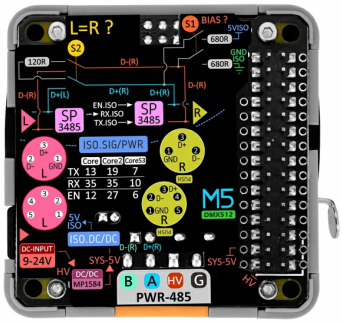
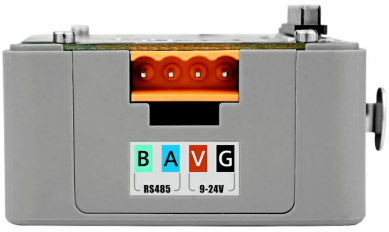
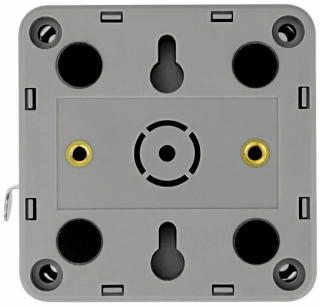
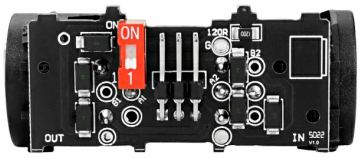
Base DMX

SKU:M128









Description

Base DMX is a functional base specifically designed for DMX-512 data transmission scenarios. It communicates and enables control with the M5 host via a serial port and comes equipped with both male and female XLR-5 and XLR-3 connectors to facilitate connections to DMX devices with different interfaces. In addition, the module features a 485 interface with HT3.96 pitch for connecting to extended 485 devices. Communication signals are transmitted through high-speed opto-isolation, and the power supply adopts a dedicated isolated power module. It provides two independent RS-485 circuits for transmitting and receiving DMX data, with an internal double-pole switch allowing the operation of two independent lines or parallel connections. For power supply, the DC-JACK interface and its corresponding DC-DC circuit can power the entire device. This product is suitable for stage lighting control, sound equipment control, landscape lighting control, and decorative lighting control.

Features

- Equipped with both male and female XLR-5 and XLR-3 connectors for DMX device connections
- Supports communication and enable control with M5 host via serial port
- Built-in two double-pole switches to control connection mode and transmission path
- Uses DC-DC isolated power supply to improve stability and consistency
- Development Platform:
  - Arduino
  - UIFlow

Includes

- 1 x Base DMX
- 1 x Hex Key L-Shape 2.0mm (For M2.5 Screw)
- 1 x HT3.96-4P Terminal
- 1 x XLR-3 Connector

Applications

- Stage lighting control
- Sound equipment control
- Landscape lighting control
- Decorative lighting control

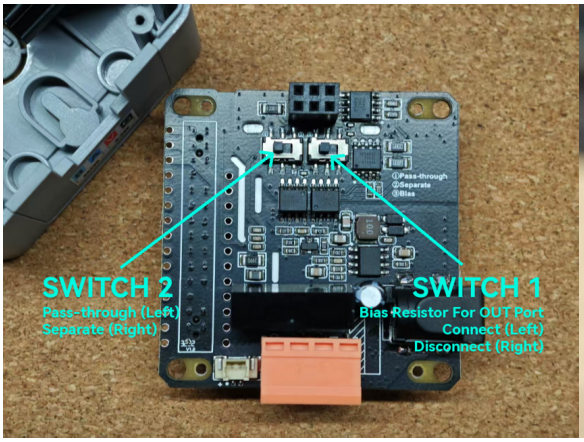
Specifications

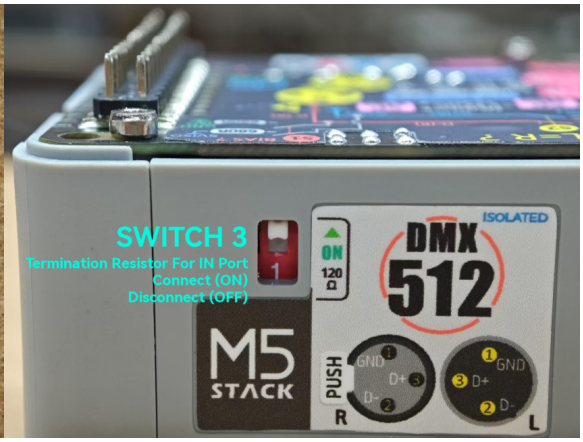
Specification	Parameter
485 Communication	SP3488EN
Optocoupler Isolation High-speed Transmission	EL0600EL0631
DC-DC	MP1584EN
Voltage Isolation	B0505LS-1WR2
Voltage Input	DC 9 ~ 24V
DMX Interface	XLR-5, XLR-3 male/female connectors
485 Interface	HT3.96 interface
Power Output	DC 5V / 3.3V
Operating Temperature Range	0 ~ 40°C
DMX Signal Support	DMX512
Product Size	54.0 x 54.0 x 27.0mm
Product Weight	48.0g
Package Size	147.0 x 90.0 x 40.0mm
Gross Weight	88.2g

