Smart three-color light board

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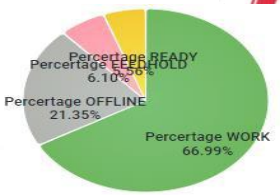
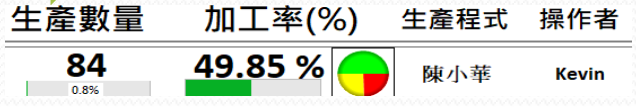
Smart three-color light board

CNC production

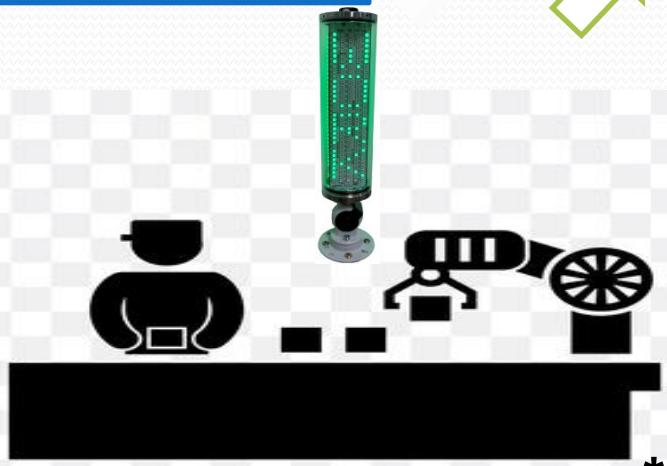
CNC production

DeviceName(機台名稱):
機台001
Program(程式名稱):
Program
Employee_ID(員工ID):
AB123457892
Employee_name(員工姓名):
王小明 MING
Partcount_increment pertime(每次工件增加數量):
1
送出設定



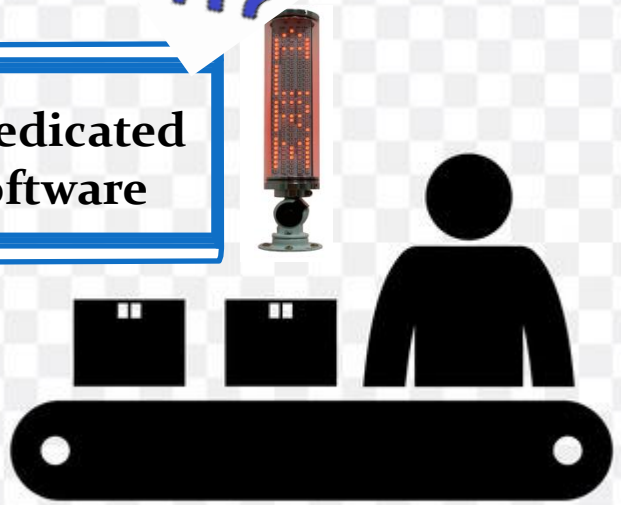


Production line



Dedicated software

Packaging line

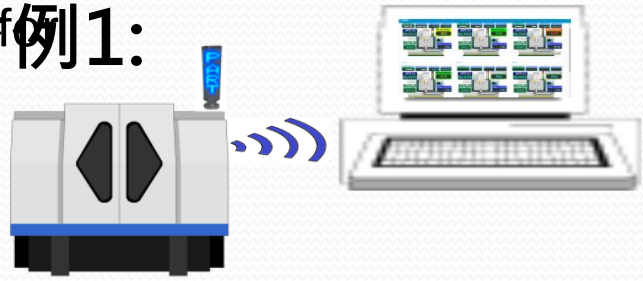


*Software output video

Smart three-color light board

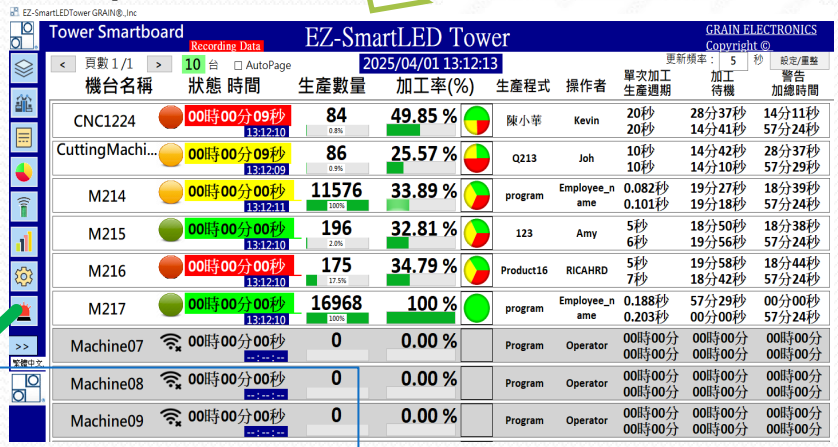
- Light status display ✔
- Real-time data recording,no need for manual recording ✔
- Wi-Fi connection ✔
- Dedicated software (data is permanently stored in the factory ✔
- Processing quantity calculation ✔
- Processing time ✔
- Standby time ✔
- ALARM time ✔
- Operation personnel set
- Working time cycle ✔
- Calculation of assembly product quantity ✔

*例1:



*例2:

