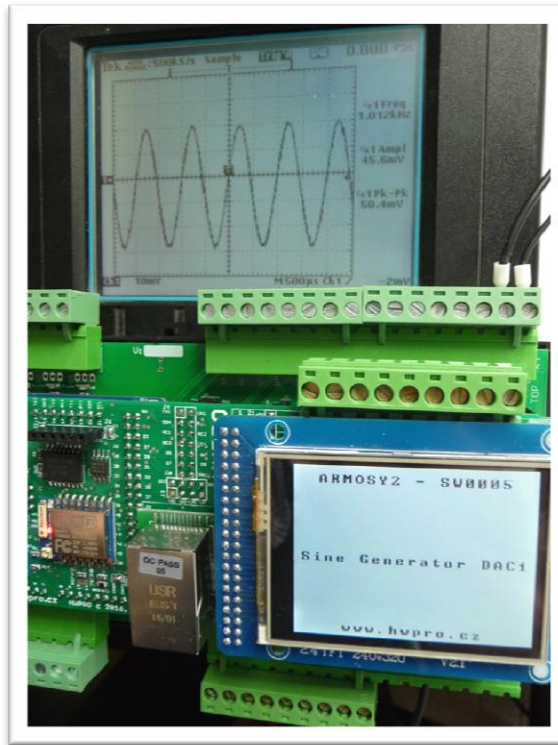


Example – SW0005

Generator Sine Tone 1kHz DAC1 12bit



Universal Control System

ARMOSY-2

ARduino MOdule SYstem

ARM, 32 bit 84MHz, 512k FLASH	Arduino DUE 3.3V Technology	EEPROM, I2C 256 kB	RTC, DS3231, I2C temper.compensation Battery CR2032	SD CARD, SPI Slot In TFT LCD	2.4" COLOR LCD 240x320 px	NF amplifier, DAC OPTION Audio
2x RS-232 115 kbps	Two Wire RS-485 115 kbps	Mini USB, FTB232 OPTION USB 1 Mbps	ESP8266, UART OPTION WiFi 2 Mbps	W5500, SPI OPTION Ethernet 10/100 Mb, 2 LED	GSM, UART OPTION GSM SIM800L	Two I2C BUS 1Wire BUS
8x INPUT Optocoupler 6 MODE	8x OUTPUT Optocoupler 3 MODE, PWM	8x IN / OUT Universal I/O Direct CPU	2x OPTION 0 – 30A Current measurement	4x AD OPTION 0 – 10V 18b AD Converter	4x DA OPTION 0 – 10V 12b DA Converter	4x OPTION 10A, 250V, AC
POWER INPUT 8V ~ 72V, 3W AC, DC, USB	Measurement Systém Voltage 3.3V / 5V	OTHERS 2x Buttons 2 x LED Buzzer	User Design PCB Size 10x4 cm	DIN OPTION 12 modul	Programming Free Software	CZ, EN User manual Examples

```

/* ||||| ARMOSY-2 Example |||||
Generator Sine Tone cca 1kHz DAC1 12bit
Hardware: ARMOSY-2
Version HW: 2.21
Create: 22.04.2016

||||| TERMINAL CONNECTION |||||
63 - IN POWER, VCC min 8V/1A!
64 - IN POWER, ---

||||| JUMPER |||||
SW2 ON (POWER NF Amplifier)
*/

// | LIBRARY
#include <UTFT.h> //Driver UTFT

// | DECLARATIONS
UTFT myGLCD(ITDB24,38,39,40,41); // RS, WR, CS, REST
extern uint8_t BigFont[]; // UTFT Fonds

// | DAC INTERN
int sine[] =
{2048,2305,2557,2802,3034,3251,3449,3625,3777,3901,3995,4059,4092,4092,4060,3996,3902
,3778,3628,3452,3254,3037,2805,2560,2308,2051,1795,1542,1297,1065,847,649,473,321,197
,102,37,4,4,35,99,193,316,466,642,839,1056,1288,1533,1785,2041};

// ||||| SETUP |||||

void setup()
{
// | UTFT
myGLCD.InitLCD(); // Initialization LCD
myGLCD.clrScr(); // Clear Screen
myGLCD.fillScr(VGA_WHITE); // VGA Background Transparency
myGLCD.setColor(0, 0, 0); // Black Fonds
myGLCD.setBackColor(255, 255, 255); // White Background
myGLCD.setFont(BigFont); // Select Font

// | HEADER
myGLCD.print("ARMOSY2 - SW0005", CENTER, 10);
myGLCD.print("www.hwpro.cz", CENTER, 220);
myGLCD.print("Sine Generator DAC1", CENTER, 120);
}

