

Vista-128FB

System Design Sheet



FIRE
DETECTION



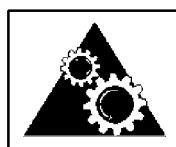
SPRINKLER
SUPERVISION



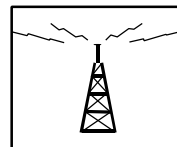
INTRUSION
DETECTION



HOLD
UP



CRITICAL
EQUIP. SUPV.



LONG RANGE
RADIO



ACCESS
CONTROL

SECTION 1:

Basic Vista-128FB -Features QED programming for quick enrollment of devices

(Eight Hardwired Zones, One Addressable Loop, Wireless)

Select one of the following:		
Vista-128FB Control/Communicator - 12 Volt	(300mA)*	(470mA)**
Vista-128FB-24 Control/Communicator - 24 Volt	(300mA)*	(470mA)**
If the system is to be monitored by a Central Station (CS) select the following:		
Phone block		
If the system is CS monitored Commercial Fire, select one of each of the following:		
Second supervised digital communicator	(5mA)*	
Phone block		
Select at least one, but no more than 16, of the following:		
32 Character Ash White alpha keypad-customized English display	(40mA)*	(100mA)**
32 Character Red alpha keypad-customized English display	(40mA)*	(100mA)**
Select one of each of the following to add a serial printer:		
Security system printer, wall or desk mount ready		
Serial interface module with cable assembly		
Select at least one of the following: (for 24 Volt systems you will require two of each)		
Yuasa 12 Volt DC, 7 AmpHr Battery		
Yuasa 12 Volt DC, 12 AmpHr Battery (minimum battery size for 12 Volt applications)		
Yuasa 12 Volt DC, 17.2 AmpHr Battery		
Select only one of the following:		
Remote key switch for arming/disarming panel		
Remote key switch for silencing the notification (bell) circuits		
Select the following to remotely annunciate system power and phone status:		
System power, communication line and dialer status LED indicator	(10mA)*	
For interactive remote phone control select one of the following:		
Vista interactive phone module, supports arming/disarming, system status	(160mA)*	
Select one of each of the following to add alpha numeric paging capability:		
Alpha numeric pager module with cable assembly		
Serial interface module		
If required, select from the following for control functions and notification circuit supv.:		
Addressable four relay, form C contacts, module (maximum of four)	(15mA)*	
Addressable supervised notification appliance (bell) module with 2 class B, 1.2 amp Cir.		
Important Note: This module may require additional power supplies to operate. (25mA)*		

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
VISTA-128FB					
VISTA-128FB-24					
MO-RJ31X					
5140DLM					
MO-RJ31X					
6139					
6139R					
6220S					
4100SM					
NP7-12					
NP12A12V					
NPG1812					
4146					
4146					
5140LED					
4285					
4100APG					
4100SM					
4204					
4204CF					

Important Note: The Vista-128FB has eight base hardwired zones, the remaining 120 zones/points can be **any** combination of V-Plex addressable loop, or QED compatible wireless configurations. The Vista-128FB provides up to 1000mA which can be used to power remote consoles and other devices such as motion detectors or four-wire smoke detectors. If power requirements exceed control's capabilities, add power supplies as required, (see note under "Power Supplies").

* Represents standby current draw

** Represents alarm current draw

SECTION 2:**V-Plex Addressable Fire Devices (attach to V-Plex loop)**

<i>Select the following addressable devices as required:</i>	
Photoelectric smoke/heat detector	(.4mA) *
Photoelectric smoke detector	(.4mA) *
Ionization smoke detector	(.4mA) *
Photoelectric smoke/heat detector with maintenance	(2.6mA) *
Photoelectric smoke detector with maintenance	(2.6mA) *
Ionization smoke detector with maintenance	(2.6mA) *
Addressable low profile photoelectric detector with maintenance	(2mA) *
Addressable low profile photoelectric/heat detector with maintenance	(2mA) *

Part No.	Qty.	Hrs.	Each	Sub Total	Hrs.
4192SDT					
4192SD					
4192CP					
4192SDTM					
4192SDM					
4192CPM					
5192SD					
5192SDT					