*Software output video wall



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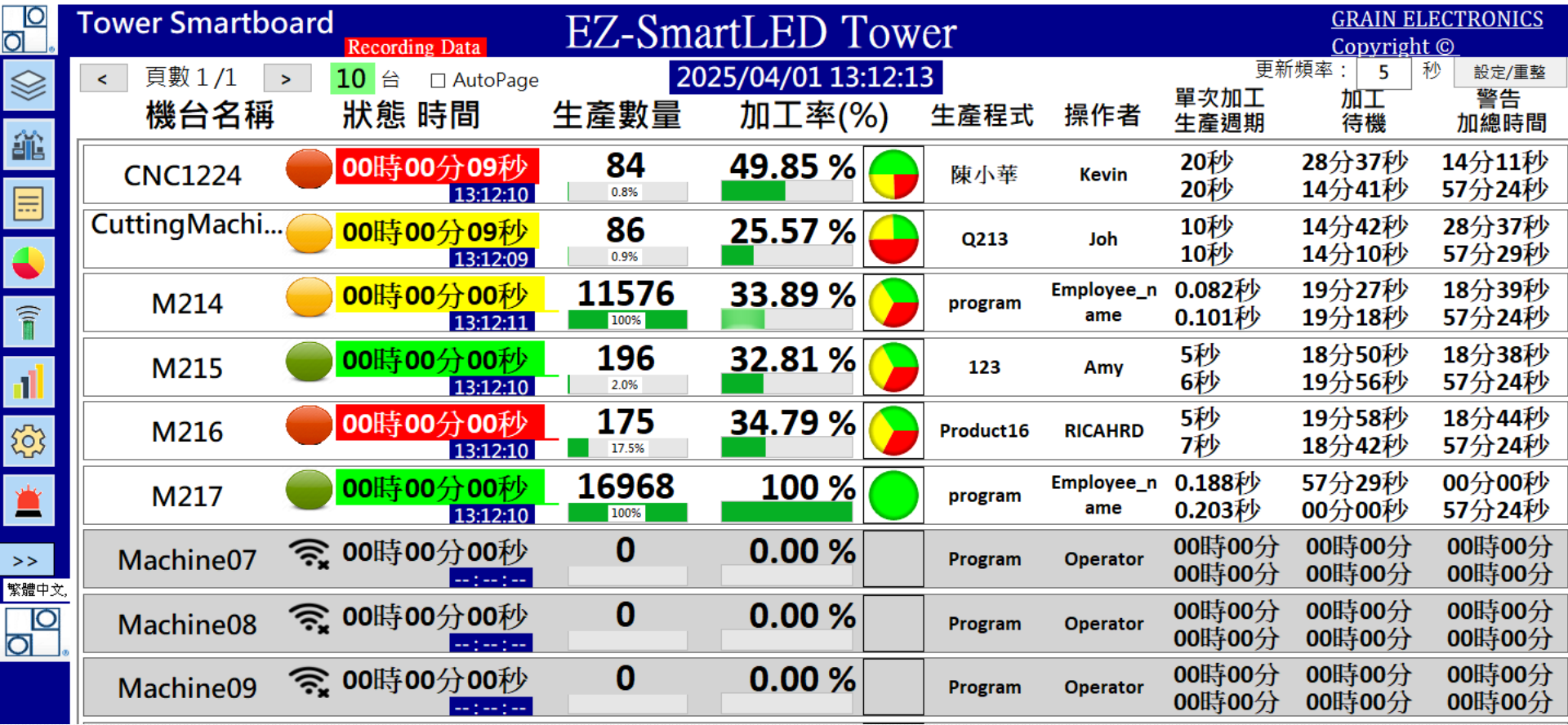
- **Real-time data updates**：

Keep track of production progress and improve response speed。

Processing quantity calculatio
Processing time ✔
Standby time ✔
ALARM time ✔
Operation personnel set
Working time cycle ✔
Calculation of assembly product quantity ✔

Machine smart dashboard (production status/production quantity/processing rate/startup time)



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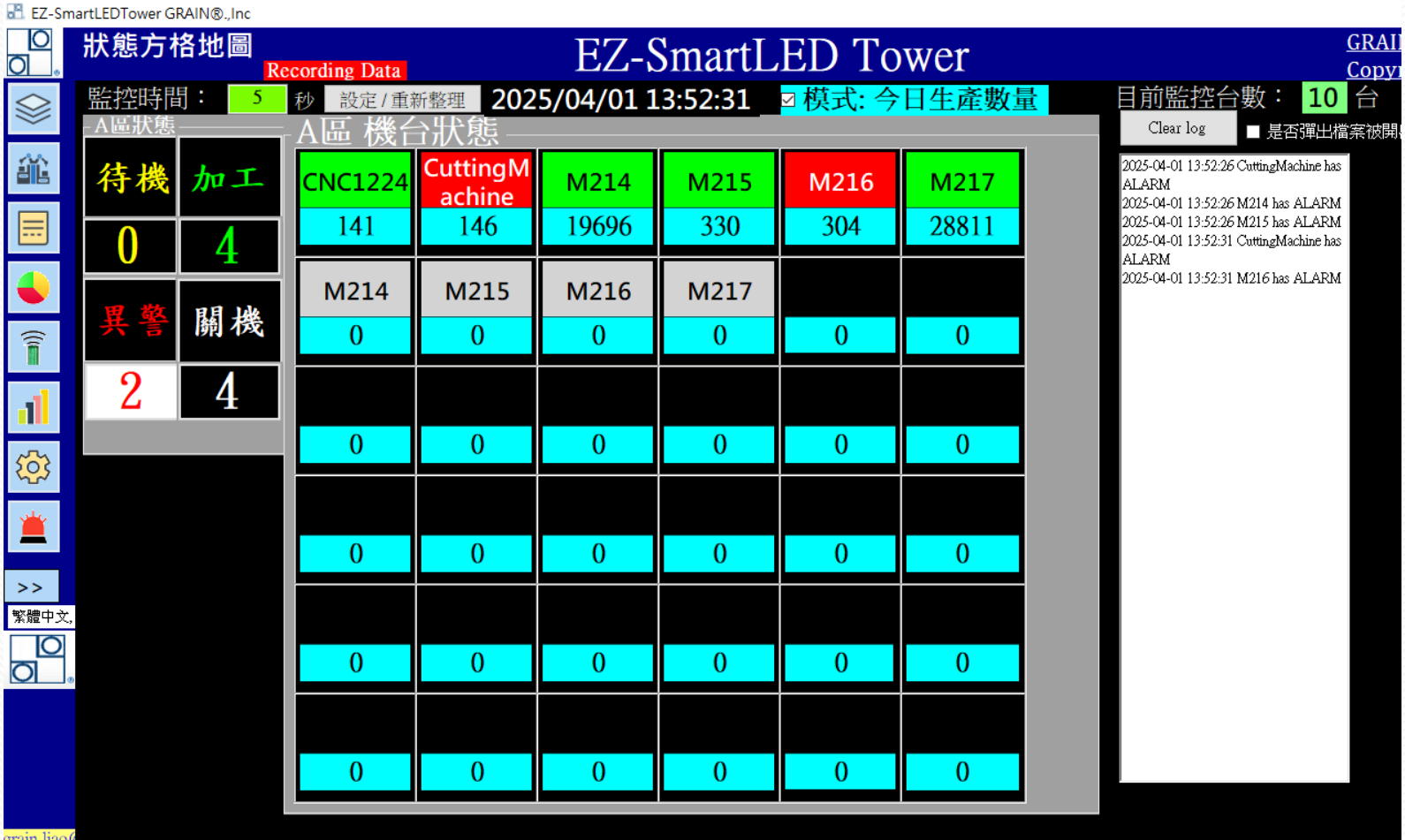
- **Real-time observation of production line ：**

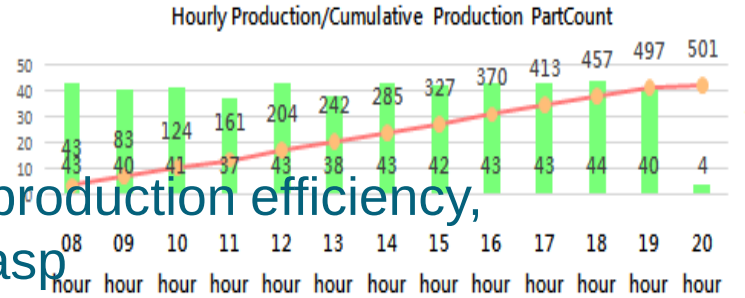
Managers can monitor progress at any time through the video wall。

