

PROJECT PROFILE ON DIGITAL VIDEO RECORDER (DVR)

1. PRODUCT : DIGITAL VIDEO RECORDER

2. QUALITY & STANDARD : As per customer specification

3. PRODUCTION CAPACITY :

Qty	Value
3000 nos	Rs. 1,35,00,000

4. YEAR OF PREPARATION : 2010-11

5. PREPARED BY : ELECTRONICS DIVISION,
MSME Development Institute
,Okhla Indl. Estate, New Delhi-
110020

1. INTRODUCTION:

Closed-circuit television (CCTV) is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors. It is often used for surveillance in areas that may need continuous/periodic monitoring such as banks, casinos, airports, military installations, convenience stores etc. In industrial plants, CCTV equipment may be used to observe parts of a process from a central control room, when the environment is not suitable for humans. It may operate continuously or only as required to monitor a particular event. The use of CCTV cameras is getting demand in every field of life keeping in view the security threats due to terrorism and also to keep the record of day to day events of any public place/business enterprise etc.

2. MARKET

The global CCTV market (including both IP-based CCTV and conventional CCTV) has been growing at a CAGR of 12.38% for the period spanning from 2005 to 2007 and is forecasted to grow at a CAGR of over 13% from 2007 to 2011. The global demand for conventional CCTV systems is showing downward trend with the escalating demand for IP-based CCTV surveillance. In 2006, North America and Europe accounted for more than 85% of the global CCTV market. It is expected that major demand for CCTV systems will come from Asia-Pacific region in future. Intelligent video surveillance system is emerging as a new trend that is driving the video surveillance software market. Various sectors like retail, healthcare, and transportation represents the opportunistic areas for the global CCTV market. Most of the sub-assemblies like PCBs with components; CCD Camera etc. are imported from China, Taiwan etc. With after sale service, competitive price and better quality the assembling/manufacturing of CCTV has the good scope in Indian market.

3. BASIS & PRESUMPTIONS:

- i. The basis for calculation of Production Capacity has been taken on Single Shift basis on 75% efficiency.
- ii. The expected capacity utilization on Single Shift basis for 300 days a year during first Year and Second Year of operation the capacity utilization is 60% and 80% respectively. The unit is expected to achieve full capacity utilization from 3rd year onward.

- iii. The Salaries & Wages, Cost of Raw Materials, Utilities, Cost of Land and Rents etc are based on prevailing rates in 2009-2010 in and around NCT of Delhi. These cost factors are likely to vary with time and location.
- iv. Interest of term loan and working capital loan has been taken at the rate of 12% on an average. This rate may vary depending upon the policy of the financial Institutions/agencies from time to time.
- v. The cost of Machinery and Equipment refer to a particular make/model and the prices are approximate prevailing in 2009-2010.
- vi. The breakeven point percentage indicated is of full capacity utilisation.
- vii. The project preparation cost etc., whenever required could be considered under pre-operative expenses.
- ii. The essential production machinery and test equipment required for the project have been indicated. The unit may also utilise common test facilities available at Electronics Test & Development Centre (ETDCs), Electronics Regional Test Laboratories (ERTLs), Regional Test Centres (RTCs) etc.

4. IMPLEMENTATION SCHEDULE

The major activities in the implementation of the project have been listed and the average time for implementation of the project is estimated at 12 months –

1. Preparation of Project Report	: 1 Month
2. Registration & Other Formalities	: 1 Month
3. Sanction of Loan by Financial Institutions	: 3 Months
4. Plant/Machinery	
a. Placement of Order	: 1 Month
b. Procurement	: 2 Months
c. Power Connection/Electrification	: 2 Months

d. Installation/Erection of Machinery/Test Equipment : 2 Months

5. Procurement of Raw Materials : 2 Months

6. Recruitment of Technical Personnel etc. : 2 Months

7. Trial Production : 11th Month

8. Commercial Production : 12th Month

NOTE:

Many of the above activities shall be initiated concurrently. Procurement of raw materials commences from 8th month onwards. When imported plant & machinery are required the implementation period of the project may vary from 12 months to 15 months.

5. TECHNICAL ASPECTS:

I) Process Online

It consists of the following assembly/testing operations

1. Inspection of raw materials/components/sub-assemblies.
2. Mounting of PCB's/Sub-assemblies/CCD Camera/Switches/Socket in the cabinet.
3. Inter-connecting the PCBs/Sub-assembly/CCD Camera
4. Precautions in respect of CMOS IC's should be taken care of while mounting/soldering IC on PCB/Chasis.
5. QA/QC check/Packing/despatch

II) Quality Specification: As per customer requirement

III) Production Capacity (per annum):

Qty: 3000 Nos.

Value: Rs. 1,35,00,000

IV) Motive Power : 3KVA (Approx.)

V) Pollution control Requirement:

The Government accords utmost importance to control environmental pollution. The small-scale entrepreneurs should have an environmental friendly attitude and adopt pollution control measures by process modification and technology substitution.