SECTION 3:**V-Plex Addressable Security Devices (attach to V-Plex loop)**

<i>Select the following addressable devices as required:</i>	
Dual alternate polarity PIR with look down	(1mA)
Quad alternate polarity passive infrared detector	(1mA)
Dual element passive infrared detector	(1mA)
Dual technology acoustic/shock glassbreak detector	(1mA)
Wide gap surface mounted reed contact	(1mA)
Surface mounted reed contact	(1mA)
Recessed contact	(1mA)
Overhead door contact with 24" armored cable	(1mA)
<i>Select the following V-Plex Interface devices for use with non-addressable devices:</i>	
One zone RPM for contact devices only	(2mA)
Eight zone RPM for contact devices only	(16mA)
Micro-miniature two zone RPM for contact devices only	(1mA)
Micro-miniature one zone RPM for contact devices only	(1mA)
<i>Select as required:</i>	
V-Plex loop expander and isolation module, maximum of eight	(32mA)

Part No.	Qty.	Hrs.	Each	Sub Total	Hrs.
998MX					
4278EX-SN					
4275EX					
9500					
4194WH					
4939SN					
4944SN					
4959SN					
4190WH					
4208U					
4193SN					
4293SN					
4297					

SECTION 4:**V-Plex Addressable Fire & Security Interface Devices (attach to V-Plex loop)**

<i>Select the following addressable module as required: (Remote Point Module)</i>	
One zone RPM for contact devices only	(2mA)
Micro-miniature two zone RPM for contact devices only	(1mA)
Group zoning RPM for two-wire smokes configurable for two or four loops	(16mA)
Eight zone RPM for contact devices only	(16mA)
Addressable loop expander and addressable loop isolation module, max. of eight	(32mA)

Part No.	Qty.	Hrs.	Each	Sub Total	Hrs.
4190WH					
4193SN					
4209U					
4208U					
4297					

SECTION 5:**Wireless Accessories – For use with QED control panels only.**

<i>If wireless devices will be used select at least one and no more than two of the following:</i>	
Commercial wireless receiver (supports up to 128 wireless devices)	(50mA)
<i>Select as required: (above receiver required)</i>	
Wireless smoke detector UL rated for commercial fire	
Wireless heat detector	
Wireless PIR detector 40' x 50' coverage	
Wireless glassbreak detector dual technology (audio/shock)	
Wireless micro-miniature transmitter	
Wireless two zone transmitter	
Wireless three zone transmitter	
Wireless recessed contact	
Wireless shock sensor	
Wireless low temperature sensor (45 degrees F)	
Wireless single button operation panic transmitter with belt clip	
Wireless dual button operation panic transmitter with belt clip	
Wireless four button transmitter key	
Wireless four button bi-directional transmitter key	
Wireless two way portable keypad	
Wireless transmitter module for use with 5827BD (connects to control)	(20mA)

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
5881-EH					
5808					
5809					
5890					
5849					
5814					
5816					
5817					
5818					
5819					
5816Temp					
5802MN					
5802MN2					
5804					
5804BD					
5827BD					
5800TM					

* Represents standby current draw

SECTION 6:**Glassbreak Sensors (require remote power) *****

Select as required:	
Surface mount acoustic detector	(30mA)
Surface mount advanced acoustic detector	(24mA)
Surface mount dual technology (shock/sound) detector	(30mA)
Surface mount shock sensor	(1mA)

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
2520					
ASC25					
2500					
ASC-SS1					

SECTION 7:**Door Contacts *****

Select as required:	
Industrial surface mount 4.125" x .62" SPST (BR-brown, GY-gray)	
Industrial surface mount 4.125" x .62" SPST wide gap (1.75") (BR-brown, GY-gray)	
Industrial surface mount 3.5" x .5" SPST (WH-white, BR-brown, GY-gray) with 6' cable	
Industrial surface mount 3.5" x .5" SPDT (gray only) with 6' cable	
Moisture resistant 3.5" x 1.2" SPST aluminum housing with 3' armored cable	
Moisture resistant 3.5" x 1.2" SPDT aluminum housing with 3' armored cable	
Overhead door contact SPST	
Overhead door contact SPDT	
Mini-surface mount with 5' zip cord, 1/2" gap	
Mini-surface mount with 5' zip cord, 3/8" gap	

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
950BR					
950W-BR					
7945WH					
7945-2GY					
960					
960-2					
959					
959-2					
943					
951					