Machine signage

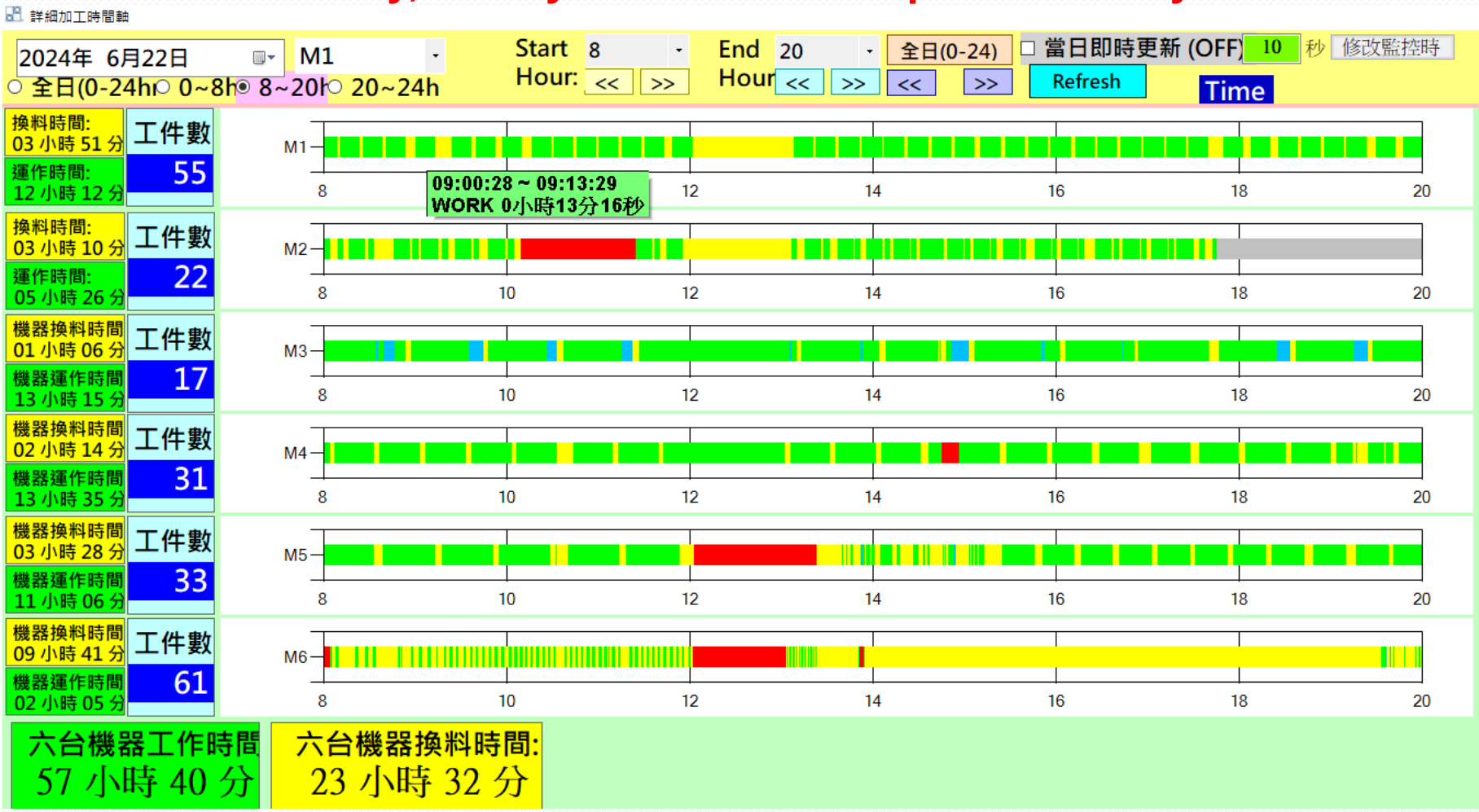


Data Analysis：

Provide reports and trend analysis to optimize production efficiency, understand production cycle and accurately grasp

