Budget 1

	item		quality		Where
Patch Panel	iwillink Patch Panel 48 Ports, Cat6 / Rj45 Patch Panel, 2u Network Patch Panel Utp 19-Inch, Black. Rack or Wall Mount Compatible with Cat6, Cat5e, Cat5 Cabling.	$57.99	4	$231.96	Amazon
Face plate	Iwillink 2 Port Keystone Jack Wall Plate 10-Pack, Low Profile Ethernet Wall Plate Single Gang Wall Plates for Keystone Jack, White	$8.99	10	$89.90	Amazon
	Pass-Thru Modular Data Plugs, RJ45-CAT6A, Shielded (STP), (50-Pack)	$90.99	4	$363.96	Home Depot
Keyston outlets	RJ45 Keystone Coupler - 20Pack iGreely Cat6 Cat5e Cat5 Compatible 8P8C Ethernet Network Jack Insert Snap in Adapter Connector Port Inline Coupler for Wall Plate Outlet Panel-White	$16.99	10	$169.90	Amazon
Cabling	1,000 ft. 23/4 Solid CU CAT6 CMR (Riser) Data Cable in Blue	$195.00	27	$5,265.00	Home Depot
				$6,120.72	**Total**

Total outlets needed: 21(basement)+18(1st Floor)+ 19(2nd floor)+19(3rd floor)=77*2=154

Total amount of cable= 24,640 (22mm=300ft) (1mm= 13.64ft approx14ft) (Avg length of cable = 160ft) (this included 10ft to run into and out of the wall on both ends)

38607.558/ 1000=38.6 == about 39 packets

Equipment on the 1st floor, two comm closets on the 2nd and 3rd in the exact location above the Equipment room. Basement switches and patch panels are located in the equipment room (in case of flooding)

Budget 2

Core Switch	H3C LS-S5500-28F-EI-AC Ethernet Switch 24-Port All-Optical Gigabit Layer 3 core Aggregation Switch	$2,250.00	5	$11,250.00	Amazon
Managed Switch	Cisco Business CBS350-48T-4G Managed Switch | 48 Port GE | 4x1G SFP | Limited Lifetime Protection (CBS350-48T-4G-NA)	$718.58	4	$2,874.32	Amazon
Patch Cable	1,000 ft. 23/4 Solid CU CAT6 CMR (Riser) Data Cable in Blue	$195.00	2	$390.00	Amazon
				$14,514.32	

Number of work switches:

5 core switch 4 managed work switches

2 switches per floor

1 core Switch connected to the router in equipment room 1st, 2 core switches connected to the previous switch (one switch for the 1st floor and one for the basement), and 2 workgroup switches connected to it corresponding floor switch.

Budget 3

item		quality	
Fortinet FortiGate-200F Hardware Plus 1 Year 24x7 FortiCare And FortiGuard Enterprise Protection - FG-200F-BDL-811-12	$7,999.99	1	$7,999.99
https://www.firewalls.com/brands/fortinet/fortigate/enterprise/fortigate-200f-201f.html#tab-products			

Firewall	IPS	NGFW	Threat Protection	Interfaces
27 Gbps	5 Gbps	3.5 Gbps	3 Gbps	Multiple GE RJ45, GE SFP and 10 GE SFP+ slot

Specifications

	FORTIGATE 200F	FORTIGATE 201F
Hardware Specifications		
GE RJ45 Ports	16	
GE RJ45 Management/HA	1 / 1	
GE SFP Slots	8	
10GE SFP+ FortiLink Slots (default)	2	
10GE SFP+ Slots	2	
USB Port	1	
Console Port	1	
Internal Storage	—	1x 480 GB SSD
Included Transceivers	0	
System Performance — Enterprise Traffic Mix		
IPS Throughput [2]	5 Gbps	
NGFW Throughput [2,4]	3.5 Gbps	
Threat Protection Throughput [2,5]	3 Gbps	
System Performance		
Firewall Throughput (1518 / 512 / 64 byte UDP packets)	27 / 27 / 11 Gbps	
Firewall Latency (64 byte UDP packets)	4.78 µs	
Firewall Throughput (Packets Per Second)	16.5 Mpps	
Concurrent Sessions (TCP)	3 Million	
New Sessions/Second (TCP)	280,000	
Firewall Policies	10,000	
IPsec VPN Throughput (512 byte) [1]	13 Gbps	
Gateway-to-Gateway IPsec VPN Tunnels	2,500	
Client-to-Gateway IPsec VPN Tunnels	16,000	
SSL-VPN Throughput	2 Gbps	
Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode)	500	
SSL Inspection Throughput (IPS, avg. HTTPS) [3]	4 Gbps	
SSL Inspection CPS (IPS, avg. HTTPS) [3]	3,500	
SSL Inspection Concurrent Session (IPS, avg. HTTPS) [3]	300,000	
Application Control Throughput (HTTP 64K) [2]	13 Gbps	
CAPWAP Throughput (HTTP 64K)	20 Gbps	
Virtual Domains (Default / Maximum)	10 / 10	
Maximum Number of FortiSwitches Supported	64	
Maximum Number of FortiAPs (Total / Tunnel Mode)	256 / 128	
Maximum Number of FortiTokens	5,000	
High Availability Configurations	Active / Active, Active / Passive, Clustering	

	FORTIGATE 200F	FORTIGATE 201F
Dimensions		
Height x Width x Length (inches)	1.73 x 17.01 x 13.47	
Height x Width x Length (mm)	44 x 432 x 342	
Form Factor (supports EIA / non-EIA standards)	Ear Mount, 1 RU	
Weight	9.92 lbs (4.5 kg)	10.14 lbs (4.6 kg)
Environment		
Power Required	100–240V AC, 50-60 Hz	
Maximum Current	100V / 2A, 240V / 1.2A	
Power Consumption (Average / Maximum)	101.92 W / 118.90 W	104.52 W / 121.94 W
Heat Dissipation	405.70 BTU/h	436.98 BTU/h
Redundant Power Supplies	Yes	
Environment		
Operating Temperature	32–104°F (0–40°C)	
Storage Temperature	-31–158°F (-35–70°C)	
Operating Altitude	Up to 7,400 ft (2,250 m)	
Humidity	20–90% non-condensing	
Noise Level	49.9 dBA	
Compliance	FCC Part 15B, Class A, CE, RCM, VCCI, UL/cUL, CB, BSMI	
Certifications	ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN, IPv6	