	LC ultra polish
M	LC angled polish
Multimode	
9	SC
P	LC

Other configurations are available upon request. Please contact ADC Technical Assistance Center.

NG3® Optical Distribution Frame
Cable Clamp Kit

IFC Clamp Kit

Unterminated adapter-only panels ordered on page 40 are configured to accommodate single fiber jumpers or multifiber breakout cables. Additional hardware is required to load a preterminated intrafacility cable (IFC). The conversion kit (shown here) contains the cable management hardware, brackets and cable clamps required to properly clamp IFC. Each panel has two cable clamp positions.

IFC Clamp Kit
(NG3-ACCIFCKIT Shown)

Ordering Information

Description	Catalog Number
IFC single clamp kit	NG3-ACCIFCKIT
IFC triple clamp kit	NG3-ACC3TRCLMP

OSP Cable Clamp Kit

This cable clamp kit is available for securing OSP (outside plant) cable on the rear of the hinged fiber termination panel. Each panel has two cable clamp mounting positions and each kit contains proper OSP grounding hardware.

Ordering Information

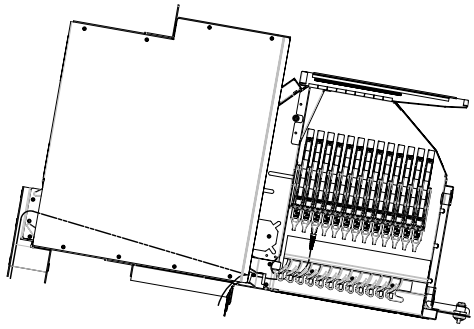
Description	Catalog Number
OSP cable clamp kit for OSP dielectric cable with grounding hardware (included with fiber termination blocks with IFC)	NGF-ACCCLMP08

NG3® Optical Distribution Frame

Value-Added Module (VAM) MicroVAM Chassis

The NG3® MicroVAM chassis houses up to 13 MicroVAM modules. These MicroVAM modules are ADC's highest density and most versatile VAM modules.

MicroVAM Chassis



NG3-VPB0000
(Shown Loaded)

Ordering Information

Description	Dimensions (HxWxD)	Catalog Number
NG3 MicroVAM chassis, unloaded; accommodates up to 13 single MicroVAMs for monitoring optical signals	89 mm x 483 mm x 381 mm (3.5" x 19" x 15")	NG3-VPB0000

Value-Added Module (VAM) System

ADC offers an expansive line of monitor, splitter, WDM and CWDM VAM plug-in modules designed to meet all application needs. Please reference the **Value-Added Module (VAM) System Catalog #101663AE** for details at www.adc.com or contact ADC Customer Service.

NG3® Optical Distribution Frame

Frame Accessories

Fiber Optic Terminal Jumper Storage Panel (Rear Facing)

In cross-connect applications, a jumper (often single fiber) is routed from the fiber optic terminal (FOT) equipment to the rear port of an adapter-only NG3® panel through a fiber raceway system, such as ADC's FiberGuide® system. Traditionally the excess slack in those jumpers has been stored at the FOT equipment end. However, there typically is not a provision for storing excess jumper slack near the FOT equipment. The optional fiber optic terminal equipment jumper storage panel is a filler panel that mounts next to the NG3 frame and provides storage capacity for up to 3.6 meters (12 feet) of excess jumper slack. The panel is mounted to the left side of the frame it is serving and is accessed from the rear of the frame.

Ordering Information

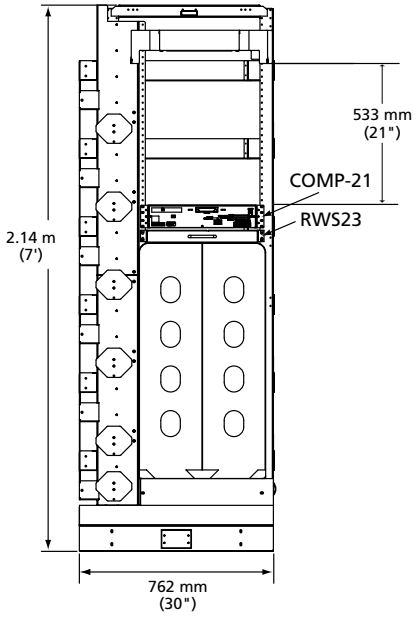
Description	Dimensions (HxWxD)	Catalog Number
Fiber optic terminal jumper storage panel; for use with single and dual jumpers	2.14 m x 305 mm x 610 mm (7" x 12" x 24")	NG3-FOTSP3TWN7A12

