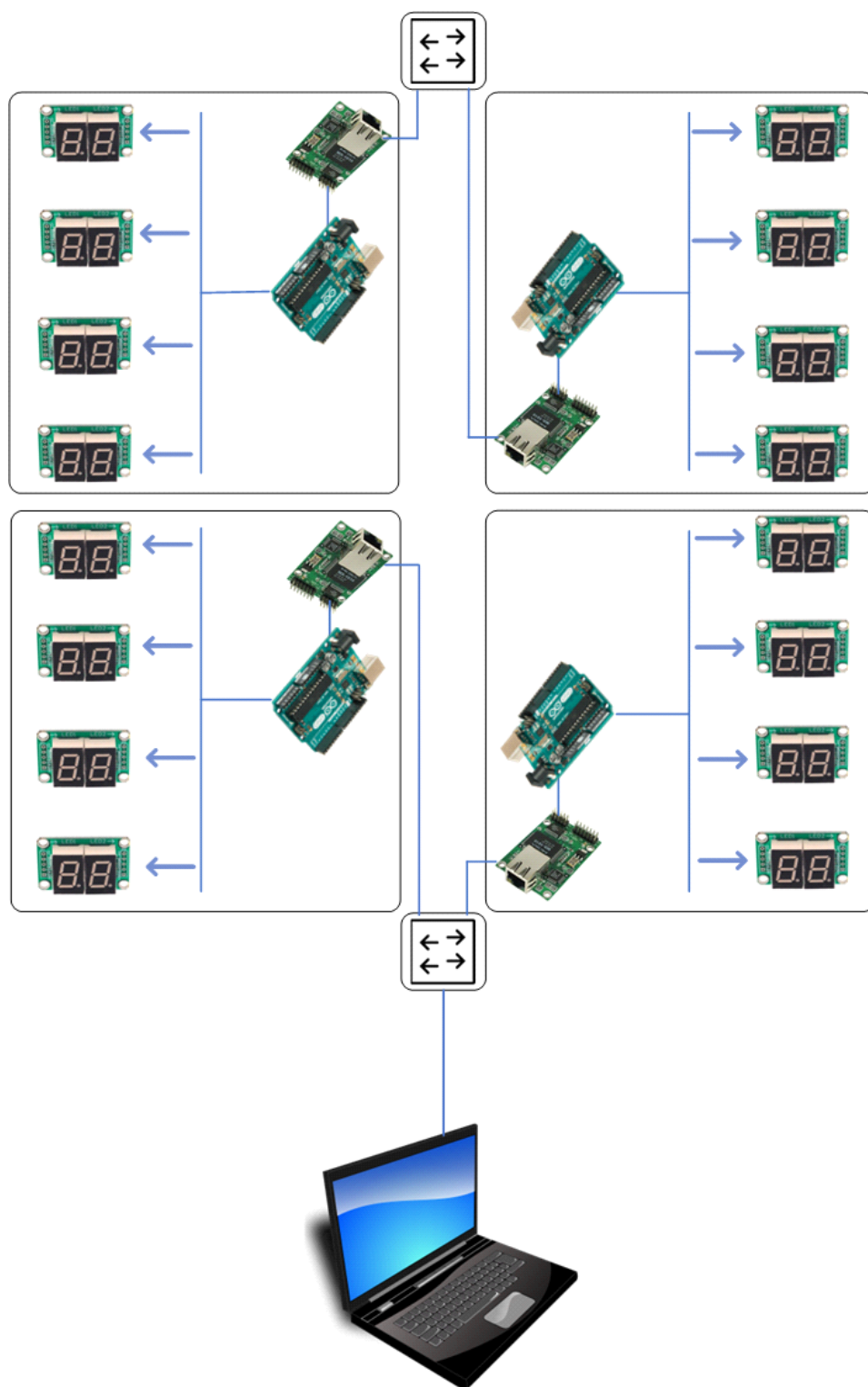


# Concept and elements

poniedziałek, 23 maja 2022 19:08



Main elements:

1. **MOXA NE4110S** – Ethernet -> COM server
2. **Arduino UNO** – Mikrokontroler
3. **WHMXE-595-2** – 7x2 display module
4. **PS-05-5** – 230-5V transformer
5. **GAINTA G17081UBK** – 1U rack case