SECTION 8:**PIR Detectors (require remote power) *******Hrs.**

Select as required:	
Fresnel PIR with lookdown 50' x 50' coverage	(17mA)
Fresnel PIR 50' x 70' coverage	(17mA)
Fresnel Lens PIR 60' x 60' coverage	(15mA)
Quad AP Fresnel PIR 50' x 60' coverage	(15mA)
Recess mount PIR 40' x 56' coverage	(15mA)
Ceiling mount PIR 8'-12' ceilings (23' @ 8')/(36' @ 12')	(15mA)
Mirror PIR 35' x 45' coverage	(15mA)
Quad AP gold mirror PIR 40' x 48' coverage	(22mA)
Twin element mirror PIR 40' x 48' coverage	(22mA)
Advanced quad AP detector 35' x 45' coverage	(22mA)
Advanced AP Gold detector 35' x 45' coverage	(22mA)

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
998					
996					
1990					
1992					
995					
997					
1875EX					
1878GLD2					
1876-2					
RX4					
RX4GLD					

SECTION 9:**Dual Tech Detectors (require remote power) *******Sub-Total Hrs.**

Select as required:	
Microwave/PIR 40' x 50' coverage	(16mA)
Microwave/PIR 35' x 35' coverage	(16mA)
Microwave/PIR 60' x 60' coverage	(16mA)

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
Quest 2000					
Quest 2135					
Quest 2160					

SECTION 10:**Photoelectric Beams (require remote power) *****

Select as required:			
Photoelectric beam	two beams	Max outdoor range: 80'	(35mA)
Photoelectric beam	two beams	Max outdoor range: 160'	(40mA)
Photoelectric beam	two beams	Max outdoor range: 250'	(50mA)
Photoelectric beam	two beams	Max outdoor range: 320'	(50mA)
Photoelectric beam	four beams	Max outdoor range: 160'	(70mA)
Photoelectric beam	four beams	Max outdoor range: 320'	(90mA)
Photoelectric beam	four beams	Max outdoor range: 500'	(95mA)

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
PBD25					
PBD50					
PBD75					
PBD100					
PBQ50					
PBQ100					
PBQ150					

***Important Note: A V-Plex interface device is required for any of these devices should they be connected to the V-Plex Loop.

For complete line of Photoelectric Beam detector accessories, refer to Commercial Security Products full line catalog.

SECTION 11:**Non-Addressable Hard Wired Fire Devices**

Select as required:	
Manual pull station with key reset (screw terminals)	
Manual pull station with Allen screw reset (wire leads)	
Manual pull station with key reset (wire leads)	
Heat detector – open contact, 135 degrees UL	
Heat detector – open contact, 190 degrees UL	
Heat detector 190 degrees UL requires B401B base	
Select two-wire smoke detectors as required:	
Smoke detector photoelectric, direct wire	
Smoke detector photoelectric, with heat sensor, direct wire	
Smoke detector photoelectric requires B401B base	
Smoke detector photoelectric with heat sensor and B401B base	
Smoke detector ionization, direct wire	
Smoke detector ionization requires B401B base	
Smoke detector photoelectric duct detector with housing	
Smoke detector ionization duct detector with housing	
Smoke detector photoelectric, direct wire	
Smoke detector photoelectric, with heat sensor, direct wire	
Smoke detector photoelectric, with B110LP base	
Select four-wire smoke detectors as required:	
Smoke detector photoelectric, direct wire	
Smoke detector photoelectric, with heat sensor, direct wire	
Smoke detector photoelectric duct detector with housing 24Volt	(25mA)
Smoke detector ionization duct detector with housing 24Volt	(25mA)
Select smoke detector accessories as required:	
Two-wire smoke detector base	
Two-wire smoke detector base, low profile	
Metal sampling tube duct widths 1' – 2'	
Metal sampling tube duct widths 2' – 4'	
Metal sampling tube duct widths 4' – 8'	
Duct detector remote test station with key lock	
Smoke detector sensitivity test module	
Remote annunciator alarm LED for smoke detectors	
Power supervision relay module for four-wire detection circuits	(15mA)*

