

Memo

To: Catherine Stokes, Special Projects Manager, Cyberdyne Systems
From: William Matheson, CCIE, Fat Cat Consulting
CC: Inda Wallsorcelin, Facilities Manager, Cyberdyne Systems
Date: 12/2/2011
Re: Estimated costs for networking the new facility [Proj. Code LAB3NETW1100SECTION703C]

Methodology

Depending on whether the cables are run through entirely the walls or run over rooms in the ceilings (they are plenum rated, so they can be run through above-ceiling spaces, and this would shorten the cable runs – the distances used in this study are for in-wall runs), we would need, at the most, 1,425 feet of cable. It is recommended that two 1,000-foot reels be purchased. Minimum cable lengths for each run are somewhat longer than the run lengths, as 5 additional metres of patch lead are required at each end, which amounts to approximately 32 feet, 10 inches per run.

A revised plan of the ground floor is attached. Note that individual cables are required for each data jack – in the diagram, they are combined for neatness. Examples: The single-jack outlet on the foyer-facing wall of the reception office requires its own cable, one keystone jack, and one single-outlet wall plate. The dual-jack outlet in the President's office requires two cables, two keystone jacks, and one dual-outlet wall plate.

A breakdown of estimated costs is attached along with a list of the required cable runs.

Cable Runs

Run Length (ft)	Runs	Minimum Cable Length (ft)	Number of Runs	Totals (ft)
15	Wall between Wiring Closet and Admin Assistants' Office	47.81	2	95.62
35	Wall between Reception Office and Admin Assistants' Office	67.81	5	339.04
50	Reception Office, Foyer-facing wall	82.81	1	82.81
55	Production Manager's Office	87.81	2	175.62
140	Vice President's Office	172.81	2	345.62
160	President's Office	192.81	2	385.62
			Total Runs: 14	1424.32

Cost Estimates

Item Type	Vendor Name	Model/Part #	Price	Vendor Name	Model/Part #	Price
Open Frame Equipment Rack	American Power Conversion	AR201	\$129.99	Video Mount Products	ER-72	\$246.95
Cat5e 110-Type 24-Port Patch Panel	MonoPrice.com	7255	\$17.93	TigerDirect.ca	CablesToGo C184-03859	\$71.99
(2x) Plenum-Rated Cat-5e Bulk Patch Cable, 1000ft Reel	CablingPlus.com	5E04UPBL1	\$410.66	BroadbandUtopia	Coleman Cable Inc. 2003548	\$611.00
(2x) 1-outlet Keystone Wall Plate	MonoPrice.com	6725	\$0.76	American Tech Supply	CP-216B-1-WHT	\$1.20
(6x) 2-outlet Keystone Wall Plate	MonoPrice.com	6727	\$2.28	American Tech Supply	CP-216B-2-WHT	\$3.60
(14x) Cat-5e Keystone Jack	MonoPrice.com	5376	\$14.98	American Tech Supply	CP-3013A/B-C5E-WHT	\$35.00
		Lower Total	\$576.60		Higher Total	\$969.74

Vendor Websites

American Power Conversion	http://www.apc.com
American Tech Supply	http://www.americantechsupply.com
BroadbandUtopia	http://www.broadbandutopia.com
CablingPlus.com	http://www.cablingplus.com
MonoPrice.com	http://www.monoprice.com
TigerDirect.ca	http://www.tigerdirect.ca
Video Mount Products	http://www.videomount.com

Revised Floor Plan