# MOXA NE4110S

poniedziałek, 23 maja 2022 19:28



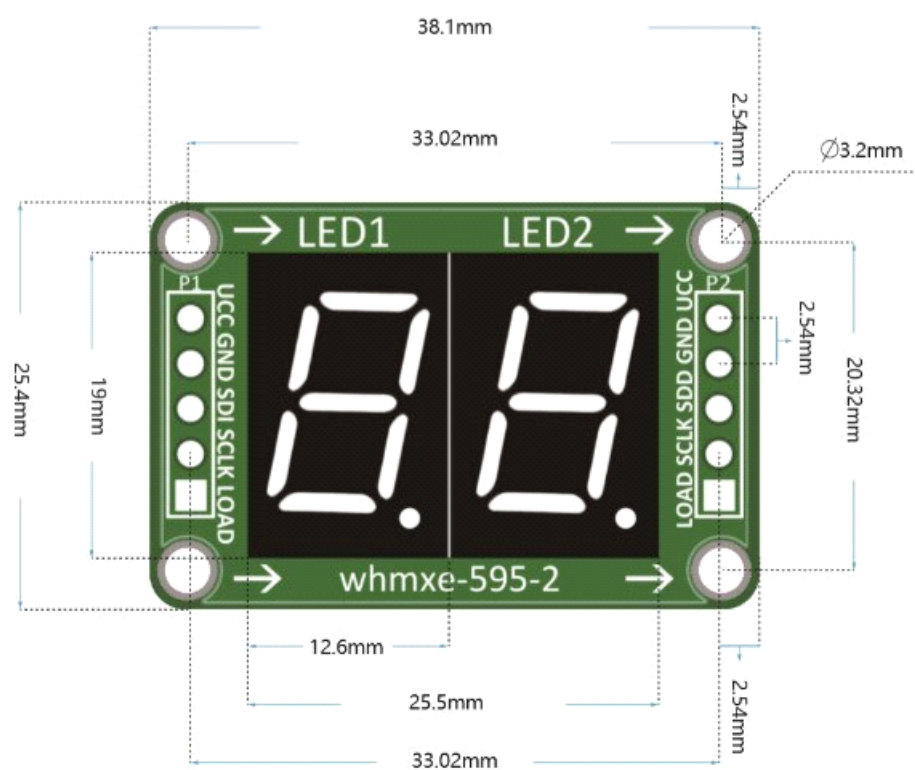
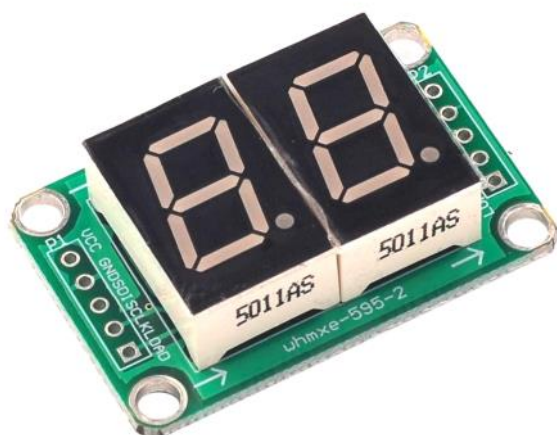
## [MOXA NE-4100 Series](#)

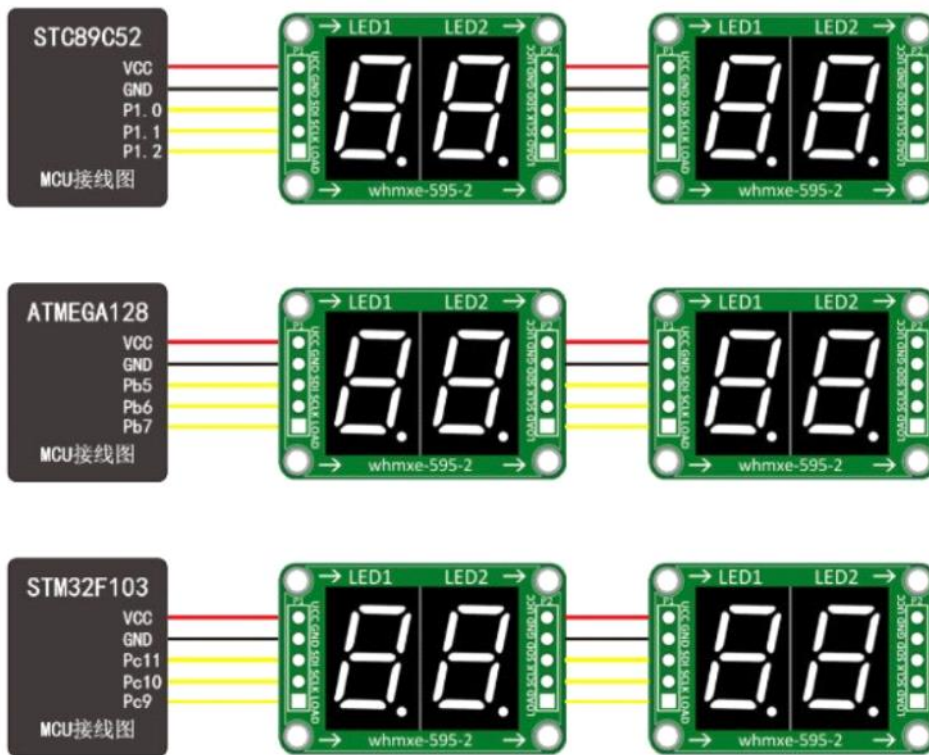
Documentation:

1. User manual: <https://cdn-cms.azureedge.net/getmedia/655cb5db-0c27-4eb8-96a3-04efb5cc5544/moxa-ne-4100-series-manual-v11.0.pdf>
2. SDK programmer guide: <https://cdn-cms.azureedge.net/getmedia/edbc294d-b4b8-4696-9677-4fbf6241075f/moxa-ne-4100-series-programming-guide-manual-v5.0.pdf>
3. Datasheet: <https://cdn-cms.azureedge.net/getmedia/90d20bdc-668b-44dd-97ed-b26c91d37502/moxa-ne-4100-series-datasheet-v1.3.pdf>

# WHMXE-595-2

poniedziałek, 23 maja 2022 19:29





Similar module is described here:

[Arduino and 2-Digit Seven Segment Module - Ardumotive Arduino Greek Playground](#)

# GAINTA G17081UBK

sobota, 23 października 2021 19:35



## G17081UBK GAINTA

Z <[https://www.tme.eu/pl/details/g17081ubk/obudowy-system-19-cali/gainta/?brutto=1&currency=PLN&gclid=CjwKCAjw5c6LBhBdEiwAP9ejGzIBizFp\\_bxv\\_IHaRX9FuBgm9VZ9Nnbee\\_rGkVVBR\\_CTh-IWNQdxoCtLMQAvD\\_BwE](https://www.tme.eu/pl/details/g17081ubk/obudowy-system-19-cali/gainta/?brutto=1&currency=PLN&gclid=CjwKCAjw5c6LBhBdEiwAP9ejGzIBizFp_bxv_IHaRX9FuBgm9VZ9Nnbee_rGkVVBR_CTh-IWNQdxoCtLMQAvD_BwE)>



## 5W Single Output Switching Power Supply

## PS-05 series



## ■ Features :

- Universal AC input / Full range
- Low leakage current <0.5mA
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- 100% full load burn-in test
- Fix switching frequency at 67KHz
- Low cost
- High reliability
- 2 years warranty