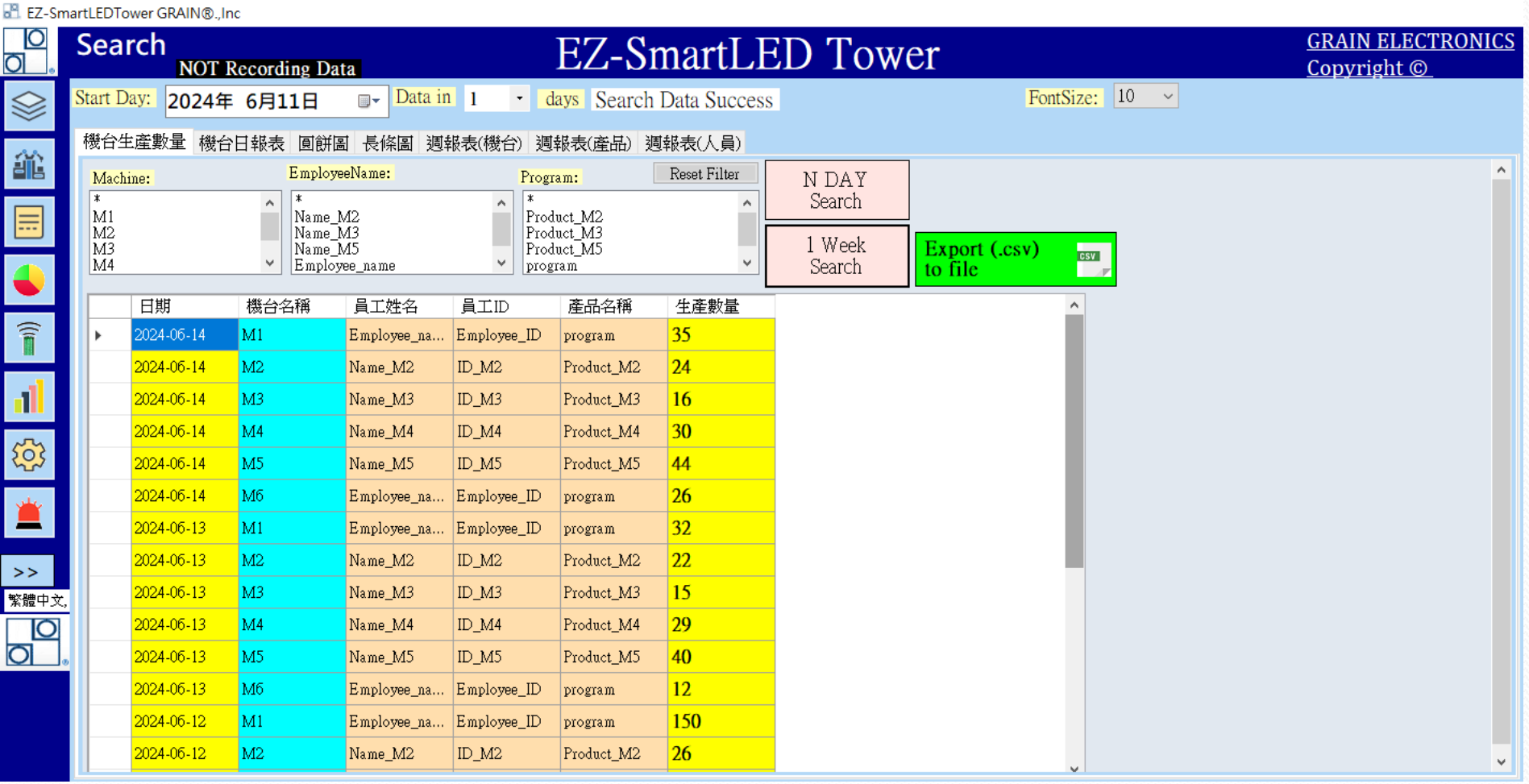


TimeLine of the day, clearly understand the production cycle



●Data Analysis ：

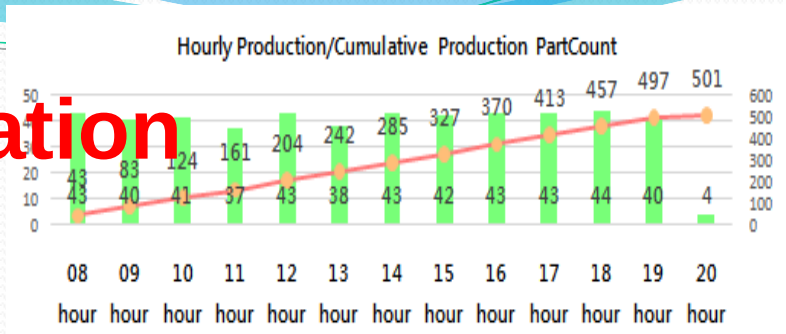
Machine production quantity Select date (by day/by week)



日期	機台名稱	員工姓名	員工ID	產品名稱	生產數量
2024-06-14	M1	Employee_na...	Employee_ID	program	35
2024-06-14	M2	Name_M2	ID_M2	Product_M2	24
2024-06-14	M3	Name_M3	ID_M3	Product_M3	16
2024-06-14	M4	Name_M4	ID_M4	Product_M4	30
2024-06-14	M5	Name_M5	ID_M5	Product_M5	44
2024-06-14	M6	Employee_na...	Employee_ID	program	26
2024-06-13	M1	Employee_na...	Employee_ID	program	32
2024-06-13	M2	Name_M2	ID_M2	Product_M2	22
2024-06-13	M3	Name_M3	ID_M3	Product_M3	15
2024-06-13	M4	Name_M4	ID_M4	Product_M4	29
2024-06-13	M5	Name_M5	ID_M5	Product_M5	40
2024-06-13	M6	Employee_na...	Employee_ID	program	12
2024-06-12	M1	Employee_na...	Employee_ID	program	150
2024-06-12	M2	Name_M2	ID_M2	Product_M2	26

●Data Analysis ：

Machine Production Utilization Daily Report



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Start Day: 2024年 6月 1日 Data in 1 days

Start Date: 2024-06-01
End Date:2024-06-01

FontSize: 10

機台生產數量 | 機台日報表 | 圓餅圖 | 長條圖 | 週報表(機台) | 週報表(產品) | 週報表(人員)

Select a machine Machine: Reset Filter

*
M2
M3
M4

Day Review | Day Report | DAY Detail | DayDetail Only show

一鍵匯出 DayReview CSV

一鍵匯出 DayReport CSV

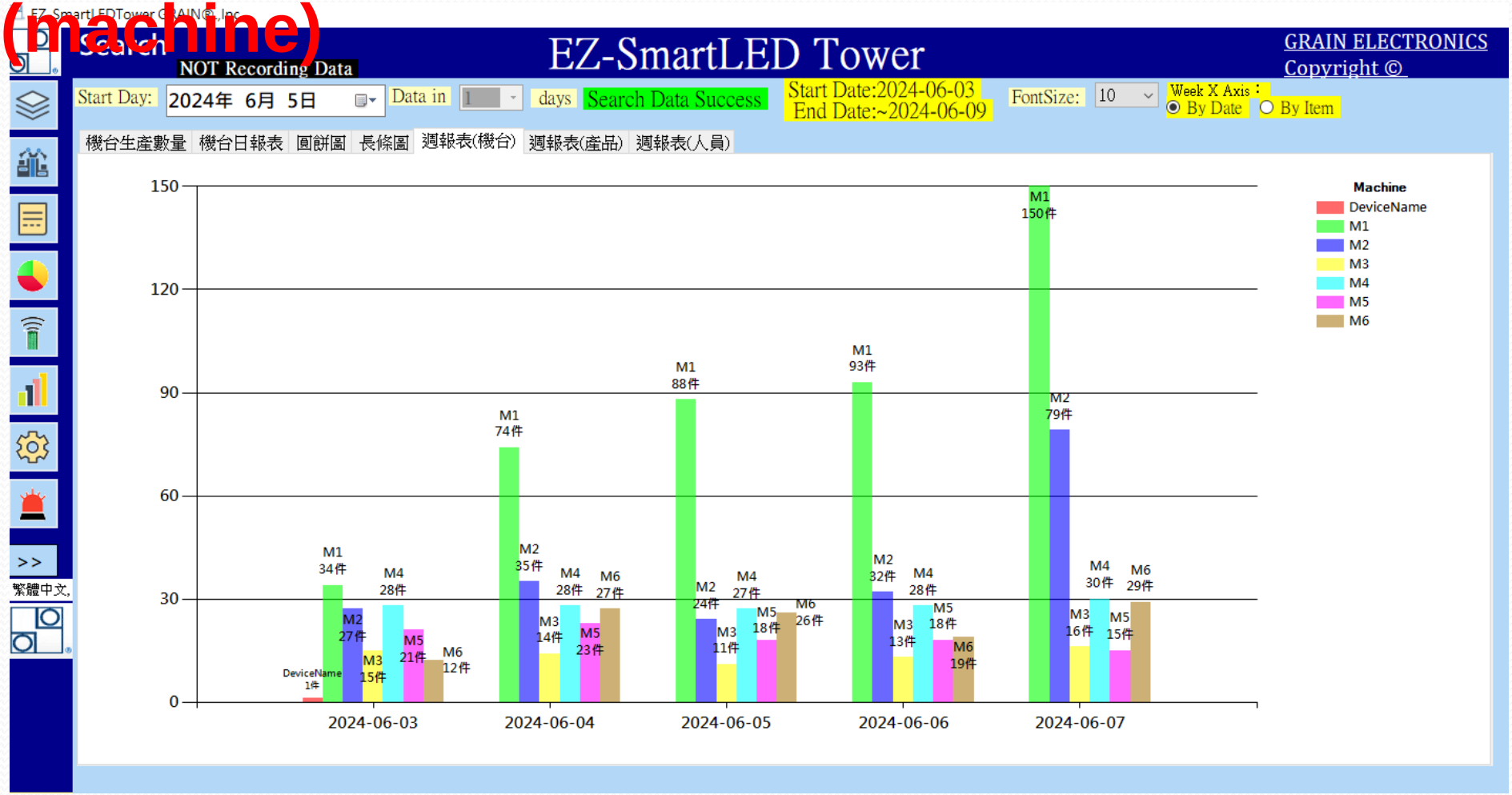
日期	機器	狀態	開始時間	結束時間	區段時間	區段數量	累計數量	產品	人員ID	人員
2024-06-01	M2	WORK	14:33:25	14:37:25	00小時04分30秒	1	16	Product_M2	ID_M2	Name_M2
2024-06-01	M2	HOLD	14:37:55	14:39:25	00小時02分00秒	0	16	Product_M2	ID_M2	Name_M2
2024-06-01	M2	WORK	14:39:55	14:43:55	00小時04分30秒	1	17	Product_M2	ID_M2	Name_M2
2024-06-01	M2	HOLD	14:44:25	14:45:55	00小時02分00秒	0	17	Product_M2	ID_M2	Name_M2
2024-06-01	M2	WORK	14:46:25	14:50:25	00小時04分30秒	1	18	Product_M2	ID_M2	Name_M2
2024-06-01	M2	HOLD	14:50:55	14:57:55	00小時07分30秒	0	18	Product_M2	ID_M2	Name_M2
2024-06-01	M2	WORK	14:58:25	15:02:25	00小時04分30秒	1	19	Product_M2	ID_M2	Name_M2
2024-06-01	M2	HOLD	15:02:55	15:04:25	00小時02分00秒	0	19	Product_M2	ID_M2	Name_M2
2024-06-01	M2	WORK	15:04:55	15:08:26	00小時04分01秒	1	20	Product_M2	ID_M2	Name_M2
2024-06-01	M2	HOLD	15:08:56	15:10:26	00小時02分00秒	0	20	Product_M2	ID_M2	Name_M2
2024-06-01	M2	WORK	15:10:56	15:14:26	00小時04分00秒	1	21	Product_M2	ID_M2	Name_M2
2024-06-01	M2	HOLD	15:14:56	15:19:56	00小時05分30秒	0	21	Product_M2	ID_M2	Name_M2
2024-06-01	M2	WORK	15:20:26	15:24:26	00小時04分30秒	1	22	Product_M2	ID_M2	Name_M2
2024-06-01	M2	HOLD	15:24:56	15:26:26	00小時02分00秒	0	22	Product_M2	ID_M2	Name_M2
2024-06-01	M2	WORK	15:26:56	15:30:56	00小時04分30秒	1	23	Product_M2	ID_M2	Name_M2
2024-06-01	M2	HOLD	15:31:26	15:44:56	00小時14分00秒	0	23	Product_M2	ID_M2	Name_M2
2024-06-01	M2	ALARM	15:45:26	17:30:58	01小時46分02秒	0	23	Product_M2	ID_M2	Name_M2
2024-06-01	M2	OFFLINE	17:31:28	23:59:59	06小時28分31秒	0	23	Product_M2	ID_M2	Name_M2