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
5140MPS-1					
5140MPS-2					
MPS-5					
502					
504					
4451HT					
2400					
2400TH					
2451					
2451T					
1400					
1451					
DH400P					
DH400I					
2100R					
2100TR					
2151					
2412/24R					
2412/24TR					
DH400ACDCP					
DH400ACDCI					
B401B					
B110LP					
ST-1.5					
ST-3					
ST-5					
RTS451KEY					
MOD400R					
RA400Z					
A77-727-01					

SECTION 12:**Bells/Sirens/Strobes (require power)**

Select as required:	
Motorized bell in box UL Grade A	(100mA)
Motorized bell in box UL	(100mA)
Motorized bell UL	(100mA)
Strobe 12 Volt, 15 Candela, Red	(114mA)
Strobe 12 Volt, 15/75 Candela, Red, ADA	(142mA)
Strobe 24 Volt, 15 Candela, Red	(53mA)
Strobe 24 Volt, 15/75 Candela, Red, ADA (PS24 required)	(66mA)
Strobe 24 Volt, 75 Candela, Red, ADA (PS24 required)	(123mA)
Horn 12/24 Volt, Red	(12/23mA)
Horn/Strobe 12 Volt, 15 Candela, Red	(124mA)
Horn/Strobe 12 Volt, 15/75 Candela, Red, ADA	(152mA)
Horn/Strobe 24 Volt, 15 Candela, Red (PS24 required)	(78mA)
Horn/Strobe 24 Volt, 15/75 Candela, Red, ADA (PS24 required)	(91mA)
Horn/Strobe 24 Volt, 75 Candela, Red, ADA (PS24 required)	(148mA)
Horn/Strobe synchronization module	(16mA)
Horn/Strobe surface mount back box skirt	
Horn/Strobe small mounting plate	
Indoor/Outdoor 25 Watt Eight Ohm siren with driver 4x4 box mount, 112db	(550mA)
Indoor wall mount siren, 85 db	(320mA)
Combination speaker and siren driver	(30 Watts)
Indoor wall mount speaker 15 Watt Eight Ohm – requires driver	(15 Watts)
Select a driver for above speakers:	
12 VDC selectable sound driver	(15 Watts)
Selectable 3 languages (English, Spanish, French) 12 VDC voice siren driver	(15 Watts)

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
AB12M					
1011BE12M					
AD10-12M					
SB1215					
SB121575					
SB2415					
SB241575					
SB2475					
HN1224					
HS1215					
HS121575					
HS2415					
HS241575					
HS2475					
SM12					
SBS					
MP/S					
748LC					
747UL					
702					
746					
744					
745x3					

* Represents standby current draw

SECTION 13:**ADA Notification Appliance Power Supply***Select auxiliary power supply if required:*

12/24 Volt auxiliary ADA power supply, 6A, two trigger inputs and four output circuits
 Yuasa 12 Volt DC, 7 AmpHr battery (24 Volt systems require two)

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
AX-AL600ULAD					
NP7-12					

*Important Note: Bells, sirens and strobes may require auxiliary power supplies.***SECTION 14:****Power Supplies***Select to provide additional current needs:*

24 Volt power supply (supervised) with 18 Volt AC for panel (3.4 Amps)
 12-24 Volt power supply (supervised) (4 Amps)
 12-24 Volt (non supervised) (2.5 Amps)
 6-12 Volt (non supervised) (1.2 Amps)

Select batteries for above power supplies: (for 24 Volt, select two)

Yuasa 12 Volt DC, 7 AmpHr battery
 Yuasa 12 Volt DC, 12 AmpHr battery
 Yuasa 12 Volt DC, 17.2 AmpHr battery

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
PS24					
AI400UL-ADA					
AD25624					
AD12612					
NP7-1					
NP12-12					
NPG18-12					

Note: 1. For components not powered by the control, add current draw (mA) of devices. Select power supplies as needed to deliver required power.
 2. In UL applications where a 4297 addressable loop extender is required, the 4297 must be powered by the control panel.