Learn

Onboard Switch Function Description

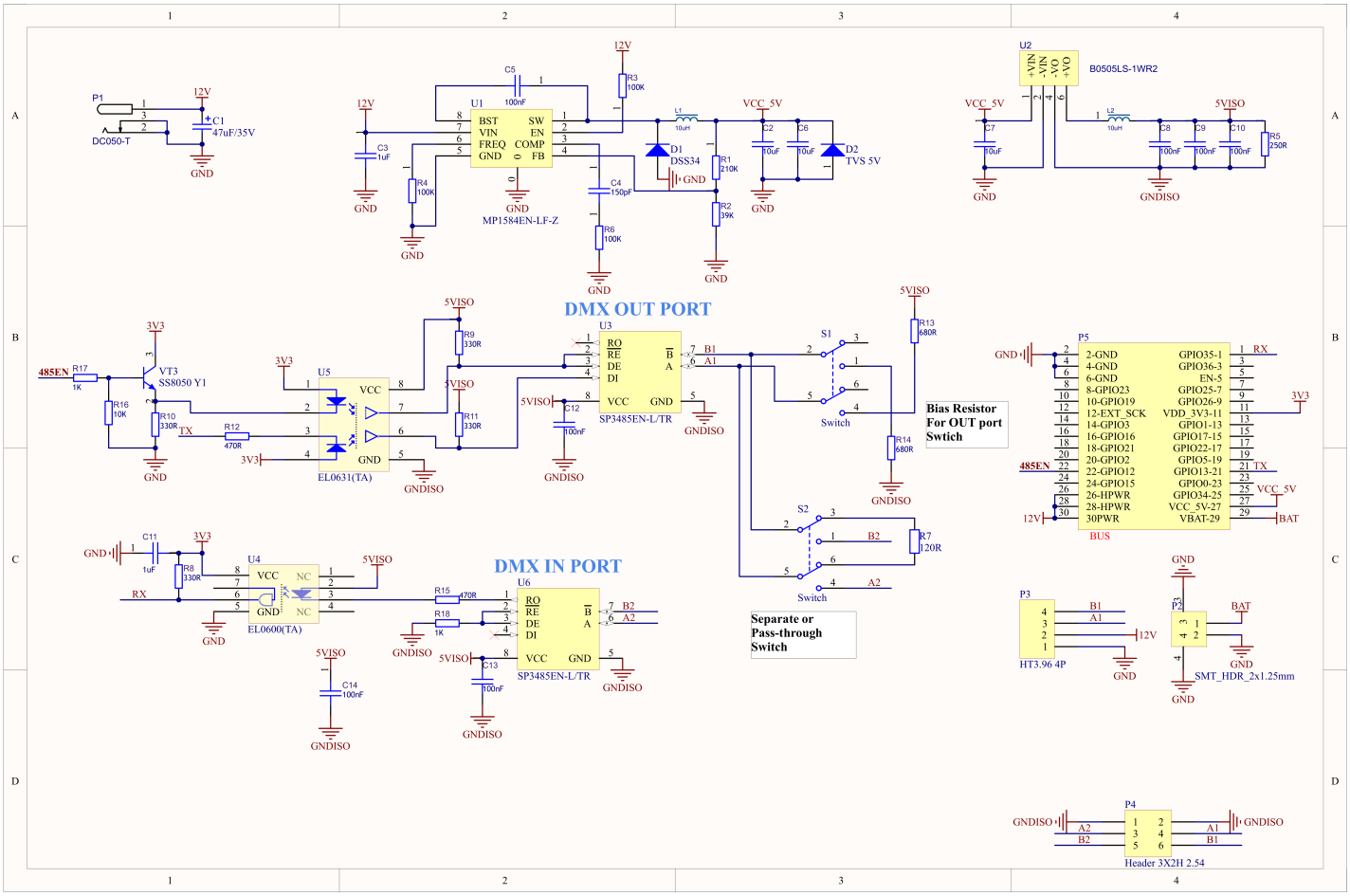
- Switch1: Controls whether the Base DMX output interface is connected to a 680Ω bias resistor. This resistor ensures stable levels on the bus during idle states and improves signal quality.
- Switch2: Controls whether the Base DMX input signal is split (signal input to the host) or bypassed directly to the output interface.
- Switch3: Controls whether the Base DMX input interface is connected to a 120Ω termination resistor. This resistor reduces signal reflection and improves signal quality.