India having acceded to the Montreal Protocol in September 1992, the production and use of Ozone Depleting Substances (ODS) like Chlorofluore Carbon (CFCs), Carbon Tetrachloride, Halons and Methyl Chloroform etc, need to be phased out immediately with alternative Chemicals/Solvents. A notification for detailed rules to regulate ODS phase out under the environment protection Act 1986, have been put in place with effect from 19th July 2000.

The following steps may help to control pollution in Electronics Industry wherever applicable-

- i) In Electronics Industry, fumes and gases are released during Hand Soldering/Wave Soldering/Dip Soldering, which are harmful to people as well as environment and the end products. Alternate technologies may be used to phase out the existing polluting technologies. Numerous new fluxes have been developed containing 2 - 10% solids as opposed to the traditional 15 - 35% solids.
- ii) Electronics Industry uses CFCs, Carbon Tetrachloride and Methyl Chloroform for cleaning of printed circuit boards after assembly to remove flux residues left after soldering and various kinds of foams for packaging

Many alternative solvents could replace CFC-113 and Methyl Chloroform in Electronics cleaning. Other Chlorinated solvents such as Trichloroethylene, per-Chloroethylene and methylene Chloride have been used as effective cleaners in Electronics Industry for many years. Other organic solvents such as Ketones and Alcohol's are effective in removing both solder fluxes and many polar contaminants.

6. FINANCIAL ASPECTS

A. Fixed Capital

I. Land and Building	
Built up area	500 Sq. ft.
Rent payable per annum (Rs.)	1,20,000

II. Machinery and Equipment:

S.No.	Description	Qty	Price(RS)
1.	Oscilloscope (10 MHz)	1	45,000/-
2.	CCTV Camera	4	20,000/-
3.	LCD Monitor	1	5,000/-
4.	DC Power Supply (30V, 2A)	1	7,000/-
5.	Analog Multimeters	1	2000/-
6.	Digital Multimeters (4 ½ digits)	1	2,000/-
7.	Bench Drilling machine	1	5,000/-
8.	Portable Grinder	1	4,000/-
9.	Tool kits etc.	2	3,000/-
Total			93,000/-

III. Other Fixed Assets

S.No	Description	Ind/ Imp	Qty	Value (RS)
1.	Electrification Charges @ 10% of Cost of Machinery and Equipment.	-	-	9,300/-
2.	Office Equipment, Furniture & Working tables etc.	Ind	LS	80,000
3.	Tools, Jigs, fixtures etc.	-do-	-	20,000
4.	Pre-Operatives Expenses	-	-	20,000
Total				1,29,100

TOTAL FIXED CAPITAL (II+III)

=Rs.2,22,300

Say

=Rs.2,22,000

B. Working capital per month

i. Staff & Labour:

Sl.No.	<u>Designation</u>	Nos	Salary/ Month (Rs.)	Total Salary (Rs.)
1.	Manager cum Servicing Engineer	1	15,000	15,000
2.	Skilled workers	2	6,000	12,000
3.	Peon cum Helper	1	3,500	3,500
	Total			30,500
	Pre requisites @ 15% of Total Salary			4,575
Total				35,075

ii. Raw Material Requirements per Month (for 250 units)

S.No.	Description	Ind/ Imp	Value per unit(Rs)	Total Value (Rs)
1.	Hard Disc	Imp.	1400	
2.	PCBs with Electronic	do	1600	
3.	Components	Ind	300	
4.	Display cum control pannal	do	250	
5.	Electronic Connectors/Switch/	do	250	
6.	Sockets	do	100	
7.	Metallic case with clamps	do	50	
8.	Connecting cables/ wires	do	50	
	Solder soft, screws etc.			
	Packing material etc.			
Total			4000	10,00.000

iii. Utilities per month (Rs.)

Power	1000
Water	200
Total	1200

iv. Other contingent Expenses per month (Rs.)

1.	Rent	10,000
2.	Postage & Stationery	500
3.	Telephone/Telex/Fax charges	1000
4.	Repair & Maintenance	500
5.	Transport and conveyance Charges	1000
6.	Advertisement/Publicity	500
7.	Insurance and taxes	1000
8.	Miscellaneous Expenses	1500
Total		16,000

Total Recurring Expenditure per Month
(i + ii + iii + iv)

= Rs. 10,52,275
Say = Rs. 10,52, 000

C. Total Capital Investment (Rs)

Fixed Capital	2,22,000
Working Capital for 2 months	21,04,000
Total	23,26,000

D. Financial Analysis

i. Cost of Production per annum (Rs)

Total Recurring Expenditure	1,26,24,000
Depreciation on Plant & Machinery @ 10 %	9300
Depreciation on office equipment, furniture etc. @ 20%	16,000
Depreciation on tools jigs, fixtures etc @ 25%	5000
Interest on total capital investment @ 12 %	2,79,720
	1,29,34,020

Total	
Say	1,29,34,000

ii. Sales Turnover per Annum:

Item	Qty. (Nos)	Average Rate(Rs.)	Value (Rs.)
4 Channel Digital Video Recorder (DVR)	3000	4550	1,36,50,000

Profit per annum (Before Tax) = Sales turnover-Production cost
(Per Annum) (Per Annum)
=Rs. 7,16,000

Net Profit Ratio = (Profit x 100)/Sales turnover

= 5%

Rate of Return = (Profit x 100)/Total capital Invest.