NG3® Optical Distribution Frame

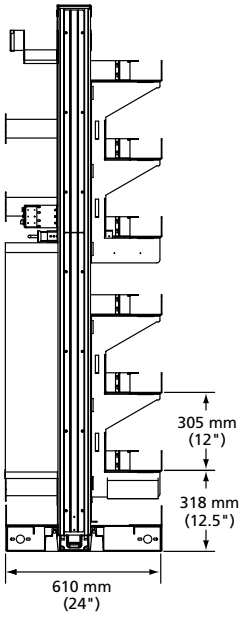
Frame Accessories

Equipment Frame

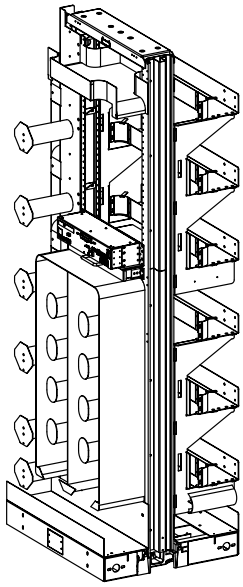
The NG3 equipment frame provides a mounting location for 19-inch frame mount equipment within a lineup. The equipment deployed in the frame can include video transmitters, RF splitter/combiners or remote fiber test systems.



Front View



Side View



ISO View

Ordering Information

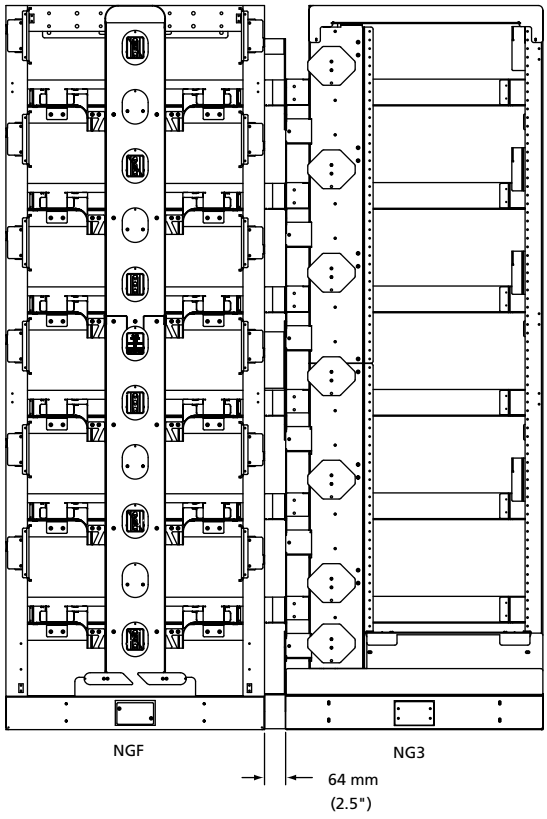
Description	Dimensions (HxWxD)	Catalog Number
Equipment frame Includes: Base NG3 frame with rear horizontal troughs Communications panel (COMP-21) Writing shelf (RWS23) Slack storage system 533 mm (21") of open mounting space Upper cross-aisle (cross-aisle bridge compatible) front upper cable trough	2.14 m x 762 mm x 610 mm (7' x 30" x 24")	NG3-EBTWN7ASC

NGF to NG3® Frame Spacer Kit

The 2.5-inch wide frame spacer kit is required for transition between next generation frames (NGFs) and NG3 frames. The kit includes six rear trough adapters that ensure the rear cable management features of both fiber frames are utilized. Tie brackets and a kick plate are also included for a secure installation. For technical documents outlining the proper procedure for making these transitions, please contact your ADC sales representative.

Ordering Information

Description	Catalog Number
Mounts on right side of NG3 frame and **left side of NGF frame**	NG3-NGFTRNTWN7A0R
Mounts on left side of NG3 frame and **right side of NGF frame**	NG3-NGFTRNTWN7A0L



Frame Spacer Kit
(NG3-NGFTRNTWN7A0L Shown)

NG3® Optical Distribution Frame

Frame Accessories

End Guard

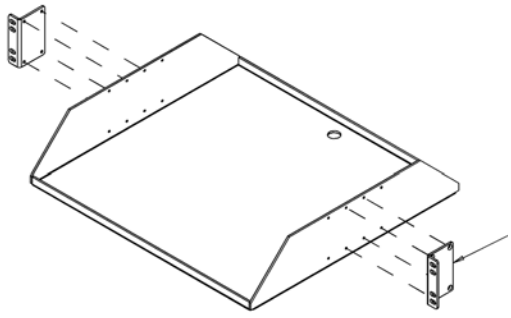
The end guard provides protection for the fibers entering and exiting frames at the ends of a lineup.