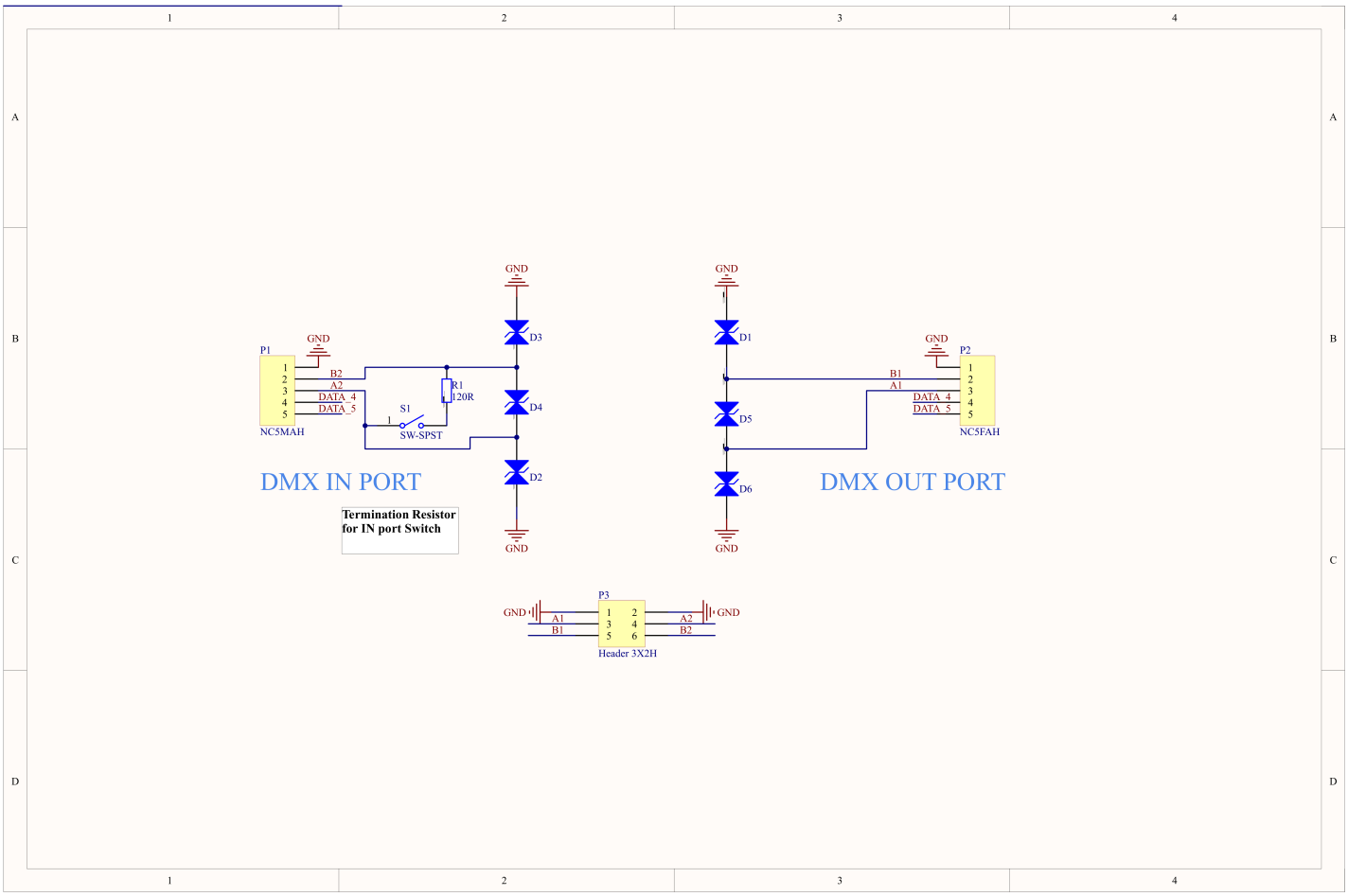




Schematics

- Base DMX Schematics PDF
- Base DMX Sub Schematics PDF


DMX OUT PORT
DMX IN PORT
Bias Resistor For OUT port Swtich
Separate or Pass-through Switch
MP1584EN-LF-Z
SP3485EN-L/TR
EL0631(TA)
EL0600(TA)
B0505LS-1WR2
SS8050 Y1
DSS34
TVS 5V
DC050-T
SW-SPST
HT3.96 4P
SMT_HDR_2x1.25mm
Header 3X2H 2.54
BUS


DMX IN PORT
DMX OUT PORT
Termination Resistor for IN port Switch
NC5MAH
NC5FAH
SW-SPST
Header 3X2H

