

ATE-75 Bill of Materials

75" Outdoor TV Enclosure - Prototype Costing

External: 1760 × 1040 × 130mm | Internal: 1700 × 1000 × 90mm

75"

TV Size

1760mm

Width

1040mm

Height

130mm

Depth

1. Enclosure Structure

1.1 Frame & Panels

Component	Qty	Unit Cost	Total	Part #
Main Frame Assembly	1	\$52.00	\$52.00	APEX-FR-75
Back Panel	1	\$35.00	\$35.00	APEX-BP-75

Front Bezel Frame	1	\$18.00	\$18.00	APEX-BZ-75
Internal Baffle	1	\$6.00	\$6.00	APEX-BF-75
VESA Mount Plate	1	\$10.00	\$10.00	APEX-VESA-75
Gas Struts (pair)	2	\$4.50	\$9.00	GS-150N-300
Subtotal - Frame & Panels		\$130.00		

1.2 Glass Assembly

Component	Qty	Unit Cost	Total	Part #
Laminated Glass Panel (4mm+4mm)	1	\$88.00	\$88.00	APEX-GL-75
AR Coating (both sides)	1	\$28.00	\$28.00	AR-COAT-2S-75
IR Rejection Film	1	\$100.00	\$100.00	3M-PR90-75
Subtotal - Glass Assembly		\$216.00		

1.3 Seals & Gaskets (IP66)

Component	Qty	Unit Cost	Total	Part #
Main Door Gasket	6m	\$1.80/m	\$10.80	EPDM-CH-1215-BK
Glass Seal Gasket	6m	\$0.80/m	\$4.80	SIL-U8-BK
Cable Glands IP68	3	\$2.50	\$7.50	CG-M20-SS316
ePTFE Breather Vent	2	\$4.00	\$8.00	GORE-PMF100
Subtotal - Seals & Gaskets		\$31.10		

2. Thermal Management System

2.1 Fans & Ventilation

Component	Qty	Unit Cost	Total	Part #
Main Cooling Fan (Noctua 140mm)	4	\$28.00	\$112.00	NF-A14-iPPC-3000
Fan Mounting Grommets	16	\$0.50	\$8.00	NA-SAV4
IP66 Intake Labyrinth Grille	4	\$8.00	\$32.00	VENT-IP66-150
IP66 Rain Cowl/Hood	1	\$15.00	\$15.00	APEX-COWL-IP66
Subtotal - Fans & Ventilation		\$167.00		

2.2 Filtration

Component	Qty	Unit Cost	Total	Part #
Intake Filter Frame	2	\$3.00	\$6.00	APEX-FILT-FR
Filter Media	4	\$2.00	\$8.00	AF-150-40PPI
Subtotal - Filtration		\$14.00		

2.3 Control System

Component	Qty	Unit Cost	Total	Part #
PWM Fan Controller Board	1	\$15.00	\$15.00	APEX-CTRL-V1

Temperature Sensor - Internal	2	\$1.50	\$3.00	DS18B20-WP
Temperature Sensor - Exhaust	1	\$0.80	\$0.80	NTC-10K-3950
Alarm Buzzer	1	\$0.50	\$0.50	BZ-12V-85DB
Subtotal - Control System		\$19.30		

3. Electrical System

3.1 Power Distribution

Component	Qty	Unit Cost	Total	Part #
IEC Power Inlet	1	\$3.50	\$3.50	IEC-C14-FS
Fuse	2	\$0.10	\$0.20	F-3A-250V-SB
Surge Protector MOV	2	\$0.50	\$1.00	MOV-275V-14D
Terminal Block	1	\$2.00	\$2.00	TB-3P-10A
DC Power Supply (12V 3A)	1	\$8.00	\$8.00	LRS-35-12
Accessory Outlet	1	\$3.00	\$3.00	UK-13A-PM
Subtotal - Power Distribution		\$17.70		

3.2 Wiring & Connectors

Component	Qty	Unit Cost	Total	Part #

Mains Cable	2.5m	\$0.80/m	\$2.00	H05VV-F-3G1.0
DC Fan Cable	4m	\$0.50/m	\$2.00	PWM-4W-22AWG
Fan Connector	4	\$0.30	\$1.20	FAN-4P-MF
Cable Ties	25	\$0.02	\$0.50	CT-150-UV
Adhesive Cable Mounts	12	\$0.15	\$1.80	3M-VHB-CM
Earth Bonding Strap	2	\$0.50	\$1.00	EB-10-TC
Subtotal - Wiring & Connectors		\$8.50		

4. Hardware & Fasteners

4.1 Fasteners (316 Stainless)

Component	Qty	Unit Cost	Total	Part #
Frame Screws	50	\$0.08	\$4.00	M4-10-PH-A4
Back Panel Screws	15	\$0.12	\$1.80	M5-12-CH-A4
VESA Screws	8	\$0.25	\$2.00	M6-15-A4-KIT
Hinge Screws	10	\$0.08	\$0.80	M4-8-CS-A4
Nylon Isolation Washers	60	\$0.02	\$1.20	NYL-M4M5-KIT
Threaded Inserts	25	\$0.10	\$2.50	TI-M4-AL
Subtotal - Fasteners		\$12.30		

4.2 Door Hardware & Security

Component	Qty	Unit Cost	Total	Part #
Concealed Hinges	3	\$4.50	\$13.50	HINGE-316-CC
Compression Latches	5	\$3.80	\$19.00	LATCH-316-ADJ
Tubular Cam Locks	2	\$5.50	\$11.00	LOCK-TUB-316
Padlock Hasps	2	\$1.50	\$3.00	HASP-316-10
Magnetic Door Catch	1	\$2.50	\$2.50	MAG-CATCH-SS
Subtotal - Door Hardware			\$49.00	

4.3 Mounting System

Component	Qty	Unit Cost	Total	Part #
Full-Motion Articulating Arm	1	\$38.00	\$38.00	MOUNT-FM-60KG
Wall Plate	1	\$8.00	\$8.00	APEX-WP-75
Wall Anchors	6	\$0.80	\$4.80	M10-CONC-SS
Subtotal - Mounting System			\$50.80	

5. Packaging & Documentation

Component	Qty	Unit Cost	Total	Part #
Carton Box	1	\$8.00	\$8.00	BOX-75-DW

Foam Corners	1	\$6.00	\$6.00	FOAM-75-SET
Glass Protection	1	\$3.00	\$3.00	GP-75
Accessories Box	1	\$1.25	\$1.25	ACCBOX-75
Installation Manual	1	\$0.50	\$0.50	MAN-APEX-75
Clearance Gauge	1	\$0.50	\$0.50	GAUGE-75
Spare Filter	2	\$2.00	\$4.00	AF-150-40PPI
Subtotal - Packaging & Docs		\$23.25		

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