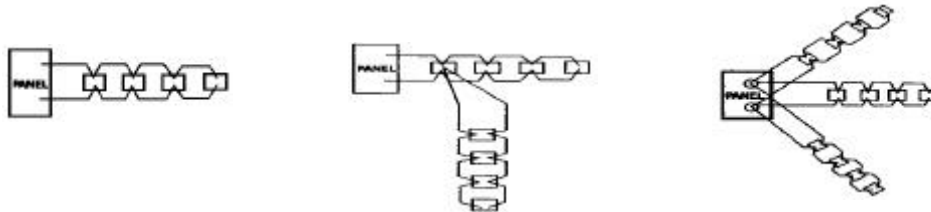
SECTION 15:**Fire Alarm/Security Cables***Select as required:*

18/4 Solid jacketed FPL fire rated wire, 500' Red, in box
 18/2 Solid jacketed FPL fire rated wire, 500' Red, in box
 18/2 Solid zip FPL fire rated wire, 1,000' Red, in box
 18/2 Stranded, unjacketed, security rated wire, 1,000', White, in box
 18/4 Stranded, jacketed, security rated wire, 500', White, in box

Part No.	Qty.	Hrs.	Each	Sub-Total	Hrs.
GJ-988040504					
WG-818424504					
GJ-978184604					
WG-38162					
WG-28251					

Wire Installation Labor Estimates

Installation Difficulty	Wire Run Distance		Rate: (hours/feet)		Wire Installation Hours
Easy wire runs	Feet	Multiplied by	0.015 hrs/ft	Equals	
Medium wire runs	Feet	Multiplied by	0.025 hrs/ft	Equals	
Difficult wire runs	Feet	Multiplied by	0.100 hrs/ft	Equals	
Total					

V-Plex Addressable Loop Configurations

- Note:
- The maximum allowable V-Plex addressable loop current shall be 128mA. No more than 64mA on any individual wire run.
 - The individual wire run lengths may not exceed 650' using #22 gauge; 950' using #20 gauge; 1500' using #18 gauge; 2500' using #16 gauge.
 - The length of all wire runs combined cannot exceed 4000' (2000' if using unshielded wire in conduit or shielded wire).
 - The 4297 V-Plex Expansion/Isolation Module can supply an additional 128mA of addressable loop current. It also allows for extended overall wire run lengths to 6400' (3200' if using unshielded wire in conduit or shielded wire).
 - No more than 128 devices can be attached to the V-Plex addressable loop, combined.

Total Job Cost Worksheet

A. JOB RESPONSIBILITY <input type="checkbox"/> Total Job Installation Checkout <input type="checkbox"/> Equipment and Final Checkout <input type="checkbox"/> Equipment Only	JOB TYPE <input type="checkbox"/> Existing Building <input type="checkbox"/> New Construction <input type="checkbox"/> Other _____ _____	SYSTEM TYPE <input type="checkbox"/> BA <input type="checkbox"/> FA <input type="checkbox"/> CCTV <input type="checkbox"/> I.P. <input type="checkbox"/> Card Access <input type="checkbox"/> Intercom <input type="checkbox"/> Voice Evac. <input type="checkbox"/> _____
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B. TOTAL MATERIAL COST: Add Material Cost Totals from previous pages. → \$

C. LABOR COST CALCULATION

Add Total Labor Hours (material and wire run) from previous pages.

Regular Hours _____ X L.L. Rate _____ = ¢

O.T. Hours _____ X 1.5 L.L. Rate _____ = ¢

O.T. Hours _____ X 2.0 L.L. Rate _____ = ¢

Add Additional Hours if Required:

Engineering Hours _____ X Branch Rate _____ = ¢

Project Mgr. Hours _____ X Branch Rate _____ = ¢

System Test Hours _____ X Branch Rate _____ = ¢

Training Hours _____ X Branch Rate _____ = ¢

TOTAL LABOR COST → C. \$

D. SUBCONTRACTOR LABOR

Subcontractor Bid \$ _____ X _____ % Overhead = D. \$

E. MISCELLANEOUS COSTS

- Additional Insured / Spot Insurance \$ _____
- Blueprints, Manuals, Etc. \$ _____
- License, Permits, Etc. \$ _____
- Shipping Costs \$ _____
- Warranty Costs \$ _____
- Inspection Costs \$ _____
- Equipment Rental Costs \$ _____
- Mileage and Per Diem Costs \$ _____
- Hardware \$ _____
- Other \$ _____

TOTAL MISCELLANEOUS COSTS → E. \$

= **TOTAL JOB COST** \$
(Total B, C, D + E)

X PROFIT MARGIN %

= **DIRECT SALE PRICE** \$