>>

繁體中文,

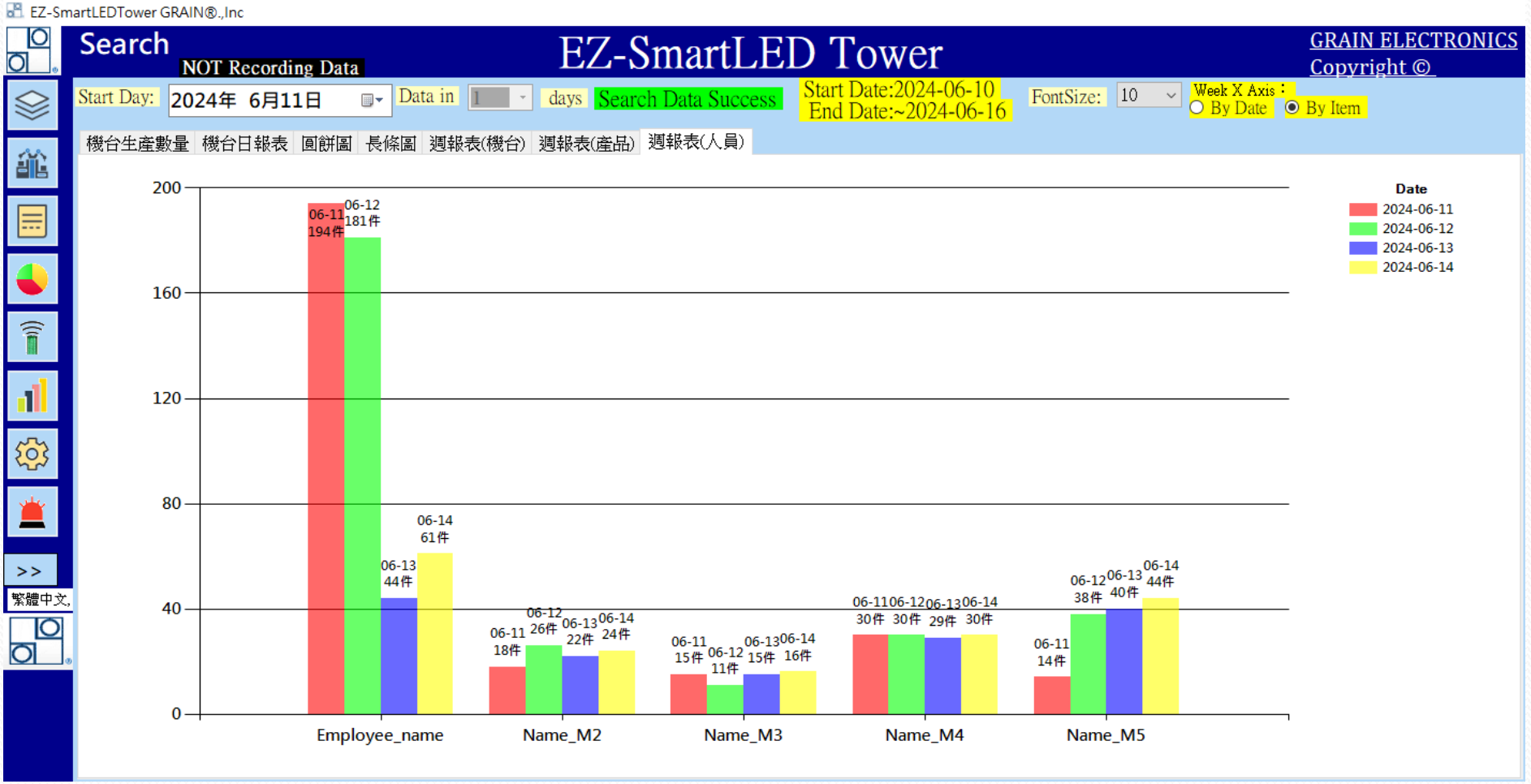
●Data Analysis ：

Weekly production report line chart (machine)



