FieldSmart® Makwa® Fiber Distribution Hub (FDH)
432 Cross-Connect Cabinet

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Application

The FieldSmart Makwa FDH 432 Cross-Connect Cabinet provides 12 to 432 ports of connectivity for cross-connect applications and utilizes patch and splice (Clearfield's in-cassette splicing solution) or patch only technology in any network environment. The FieldSmart Makwa is scalable to meet customer's specific requirements and has the ability to be mounted either above or below ground. Below grade mounting eliminates the potential above grade aesthetics issues from the deployment equation.

Description

The FieldSmart Makwa, incorporates all of the features found in our above ground cabinets and adds the ability to deploy the Makwa in a below grade application. Roughly 50% smaller than existing above grade cabinets, Makwa reduces real estate costs and improves density without compromising critical design elements of accessibility, bend-radius protection, physical fiber protection and route path diversity.

The FieldSmart Makwa consists of four basic elements: a top cover (dome), a base plate, an internal backplane and the Clearview® Black Cassettes. All components are pre-assembled and loaded into the Makwa – making it field ready for deployment. Scalable to meet customer requirements, Makwa can be configured to accommodate 12 to 432 ports for cross-connect applications as required.

Patch and splice versions are shipped with the Clearview Black Cassette preloaded. Patch only configurations are shipped complete with pre-terminated lengths of OSP cables, terminated into the Clearview Black Cassettes. They come fully installed into the Makwa, making it ready for deployment right out of the package.

Features and Benefits

Integrity
- Designed, tested and certified to Telcordia GR-3125
- Terminations designed, tested and certified to Telcordia GR-326
- Clearfield® FiberDeep® Guarantee: 0.2 dB insertion loss or less, exceeding industry standards
- Fiber cable certified to Telcordia GR-20 and GR-409
- Splitters designed to comply with Telcordia GR-1209/GR-1221
- Designed to comply with NEMA 4
- Constructed out of UV resistant plastic with stainless steel fasteners and hardware
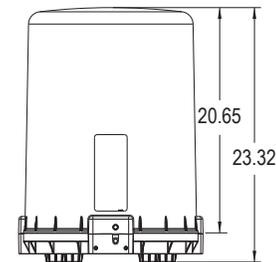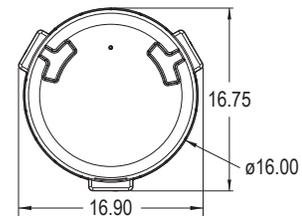
Protection
- Provides protection from water intrusion if fully submerged
- Single molded cover with double o-ring sealing technology for additional protection
- Watertight cable entrance fittings
- Each 12-fiber Clearview Black houses a 12-fiber subunit of patch and splice or patch only, protecting fiber from both environmental and human factors

Access
- Pole mount or in vault
- In vault mount option allows unit to be hidden from site and accessed only when service needs to be performed
- Removable/resealable dome allows service technicians to access fiber without damaging fiber or disrupting existing service
- Cable management integrated into the Makwa unit – including slack storage and staging plates for splitters

Investment
- All fiber is deployed in increments of 12, providing the users the ability to scale from 12 ports to full capacity, aligning capital investment with network layout and subscriber revenue
- User defined feeder to distribution ratios for cross-connect options
- Patch and splice configurations provide maximum flexibility for customer designed networks

16.75
ø16.00
16.90

20.65
23.32

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Technical Specifications

FieldSmart Makwa Fiber Distribution Hub - 432 Cross-Connect Cabinet	
Dimensions	22⅜" H x 16" W x 16" D (592.33 mm H x 425.45 mm W x 425.45 mm D)
Weight	35 lbs (15.88 kg)
Port Density	432
Cassette Types Supported	Clearview® Black
Connector Types	SC/UPC, SC/APC, LC/UPC, LC/APC
Cable Types	Indoor/Outdoor, Outdoor (Riser/Non-Rated), Outdoor Armored (Riser/Non-Rated)
Splice Capacity	12 splices in each Clearview Black Cassette
Storage Capacity	Up to ten feet of jacketed fiber
Cables Entrances	4
Recommended Jumper Length	2-3 Meter, 900 um Fiber Jumper Cables. Clearfield's PF1 series located on p. 199 in Application Guide.
Mounting Options	Above Grade: pole mount; Below Grade: in vault mount
Material	Property Blended UV Resistant Plastic

Accessories

- Below Grade: Swing Arm (VA-SWING-ARM) - can be ordered by itself or pre-installed in a 30 x 48 x 36" (762.00 mm x 1219.20 mm x 914.40 mm) CraftSmart® Vault
- Above Grade: Pole Mount Kit (016902)
- CraftSmart Vaults – minimum size required: 30" W x 48" T x 36" D (762.00 mm x 1219.20 mm x 914.40 mm)

Configured Part Numbers

R - P Z - ___ ___ ___ - ___ ___ - ___ ___ ___ - ___ ___ - ___ ___ ___   XXXM or XXXF

[1] [2] [3]   [4]   [5] [6] [7]   [8]   [9] [10] [11]

[1] Select Connector

A = SC/UPC
C = SC/APC
F = LC/UPC DX
H = LC/APC DX

[2] Select Mode and Type

1 = Singlemode (non-ribbon)
2 = Singlemode (ribbon)

[3] Select Jacket Construction

B = OSP riser
E = OSP (non-rated)
F = Loose tube patch and splice
M = OSP armored
Z = None (ribbon patch and splice)

[4] Select Feeder Count (Available in Increments of 12) **

012 = 12   072 = 72
024 = 24   096 = 96
036 = 36   144 = 144
048 = 48

[5] Select # of 288 Fiber Feeder OSP Cables

0 = 0
1 = 1

[6] Select # of 144 Feeder OSP Cables

0 = 0   2 = 2
1 = 1

[7] Select # of 96 Fiber Feeder OSP Cables

0 = 0   2 = 2
1 = 1   3 = 3

[8] Select Distribution Count (Available in Increments of 12) **

012 = 12   048 = 48
024 = 24   144 = 144
036 = 36

[9] Select # of 288 Fiber Distribution OSP Cables

0 = 0
1 = 1

[10] Select # of 144 Fiber Distribution OSP Cables

0 = 0   2 = 2
1 = 1

[11] Select # of 96 Fiber Distribution OSP Cables

0 = 0   2 = 2
1 = 1   3 = 3

XXXM or XXXF

XXXF = Length of pigtail in feet
XXXM = Length of pigtail in meters

* Order mounting brackets separately
** 216 ports maximum