

Hands on #3

IT 315
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Diagram



KEY

-  48 Port Switch
-  2 Port Wall Jacks
-  Router
-  Patch Panels

Each Wall Jack has 2 ports connected to a patch panel



Budget and Materials

Item Description	Qty	Item Cost	Item Subtotal	Reference Link
Fortigate FG-60F Firewall/Router	1	\$665	\$665	https://www.cdwg.com/search/?key=fortigate%20fg-60f
Faceplates				
1st Floor faceplates	43	\$6	\$257	https://www.cdwg.com/product/tripp-lite-single-gang-2-port-wallplate-keystone-cat5-6-usb-hdmi-dp-rca-taa/4235961?pfm=srh
2nd Floor faceplates	142	\$6	\$849	https://www.cdwg.com/product/tripp-lite-single-gang-2-port-wallplate-keystone-cat5-6-usb-hdmi-dp-rca-taa/4235961?pfm=srh
1st Floor Keystone Jacks	86	\$5	\$428	https://www.cdwg.com/product/tripp-lite-cat6-cat5e-110-style-punch-down-keystone-jack-rj45-white-taa-gsa/1500495
2nd Floor Keystone Jacks	284	\$5	\$1,414	https://www.cdwg.com/product/tripp-lite-cat6-cat5e-110-style-punch-down-keystone-jack-rj45-white-taa-gsa/1500495
Patch Panels				
Black Box 48 Port Patch Panel	8	\$524	\$4,189	https://www.cdwg.com/product/black-box-48-port-cat6-1u-shielded-feed-through-patch-panel-rj45-f-f/2421510?pfm=srh
Switches				
Fortinet FortiSwitch 148E 48 Ports	8	\$720	\$5,762	https://www.cdwg.com/product/fortinet-fortiswitch-148e-switch-48-ports-managed-rack-mountable/5675361?pfm=srh
Cables				
3 Foot Patch Cables	396	\$2	\$804	https://www.cdwg.com/product/black-box-3ft-cat5-cat5e-utp-ethernet-patch-cable-orange-pvc-snaagless-3ft/2370609?pfm=srh
Cat5e Cable Ends Box of 100	4	\$26	\$104	https://www.cdwg.com/product/tripp-lite-cat5e-rj45-modular-plugs-round-stranded-utp-conductor-100-pack/4921421?pfm=srh
Cat5e Bulk Cable 1000ft per box	9	\$196	\$1,760	https://www.cdwg.com/product/startech.com-1000ft-bulk-cat-5e-ethernet-cable-solid-cmr-white/3095778?pfm=srh
Cable Length Assumptions				
<i>Shortest cable run is 5 Meters + 3 Meters from Ceiling = 8 Meters * 2</i>				
<i>Longest cable run is 50 Meters + 3 Meters from Ceiling = 53 Meters * 2</i>				
<i>Average cable length is 6.5 Meters * 396 Cables</i>				
2,574 Meters of CAT5E				
			\$16,232	Total Materials