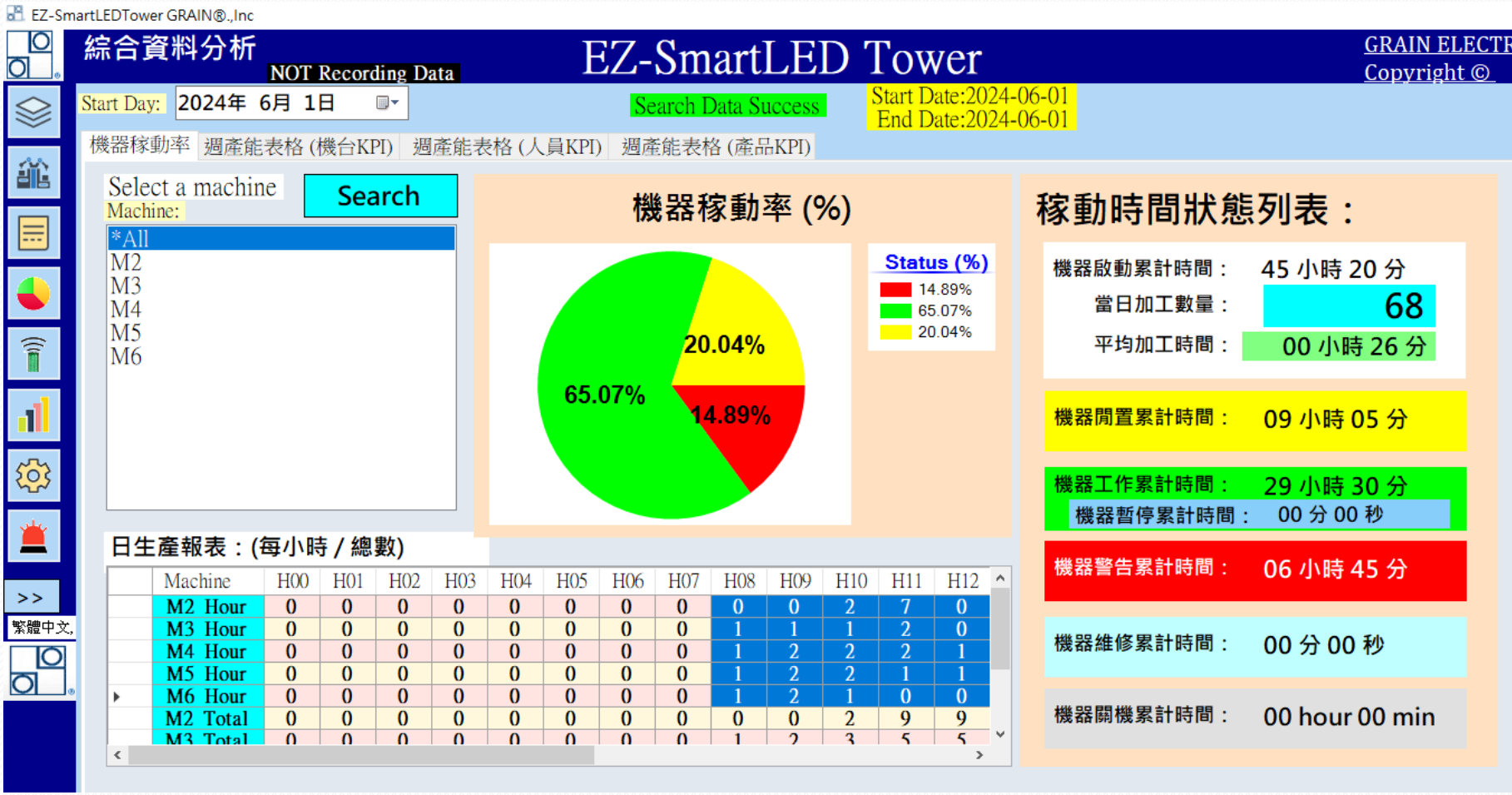
●Data Analysis：

Weekly production report line chart



●Data Analysis ：

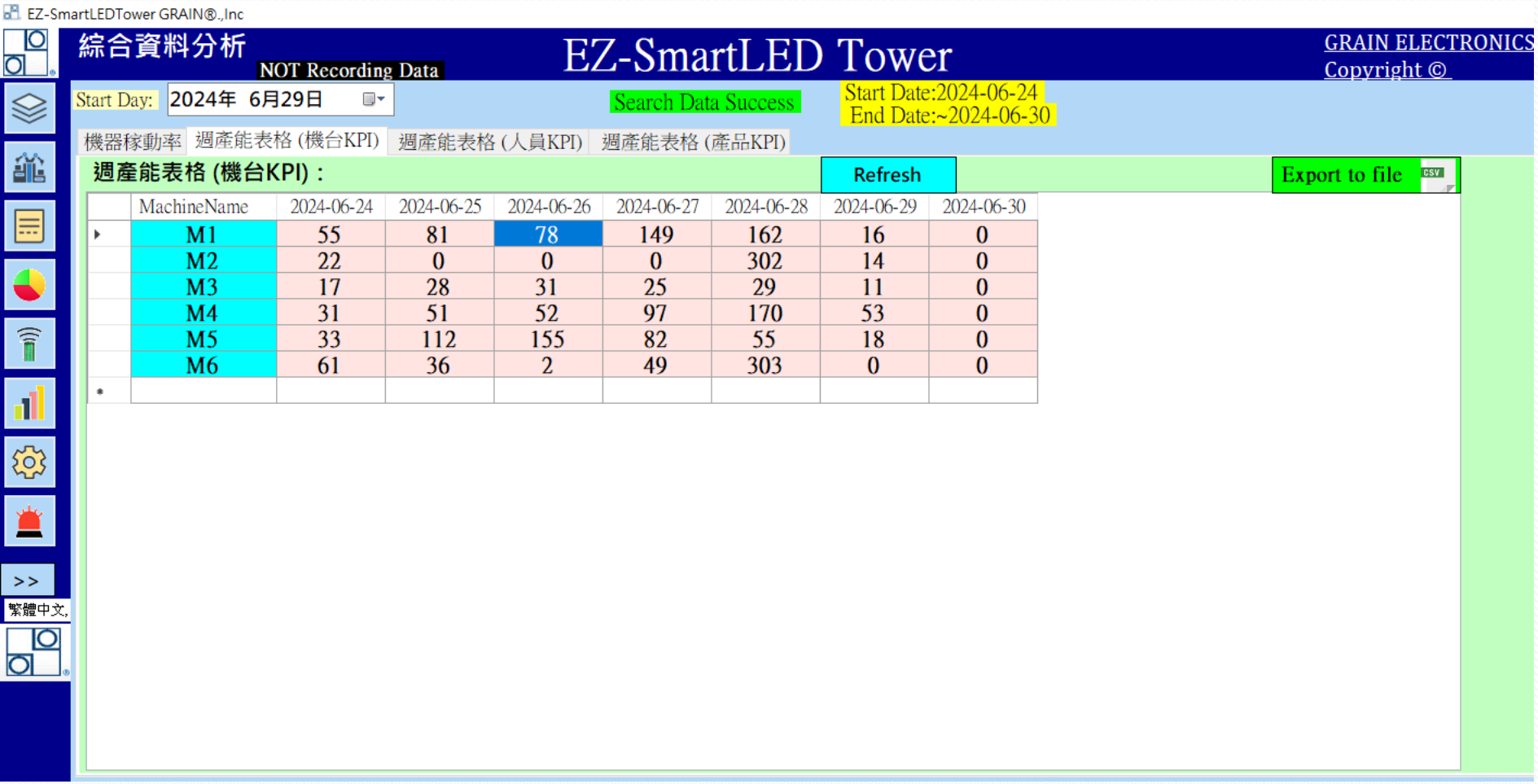
Machine utilization rate & daily production by hourly/total



