

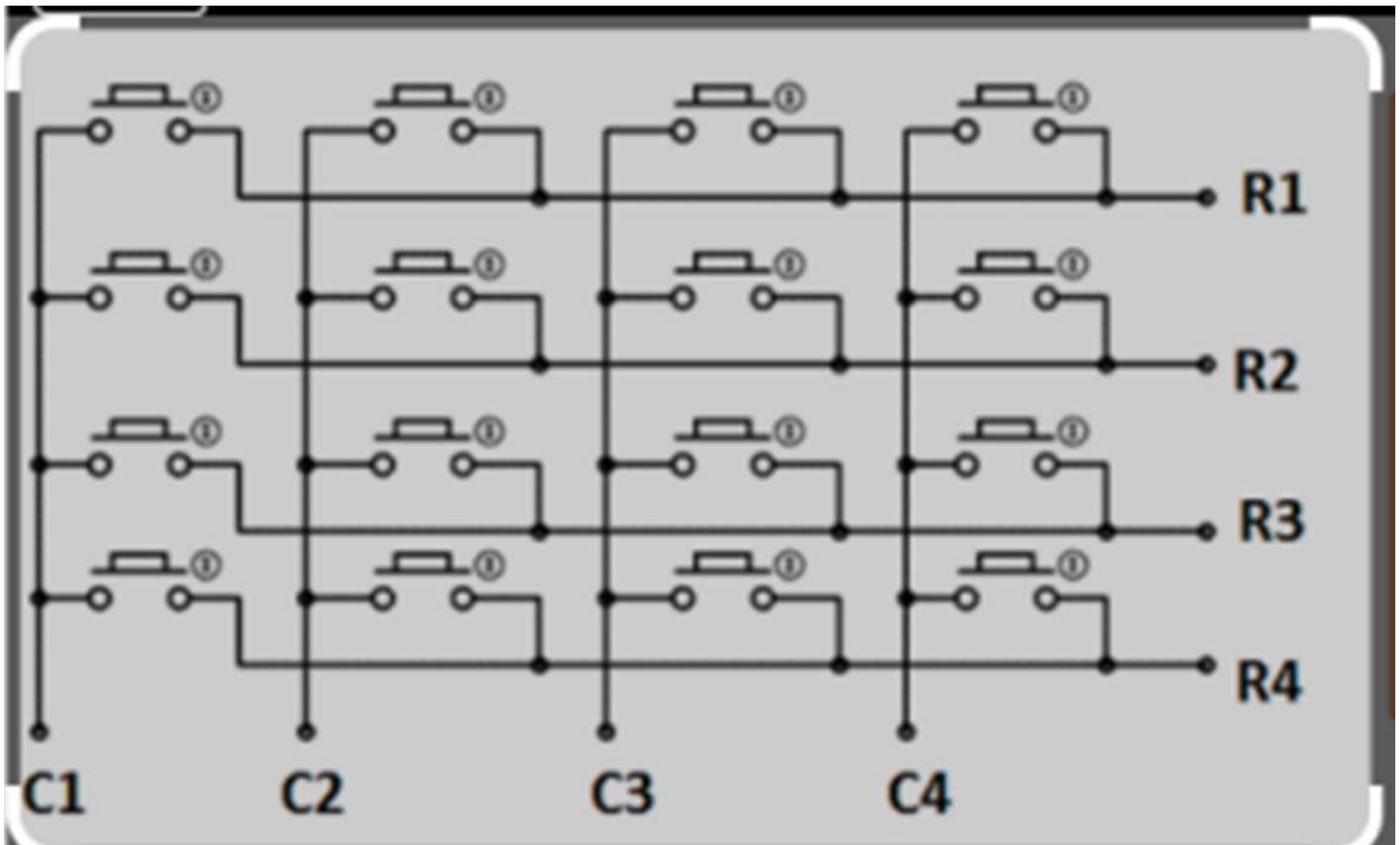
<i>Document Name</i>	KEYPAD Driver Documentation (SRS &SWS)
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## Introduction and functional overview

- A keypad is a block or pad of buttons set with an arrangement of digits, symbols, or alphabetical letters that can be customized. Matrix keypads use a combination of four rows and four columns to provide button states to the host device, typically a microcontroller.

## Scope

-This 16-button keypad provides a useful human interface component for microcontroller based projects. Convenient adhesive backing provides a simple way to mount the keypad in a variety of applications.



## • Functional specification

### - General Behavior

- ❖ The keypad module : The Keypad function scans for a pressed key by sampling the pins values of the rows connected to microcontroller and wait till a key is pressed then returns its ASCII Value .

### - Error classification

### - Development Errors

Type of Error	Related Error Code	Error Value
ErrorState_t	<ul style="list-style-type: none"> <li>Invalid channel requested</li> <li>Invalid port requested</li> </ul>	1

## • API specification

### -Imported types

In this chapter all types included from the following modules are listed:

Module	Header File	Imported types
LIB	STD_TYPES.h	U8 (typedef)
	STD_TYPES.h	OK (Error State)
	STD_TYPES.h	E_NOK (Error State)

*- Function definitions*

<b>Function Name</b>	HALL_KPD_u8GetPressedKey
<b>Syntax</b>	ErrorState_t HALL_KPD_u8GetPressedKey(u8* Copy_pu8_pressedkey);
<b>Synch/Asynch</b>	Synchronous
<b>Reentrancy</b>	Reentrant
<b>Parameters (In)</b>	u8* Copy_pu8_pressedkey;
<b>Parameters (Out)</b>	None
<b>Parameters (In/Out)</b>	None
<b>Return Value</b>	ErrorState_t   <ul style="list-style-type: none"><li>• E_OK</li><li>• E_NOK</li></ul>
<b>Description</b>	Gets the Value of the Pin Physical Level Post Build.
<b>Available Via</b>	KeyPad_Cfg.h

- **SequenceDiagrams**

The diagrams below show the sequences when calling the GetPressedKey