TPTC004 IEC62368-1

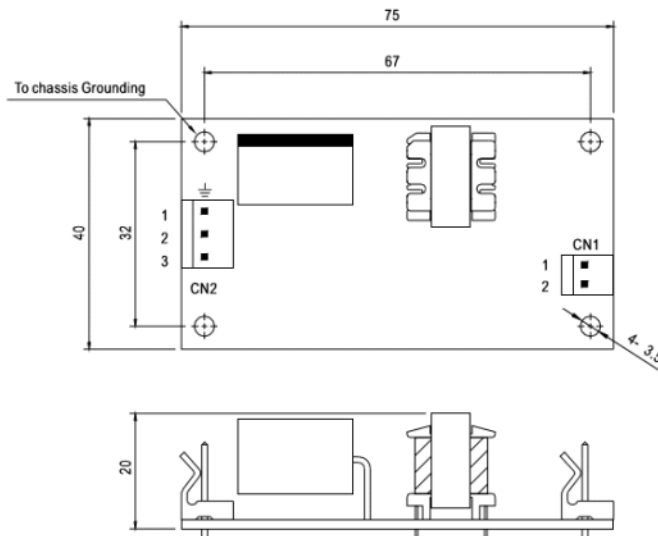
## SPECIFICATION

SPECIFICATION						
MODEL		PS-05-5	PS-05-12	PS-05-15	PS-05-24	PS-05-48
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	48V
	RATED CURRENT	1A	0.45A	0.35A	0.22A	0.11A
	CURRENT RANGE	0 ~ 1.2A	0 ~ 0.5A	0 ~ 0.4A	0 ~ 0.25A	0 ~ 0.125A
	RATED POWER	5W	5.4W	5.25W	5.28W	5.28W
	RIPPLE & NOISE (max.) <small>Note.2</small>	100mVp-p	120mVp-p	120mVp-p	200mVp-p	200mVp-p
	VOLTAGE TOLERANCE <small>Note.3</small>	± 2.0%	± 2.0%	± 2.0%	± 2.0%	± 1.0%
	LINE REGULATION	± 1.0%	± 1.0%	± 1.0%	± 0.5%	± 0.5%
	LOAD REGULATION	± 1.0%	± 1.0%	± 1.0%	± 0.5%	± 0.5%
	SETUP, RISE TIME	1000ms, 20ms				
HOLD UP TIME(Typ.)	100ms at full load					
INPUT	VOLTAGE RANGE	85 ~ 264VAC 120 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY(Typ.)	70%	75%	75%	76%	76%
	AC CURRENT (Typ.)	0.15A/115VAC 0.07A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 30A/230VAC				
LEAKAGE CURRENT	<0.5mA / 240VAC					
PROTECTION	OVERLOAD	Above 105% rated output power Protection type : Hiccup mode, recovery automatically after fault condition is removed				
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.2 ~ 20.2V	27.6 ~ 32.4V	55.2 ~ 64.8V
	OVER TEMPERATURE	Hiccup mode, recovery automatically after fault condition is removed				
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 50°C)				
SAFETY & EMC (Note 4)	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
	SAFETY STANDARDS	EAC TP TC 004 approved, IEC62368-1 CB approved by TUV				
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC				
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH				
	EMI CONDUCTION & RADIATION	Compliance to EN55032 (CISPR32) Class B, EAC TP TC 020				
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3				
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, light industry level, criteria A, EAC TP TC 020				
	DIMENSION	75*40*20mm (L*W*H)				
	PACKING	0.05Kg; 120pcs/6.25Kg/0.56CUFT				
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a> ) 5. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft) ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>					



## Mechanical Specification

Unit:mm



AC Input Connector (CN2) : Molex 5285-03 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	FG $\perp$	Molex 5058 or equivalent	Molex 2478 or equivalent
2	AC/N		
3	AC/L		

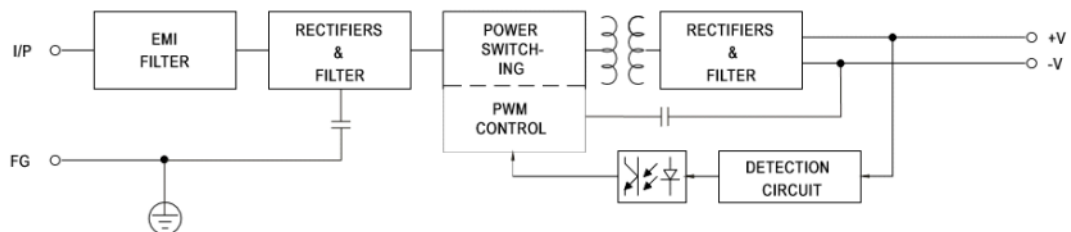
DC Output Connector (CN1) : Molex 5273-02 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	+V	Molex 5195 or equivalent	Molex 5194 or equivalent
2	-V		

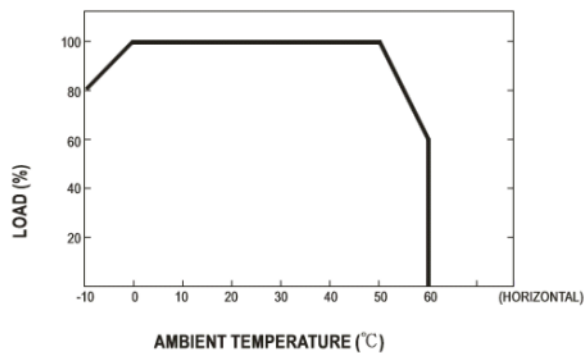
$\perp$  : Grounding Required  
CN2:Pin 1 is safety ground

## Block Diagram

fosc : 67KHz



## Derating Curve



## Static Characteristics