Machine	H00	H01	H02	H03	H04	H05	H06	H07	H08	H09	H10	H11	H12
M2 Hour	0	0	0	0	0	0	0	0	0	0	2	7	0
M3 Hour	0	0	0	0	0	0	0	0	1	1	1	2	0
M4 Hour	0	0	0	0	0	0	0	0	1	2	2	2	1
M5 Hour	0	0	0	0	0	0	0	0	1	2	2	1	1
M6 Hour	0	0	0	0	0	0	0	0	1	2	1	0	0
M2 Total	0	0	0	0	0	0	0	0	0	0	2	9	9
M3 Total	0	0	0	0	0	0	0	0	1	2	3	5	5

●Data Analysis ：

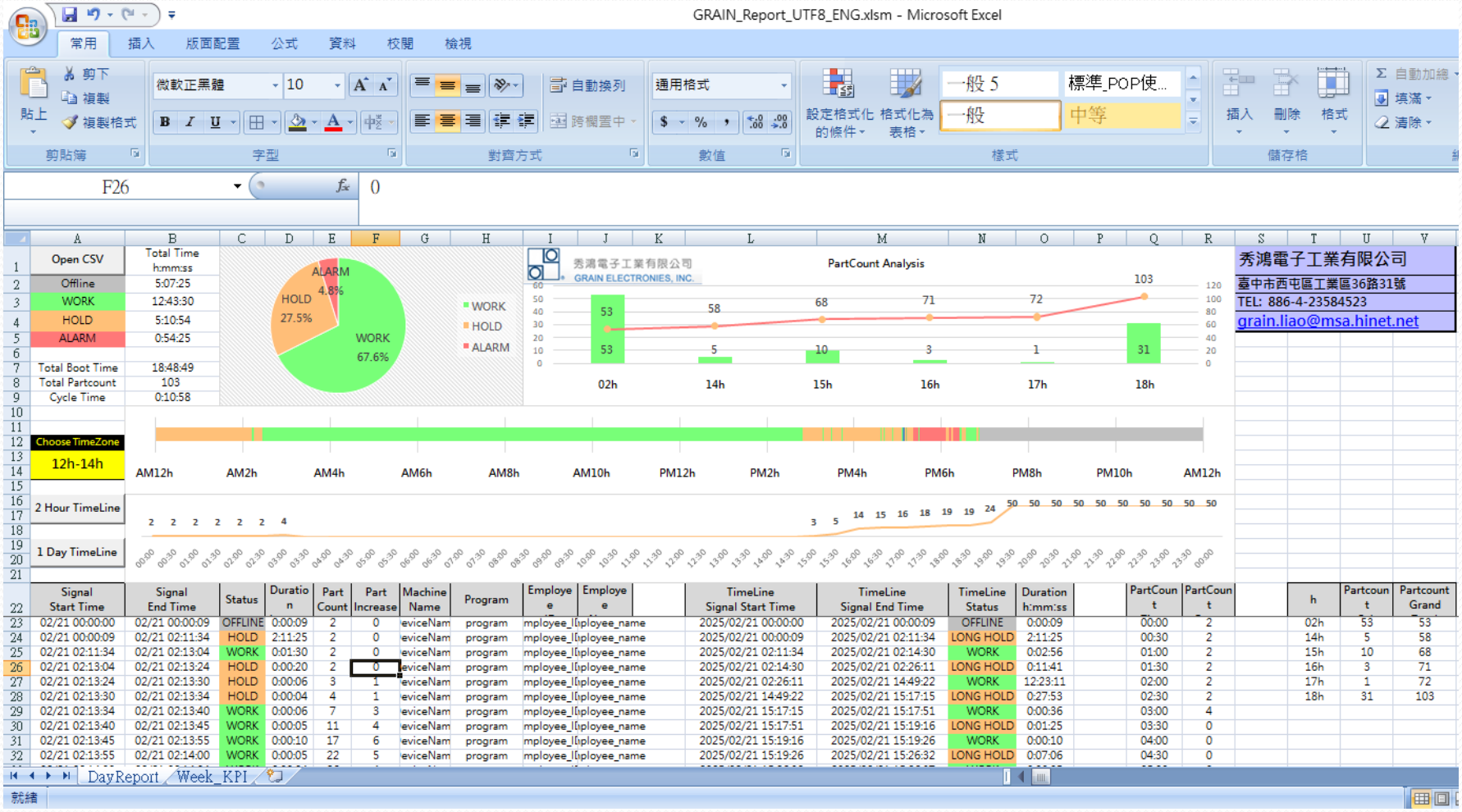
Weekly production quantity (machines/personnel/products)



MachineName	2024-06-24	2024-06-25	2024-06-26	2024-06-27	2024-06-28	2024-06-29	2024-06-30
M1	55	81	78	149	162	16	0
M2	22	0	0	0	302	14	0
M3	17	28	31	25	29	11	0
M4	31	51	52	97	170	53	0
M5	33	112	155	82	55	18	0
M6	61	36	2	49	303	0	0

