

REVIEW ON IMPLIMENTATION OF TOUCHSCREEN DIGITAL MENU CARD FOR HOTEL

Satyam Thakre¹, Prachika Sakharkar², Shubham Bhalerao³, Shweta Meshram⁴,
Prof. V. Dhumal⁵

¹²³⁴Student, Department of E&TC Engineering, Priyadarshini J. L. College of Engineering, Nagpur, India

⁵Assistance Professor, Department E&TC Engineering, Priyadarshini J. L. College of Engineering, Nagpur, India

Abstract - A new design scheme of the digital menu card ordering system applied to the middle and small hotel is proposed. The development of the touchscreen digital menu card based on the ATMEGA 328 and Wi-Fi communication technologies. It has advantages of low power, high reliability and user friendly interface. This is the method in which any person can select the desired items/order by their choice which is present in the menu display and the order place by the touchscreen panel which is place on the each and every table. This order will be transferred to the kitchen section display on the LCD with the help of the Wi-Fi module and further it will provide to the counter section for the billing of the order. A feedback (food) will be provided to the customer section from the kitchen section.

Key Words: ATMEGA 328, Touchscreen panel, LCD display, Wi-Fi Module, Raspberry PI, Aurduino.

1. INTRODUCTION

Many times in the hotel we have to wait for a waiter to give our order of food. This create problem when there is rush in hotel especially in festival seasons and generally on weekends. Main intension of our project is to avoid such problems and to give solutions to such problems. In the project a touch screen panel will placed on every table. Whenever a customer comes to their table then they will select the desired order menus from the touch screen. Suppose users have selected menu numbers 1,2,8,4 and so on and once he/she is done then he/she can press the confirm key. At that time information will be sent to the kitchen of the hotel. All this information will be displayed on a computer display. For this purpose we have used a Bluetooth at the transmitter (customer table) and receiver table (kitchen side). So orders will be directly sent to the kitchen and users don't have to wait for the waiter and at the same time LCD will display the total billed amount directly to the user. The customer needs a good service, good quality of food consumption, no confusion in placing and receiving an order, quick billing with no errors. All this can be made possible with a new type of system named as the touch screen digital menu card for hotel.

1.1 LETERATURE SURVEY

In 2013, a new design scheme of the E-menu ordering terminal applied to middle and small hotel proposed. The developing the E-menu card for hotel it is

based on the hardware and software platform. The author using ARM7 and using Zigbee module to transmitting and receiving the data. This paper introduces the two sections one is hand held device and another is the main section. Both the sections consist of the Zigbee transreceivers. The first section placed on the each and every table in that we will place an order from the touchscreen menu card and the order saved in the memory of that section. Then the order is forwarded to the main section via Zigbee wireless communication module. After that the main section receives the information and stores the data in the memory. According to that order which is stored in the memory service is provided. Here LCD is used to display the data PC is used for display data and record for billing. [1]

In this paper 128x64 GLCD are used. There is a high performance GLCD controller integrated on the chip. The CPU transfers pixel data to GLCD screen. FM7843 is a 4-wire resistive touch screen integrated circuit which is widely applied to small portable devices battery powered. The device is a 12 bit analog to digital converter with a synchronous serial interface and touch screen driving circuit. A high performance cost ratio wireless handheld ordering terminal is proposed, which is based on the hardware platform of ARM7 and zigbee wireless communication technology. The ordering terminal has the advantages to simple structure, stable operation, low power consumption and friendly interface, thus it has bright market prospect. [2]

In January 2015, to bring a change in the ordering of the desired menu in the hotel and restaurant we have to decide to generate the one system is called as touchscreen based advanced menu ordering system. This method the any person can select the desired items by their choice which is present in the menu display and place an order for it by a single touch on the menu display screen. This order is transferred to the kitchen section touch screen display with the help of the zigbee module and further it will also be provided to the manager section for billing of the order. A feedback will be provided to the customer section from the kitchen section and the ordered menu will be provided to the customer. [3]

In April 2015, in this generation we have advanced in almost all the area except one field where is still lack of technology. It is the hotel management system and service and so far there is no step being taken to introduce technology in this area the above stated project works

mainly on the method by which anyone can select any items by their choice which are in the menu display and that order will be sent to the computer of the manager using zigbee module and that ordered item will be served to that customer. With the information we have received. We are engaged in an iterative design cycle to develop a final graphical user interface for our touch screen based ordering system and displaying system. [4]

A new design scheme of the touch screen based menu ordering system applied to middle and small hotel is proposed. The development of the menu ordering is based on the software and hardware platform on ARM11 using zigbee short range radio communication technologies. It has advantages of high performance cost, low power, high reliability and friendly user interface. This paper introduces the two sections one is hand held device section and other is main section. This information is transmitted to the main section with the help of the zigbee module. The main section will receive the information from the main section and display the order on the display. In this we are using the touch-screen LCD is used to select the order and transmit the data, one data is given to the kitchen section and the one data is given to the computer section for the billing process. [5]