Ordering Information

Description	Dimensions (HxWxD)	Catalog Number
End guard mounts on frame	2.14 m x 64 mm x 610 mm (7' x 2.5" x 24")	NG3-EGDTWN7A00

Work Shelf

The work shelf can mount at any one of six positions within the NG3 frame and anywhere along the height of the frame. It provides a surface for miscellaneous objects (i.e. isopropyl alcohol, tissues and cotton swabs for cleaning connectors); also provides a writing surface or serves as an aid in field terminating cables and jumpers.



Work Shelf
(NG3-ACCWORKSHELF01 Shown)

Ordering Information

Description	Dimensions (HxWxD)	Catalog Number
Work shelf	89 mm x 483 mm x 413 mm (3.5" x 19" x 16.25")	NG3-ACCWORKSHELF01

Writing Shelf

The retractable writing shelf provides a writing surface during maintenance activities. The shelf is usually mounted at arm level on the frame for easily accessible writing space.

Writing Shelf
(RWS19-FDF Shown)

Ordering Information

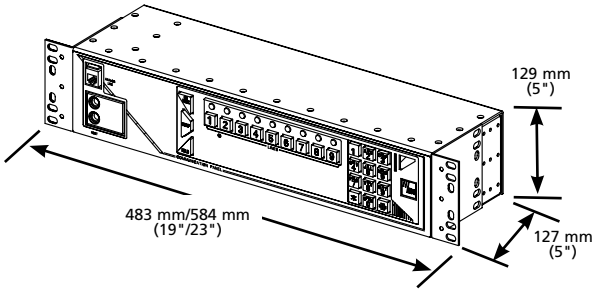
Description	Dimensions (HxWxD)	Catalog Number
Retractable writing shelf with pencil drawer	44 mm x 483 mm x 279 mm (1.75" x 19" x 11")	RWS19-FDF

NG3® Optical Distribution Frame

Frame Accessories

Communications Panel

The communications panel provides a voice line at the fiber frame. It can be mounted on any one of the hinged fiber termination panel mounting positions on the frame.

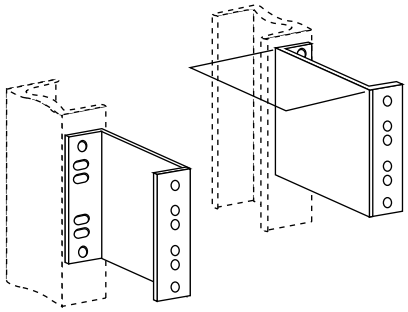


Ordering Information

Description	Dimensions (HxWxD)	Catalog Number
Communications panel	133 mm x 483 mm / 584 mm x 127 mm (5.25" x 19" / 23" x 5")	COMP-21
Headset with 3.66 m (12') coil cord		COMP-HDS
Handset with cord		COMP-HNDSKIT
Handset with holder		COMP-HNR-P

Stand-Off Bracket Kit

The stand-off bracket allows the communications panel and writing shelf to better align with the front of the NG3 panel. Stand-offs are needed because the communications panel and writing shelf are flush mount and the NG3 panels are 8-inch recess mount. If the communications panel is ordered by itself, stand-off bracket 5002-P should be ordered. If the communications panel is ordered along with the writing shelf, stand-off bracket 5003-P should be ordered.



Stand-Off Bracket Kit

Ordering Information

Description	Dimensions (HxD)	Catalog Number
3.5" stand-off mounting bracket kit for installations with communications panel only	89 mm x 127 mm (3.5" x 5")	5002-P
5.25" stand-off mounting bracket kit for installations with both communications panel and writing shelf	133 mm x 127 mm (5.25" x 5")	5003-P

NG3® Optical Distribution Frame

Frame Accessories

Frame Extender

The frame extender is used to extend the height of a 7-foot frame to the appropriate ceiling height so that it can be secured overhead. NG3® termination panels are designed to be mounted up to 7 feet. Frame extenders do not extend panel mounting capacity.