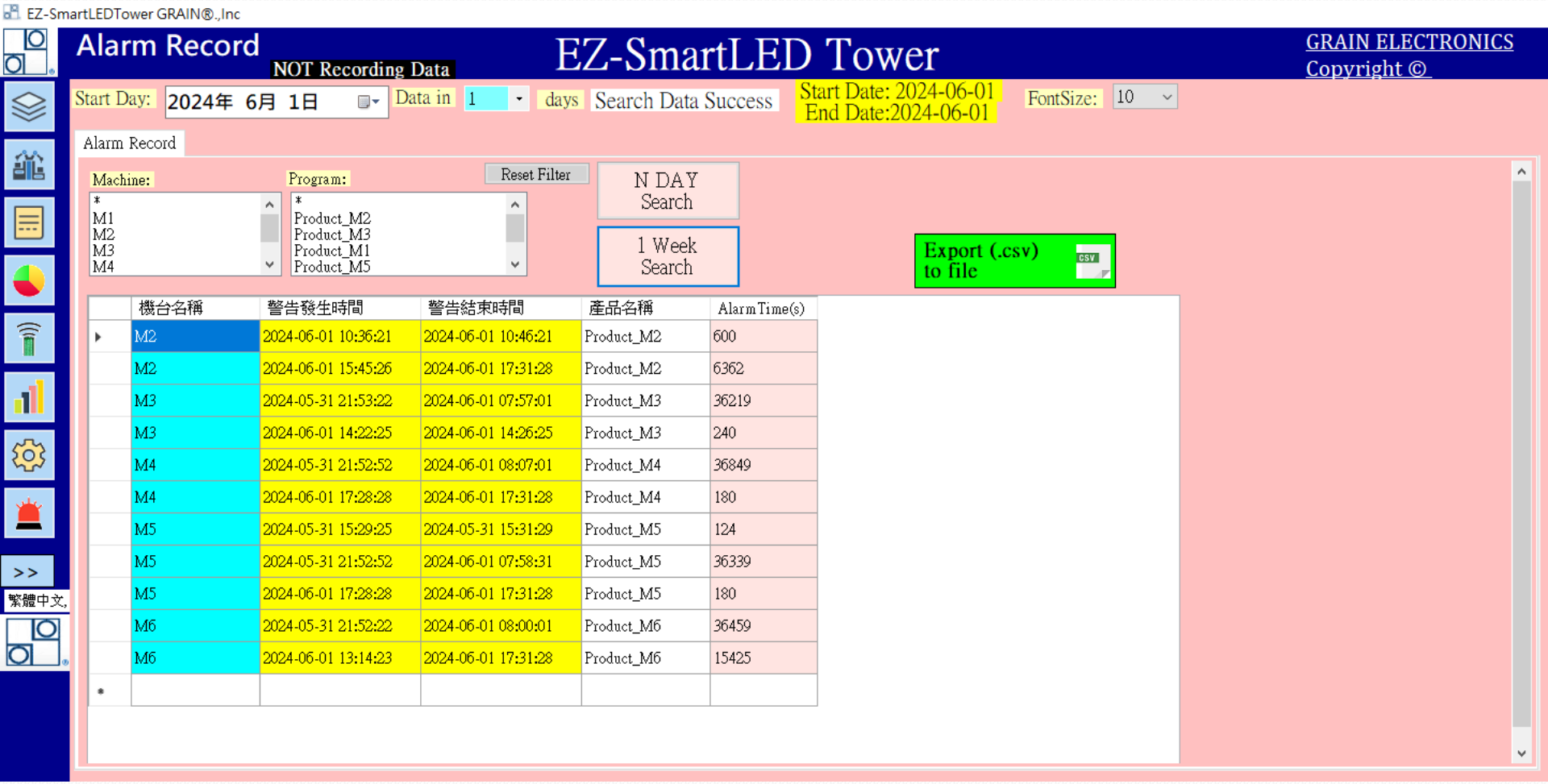
●Data Analysis ：

Excel daily/weekly reports



●Data Analysis ：

Alarm occurrence time/end time/duration



	機台名稱	警告發生時間	警告結束時間	產品名稱	AlarmTime(s)
▸	M2	2024-06-01 10:36:21	2024-06-01 10:46:21	Product_M2	600
	M2	2024-06-01 15:45:26	2024-06-01 17:31:28	Product_M2	6362
	M3	2024-05-31 21:53:22	2024-06-01 07:57:01	Product_M3	36219
	M3	2024-06-01 14:22:25	2024-06-01 14:26:25	Product_M3	240
	M4	2024-05-31 21:52:52	2024-06-01 08:07:01	Product_M4	36849
	M4	2024-06-01 17:28:28	2024-06-01 17:31:28	Product_M4	180
	M5	2024-05-31 15:29:25	2024-05-31 15:31:29	Product_M5	124
	M5	2024-05-31 21:52:52	2024-06-01 07:58:31	Product_M5	36339
	M5	2024-06-01 17:28:28	2024-06-01 17:31:28	Product_M5	180
	M6	2024-05-31 21:52:22	2024-06-01 08:00:01	Product_M6	36459
	M6	2024-06-01 13:14:23	2024-06-01 17:31:28	Product_M6	15425
*					

Customers need:

- Production information is delayed, and managers cannot grasp the progress in real time
- Failure to respond to production line anomalies leads to production losses
- Traditional recording methods are cumbersome and labor costs are high
- Lack of real-time data analysis and insufficient basis for decision-making

Comparison of traditional methods and smart three-color light systems

- Real-time collection of production data and display on the video wall
- Provide efficient and transparent management

Item	Traditional production management	Real-time monitoring system
News Update	Dependence on manual reporting, delayed time	Instant data transmission, no need for manual recording ✔
Abnormal reaction	Manual inspection is required, and abnormalities are difficult to detect	Automatic alarm notification, immediate handling of abnormalities ✔
Data Analysis	Manual recording leads to inaccurate data	Real-time grasp of production line dynamics to improve production efficiency ✔
Remote Monitoring	Need to the site to check the situation	Understand production line dynamics anytime, anywhere and improve flexibility ✔
Manpower requirements	Requires dedicated personnel to monitor and record	Reduce labor costs and improve management efficiency ✔

Solutions

- **Real-time data updates：**

-Keep track of production progress and improve response speed。

- **Abnormal alarm notification:**

-Automatically notify relevant personnel when equipment is abnormal, materials are out of stock, or production is delayed

- **Historical data analysis：**

-Understand the production cycle, provide reports and trend analysis, and optimize production efficiency.

- **Remote monitoring:**

-Check production status at any time via mobile phone or computer.

Usage scenario demonstration

- **Real-time observation of production line：**

  Managers can monitor progress at any time through the video wall.

- **When an abnormal situation occurs：**

  The system automatically sends notifications and technicians respond quickly.

- **Production data statistics and decision-making:**

  Management makes optimizations based on data analysis.

Technology and Security

- **High stability: Industrial-grade equipment design ensures long-term stable operation.**
- **Security: Local transmission ensures production data is not leaked.Permanently stored in the factory, ensuring confidentiality.**
- **High device compatibility: Seamlessly integrates with a variety of production equipment and can be integrated with existing ERP/MES systems.**
- **Remote management: Monitor production status anytime via computer or mobile phone.Monitor production line progress from both inside and outside the factory.**

Value and Return

- **Improve production efficiency by 20%+:**

  Quantify production cycles, identify pain points, reduce waiting times,
  and optimize scheduling.

- **Reduce labor costs by 30%+**

  Reduce the need for dedicated personnel to copy statistics.

- **Abnormal reaction speed increased by 50%**

  Reduce equipment downtime, quickly respond to failures and material shortages, and improve equipment utilization.

- **Shortened decision-making time**

  More flexible production planning

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