2. BLOCK DIAGRAM

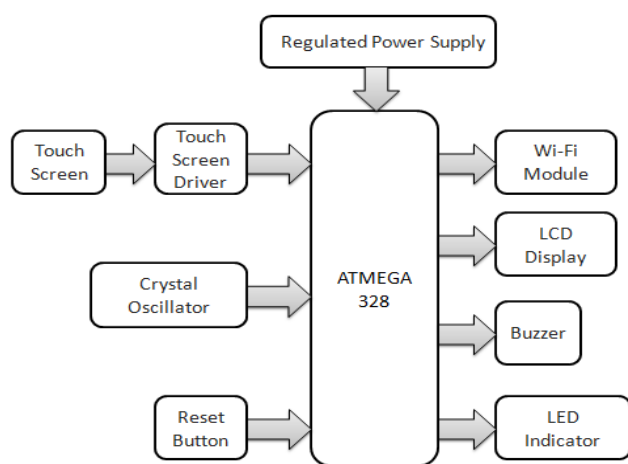


Fig. Block Diagram of Transmitter and Receiver

In this wireless handheld ordering system there will be touch screen panel place on the customer tables. In that the more numbers of transmitter section (master) but only on receiver section (slave). In this the data from the different slaves will be transmitted to the receiver section through Wi-Fi module. In this, we have one receiver section and more than one transmitter sections (customer section). In the customer section (slave) we have one LCD, ATMEGA328, Wi-Fi module transmitter and at main section we have one controller, buzzer, LCD, PC, Wi-Fi receiver. When the customer take seats and he orders the requirements by using LCD on which the items are displayed in images format, and when the customer selects the item, the input from the touch

screen will be sent to the controller of ports p1 the data from the controller will be in analog form and controller will convert the analog data to digital data by using in built ADC. The controller receives the data in digital form and according to user input the controller will display the data (images) on LCD which is connected to the port0 and sends the data to the Wi-Fi module through the transmitter pin then the Wi-Fi module transmits the data to the receiver section Wi-Fi module.

The receiver section Wi-Fi module receives the data transmitted by the transmitter section Wi-Fi and sends the data to the controller 10th pin and as soon as the data has received, the controller will make the port2 high to which the buzzer is connected. When it is made high then the buzzer will blow which indicates data has received and the controller in mean while display the data (order by the customer which) on the LCD is connected to the controller to the port1 pins and the controller will send the data to different section of server and it will display the data on PC as table no, items ordered by the customer for billing.

CONCLUSION

In this paper, we are studied about the various technologies just like ARM7, Aurduino, Zigbee module, AVR16 microcontroller and Raspberry PI. Hence by this complete the study of the touchscreen digital menu card for hotel in that e will implement, we learned about the touchscreen technology. In this we are using the ATMEGA 328, Wi-Fi module and learning how to interface these modules with each other and the required coding for it.

REFERENCES

- 1) Touch Screen Based Advanced Menu Ordering System for Restaurants using Raspberry PI, G.Santosh Kumar, M.Amarnath, International Journal of Scientific Engineering and Technology Research, ISSN 2319-8885 Vol.04, Issue.36, Pages: 7709-7712, September 2015.
- 2) Development of Wireless Ordering System for Hotel, Ajinkyakumar Jadhav, Amit Bilapatte, Jatin Patil, Snehal Gaherwar, International Journal of Emerging Technology and Advanced Engineering, ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 5, Issue 1, January 2015.
- 3) Zigbee Based Hotel Menu Card and Ordering System, Neha Singh, Mr. Devidas Chikale, Yogita Jagdale, International Journal of Science Engineering and Technology Research (IJSETR), ISSN: 2278 - 7798 Volume 2, Issue 10, October 2013.
- 4) "Comparative study of touch screen technologies" by Malik Vishwas.
- 5) S. Abbate, M. Avvenuti, F. Bonatesta, G. Cola, P. Corsini, and A. Vecchio, "A smartphone-based fall detection system," Pervasive and Mobile Computing, vol. 8, no. 6, pp. 883-899, Dec. 2012.

6) Prof. Snehal Dambhare, Prof. Mangesh Parjane, Prof. Dhanjay Deore –Touch based menu ordering & displaying system for restaurants, International Journal of Computer Engineering & Technology, volume 3, Issue 2, ISSN:0976 - 6375, July-September 2012.

7) Mudit Ratana, Anand Vardhan Bhalla Comparative study of various Touchscreen Technologies International Journal of Computer Applications (0975 – 8887) Volume 6– No.8, September 2010.

8) Hamit E, “Implementation of software- based sensor linearization algorithms on -low cost microcontrollers”, ISA Transactions, Vol.49, Issue 4, Pp. 552-558, October 2010.

9) Hangci Zhou, Guangwen Wu, “the programming based on embedded real time operating system,”Beijing: Beihang University press, 2006.

10) A.H.G Al-Dhaher, “Integrating hardware -and software for the development of- Microcontroller based systems”, Microprocessors and Microsystems, Vol. 25, Issue 7, Pp. 317-328, October 2001.