```

**HWPRO**

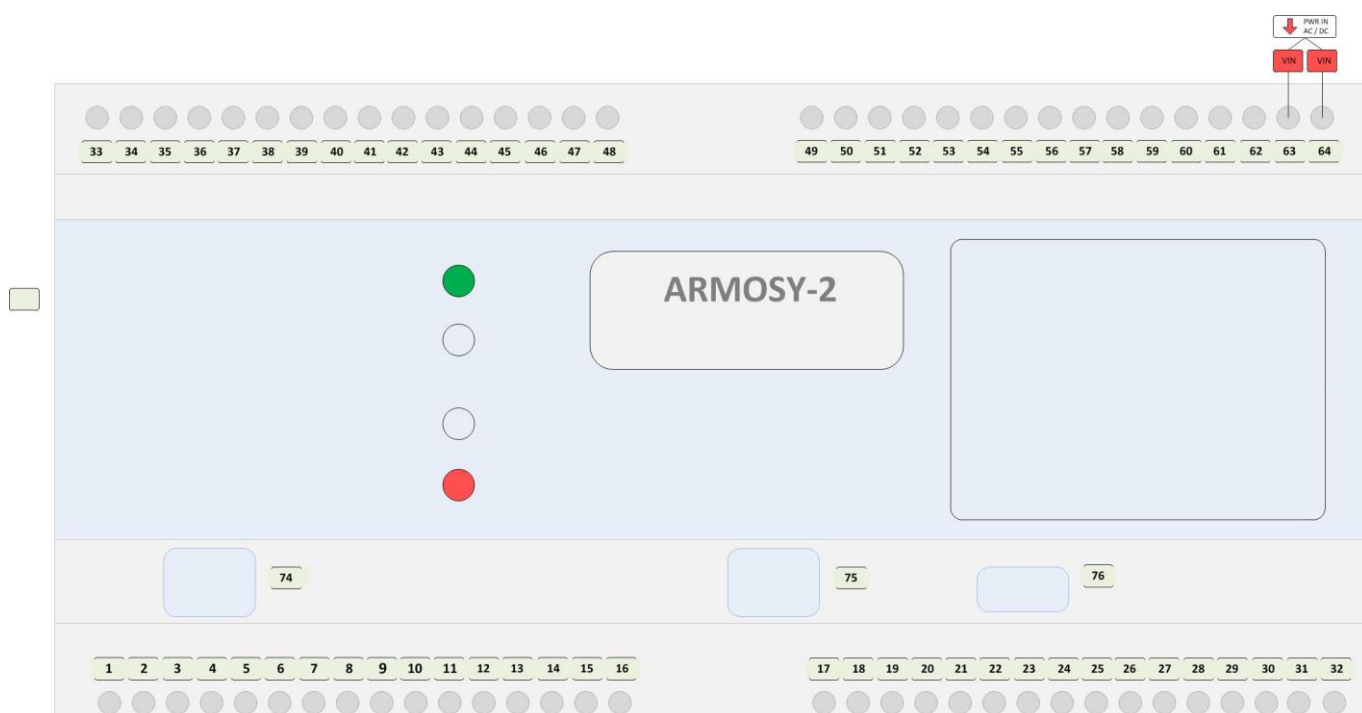
Vývoj a výroba elektronických zařízení

e-mail: info@hwpro.czweb: www.hwpro.cz

```
// ||| MAIN |||

void loop()

{
  // Tone Sine 1kHz
  for(int i = 0; i<50; i++){
    if(sine[i]>4095) {
      sine[i]=4095;
    }
    analogWriteResolution(12); // Resolution DAC1
    analogWrite(DAC1, sine[i]); // Write to DAC1
    delayMicroseconds(16); // Frequency
  }
}
```



HWPRO

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e-mail: info@hwpro.czweb: www.hwpro.cz