= 30.8%

iii. Fixed Cost (FC) per annum (Rs)

Rent	1,20,000
Depreciation on machinery & equipment @ 10%	9300
Depreciation on office equipment, furniture etc. @ 20%	16,000
Depreciation on tools jigs, fixtures etc @ 25%	5000
Interest on total capital investment @ 12%	2,79,720
Insurance	12,000
40% of Salary & Wages	1,68,360
40% of Other Contingencies(Excluding rent & insurance)	60,000
TOTAL	6,70,380
SAY	6,70,000

Break even point (BEP) = (FC/ (FC + Profit)) X100

= 48.3 %

Additional Information:

- The Project Profile may be modified/tailored to suit the individual entrepreneurship qualities/capacity, production Programme and also to suit the location characteristics, wherever applicable.
- The Electronics Technology is undergoing rapid strides of change and there is need for regular monitoring of the national and international technology scenario. The unit may, therefore, keep abreast with the new technologies in order to keep them in pace with the developments for global competition.
- Quality today is not only confined to the product or service alone. It also extends to the process and environment in which they are generated. The ISO 9000 defines standards for quality management systems and ISO 14001 defines standards for Environmental Management System for acceptability at international level. The unit may adopt ISO 9000 standards for global competition.
- The unit may contact the respective State Pollution Control Board and the Central Pollution Control Board for guidance on Pollution Control measures.
- Conservation of Energy is of national importance and the unit may strictly adhere to the energy conservation measures.

- Prior to Registration with Director of Industries/Industries Commissioner/Respective District Industries Centre, MSEs is required for manufacturing the product.
- The percentage of margin money may vary as per bank's discretion

ADDRESSES OF MACHINERY / EQUIPMENTS SUPPLIERS

- | | | |
|----|---|---------------------|
| 1. | Audiotec instruments
equipments
Survey no. 10/3, lane 3 – B,
Sahu Colony, Near Cumnis,
College of Engineering,
Karvey Nagar, Pune – 4110592. | Testing & measuring |
| 2. | Vaiseshaka Instruments,
2, Post Box Stall, 38
Industrial Area
Amabala Cantt, Hariyana | -do- |
| 3. | Aplab
6 Vasundhara, 6 th . Floor
2/7 Sarat Bose Road,
Kolkata – 700020 | -do- |
| 4. | Philliphs India,
No.7, Justice Chandra Madhab Road,
Kolkata-700020 | -do- |
| 5. | International Electronics,
202 Champakalal Industrial Estate,
105 Sion East,
Mumbai-400022 | -do- |
| 6. | Electromech,
4, subramayapura Post,
Uttarahalli Road,
Bangalore – 560061. | -do- |
| 7. | Lalani International,
Umang Commercial Centre,
(Near Hotel Gitanjali), | -do- |

Paltan Bazaar, Guwahati – 781008.

8. M/s. Microtek International Ltd.
Microtek House, Udyog Nagar,
Rohtak Raod, Delhi-110041.
9. Sumitron Exports Pvt. Ltd.,
27, Community Centre,
Naraina Phase – 1,
P.O. Box – 10227,
NEW DELHI - 110028
-do-
10. Advance Tech Services,
56, 2nd floor, Rani Jhansi Road,
New Delhi-110055
Soldering iron & assembly tools.
11. Inde Enterprises, 745, Sector -8B
Chandigarh-160009
-do-

ADDRESSES OF RAW MATERIALS SUPPLIERS

1. Continental Devices India Ltd,
C-120, Naraina Industrial Estate,
New Delhi-110028
Components.
2. Muktagiri Enterprises,
No.10, Manik Chambers, 3rd floor,
399-A, Lamington Road,
Mumbai-400001.
-do-
3. Precision Electronic Components Mfg.Co.
B-51, Electronics Complex,
Kushaiguda, ECIL PO,
Hyderabad – 500062.
-do-

- | | | |
|----|---|-------------------------|
| 4. | M/s Emaar Impex (P) Ltd.,
16/7 A hanuman Tarrace , Tara Temple Lane
Limbigton Road, Mumbai-400007 | -do- |
| 5. | M/s Omron Electronics Components (P) Ltd.,
1103, A Wing, Mittal Towers,
MG Road, Bangalore 560001 | -do- |
| 6. | M/s R.S. Compontnts & Controls (I) Ltd.,
44, Okhla industrial Estate, New Delhi-20 | -do- |
| 7. | M/s Avomech Commercial (I) Pvt. Ltd,
2 A&B Bright Apartments,
7 Bright Street,
Kolkata-700019 | Relays. |
| 8 | M/s Thakur Estate, Vidyavihar (W)
Mumbai -86 | -do- |
| 9. | Calcutta PCB Printers,
51/3-A, Kalipara,
Mukherjee Road,
Kolkata-700008 | Printed Circuit boards. |

NOTE: Most of the sub-assemblies like PCBs with components; CCD Camera etc. are imported from China, Taiwan etc