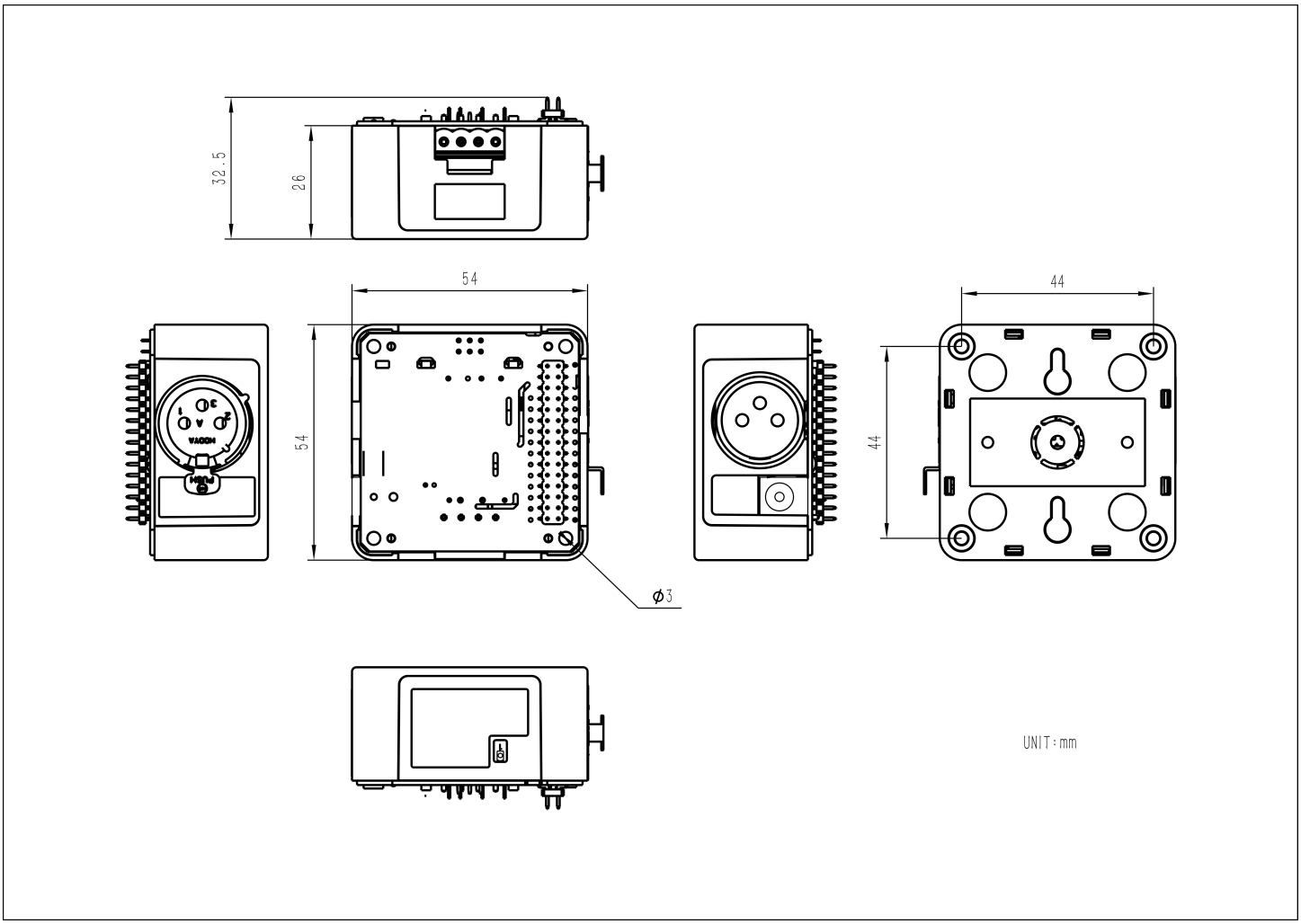
PinMap

M5-Bus

PIN	LEFT	RIGHT	PIN
GND	1	2	UART_TX
GND	3	4	NC
GND	5	6	NC
NC	7	8	NC
NC	9	10	NC
NC	11	12	3V3
NC	13	14	NC
NC	15	16	NC
NC	17	18	NC
NC	19	20	NC
RS485_EN	21	22	UART_RX
NC	23	24	NC
HPWR	25	26	NC
HPWR	27	28	5V
HPWR	29	30	BAT

Model Size

- Base DMX Model Size PDF



Datasheets

- EL0660
- EL0631
- MP1584EN
- SP485EEN
- B0505LS-1WR2

Softwares

Arduino

- Base DMX Arduino Driver Library
- Base DMX Tools Demo

DMX_Base.mp4

UiFlow1

- Base DMX UiFlow1 Docs