Ordering Information

Description	Catalog Number
Frame extender	
305 mm (12")	NG3-ACCEXTMFTWN-12
610 mm (24")	NG3-ACCEXTMFTWN-24
1.3 m (54")	NG3-ACCEXTMFTWN-54

Grounding Kit

The NG3 fiber distributing frame is equipped with a grounding kit designed with mechanical fittings (clamps, straps, connectors). Order this kit only if you are building a frame using your own frame. When connecting frame ground to office ground conductor, an H-TAP bonding kit should also be ordered.

Ordering Information

Description	Catalog Number
Grounding kit	E-501-L37*
H-TAP bonding kit	E-501-L166

*Included with NG3 fiber frame

Grounding kit includes:

2 hole terminal lug	1 each
#6 AWG copper tinned wire	13'
Wire clips	8 each
#12-24 x 1/2" screws	10 each

H-TAP bonding kit includes:

H-TAP	1 each
H-TAP insulated cover	1 each
2 hole terminal lug, crimp	3 each
Terminal lug, screw	4 each
#6 AWG stranded insulated wire	2'
Star washer	6 each
No-ox grease	1 tube

AC Outlet Kit

The AC outlet kit provides the hardware for mounting AC power outlets on the frame. Each kit includes a prewired AC power outlet strip that mounts at the bottom of the frame. An outlet cover is available to cover the space in the frame should power outlets not be required.

Ordering Information

Description	Catalog Number
Dual outlet; mounts in base of NG3 frame	ACOK-5
AC outlet cover kit	RAC-0X0493

NG3® Optical Distribution Frame
Frame Accessories

Frame Installation Kit

Frame installation kits may be used on network frames and are seismic zone 4 rated. Kits include all necessary hardware.

Ordering Information

Description	Catalog Number
Frame installation kits for	
Computer floor	FDF-ACC146
Overhead support	RINST-TOP7
Concrete floor	RINST-FLR

Isolation Pad

A template for frame installation providing isolation between the frame and the ground.

Ordering Information

Description	Catalog Number
NG3 isolation pad	NG3-ACCISOPMFTWN

Lock

A keyed lock to replace the existing rotary latch for added security.

Ordering Information

Description	Catalog Number
NG3 lock (keyed)	IPA-K1

NG3® Optical Distribution Frame

Panel Accessories

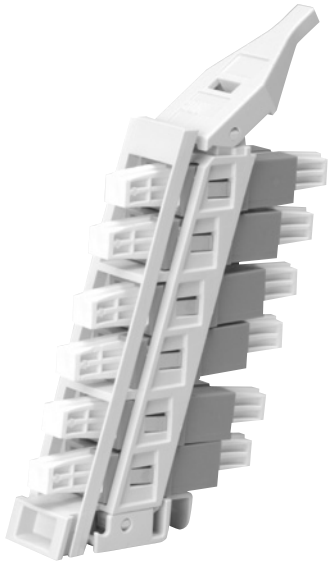
Sliding Adapter Pack

Sliding adapter packs house groups of fiber optic adapters and are mounted in fiber termination blocks to provide easy access to connectors. Sliding adapter packs are available with SC, FC and LC adapters. Six adapters are preinstalled in the sliding adapter pack as shown below.

Catalog Number
NG3-SAP __ 0N00

Adapter Type

Singlemode	
7	SC ultra polish
L	SC angled polish
2	FC ultra polish
K	LC ultra polish
M	LC angled polish
Multimode	
9	SC
P	LC



Sliding Adapter Pack

Other configurations are available upon request. Please contact ADC Technical Assistance Center.

Standard Cross-Connect Patch Cord Lengths

Total Number of Sections Traversed*	Approximate Patch Cord Length Meters (Feet)
Same frame	3 m (10')
Adjacent frames	5 m (16')
3 to 4	6 m (23')
5 to 6	8 m (26')
7 to 8	9 m (33')
9 to 10	11 m (36')

*Depending on office requirements, 11 or more frame sections may require the use of interbay tie panels.
For additional information, please call ADC Technical Assistance Center, 1-800-366-3891.
For recommended cross-connect methods refer to user manual ADCP-90-296.
For Installation instructions, refer to user manual ADCP-90-295.

Ordering Information for Patch Cords and Attenuators

ADC offers a comprehensive line of cable assembly and accessory products including patch cords, IFC assemblies, attenuators, FasTerm® connectors and adapters to meet the demanding needs of today's network. Please refer to the **Fiber Cable Assemblies Catalog #102880AE** at www.adc.com for more detailed information. For your convenience, ordering information for patch cords and attenuators can also be found on pages 122–127.

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