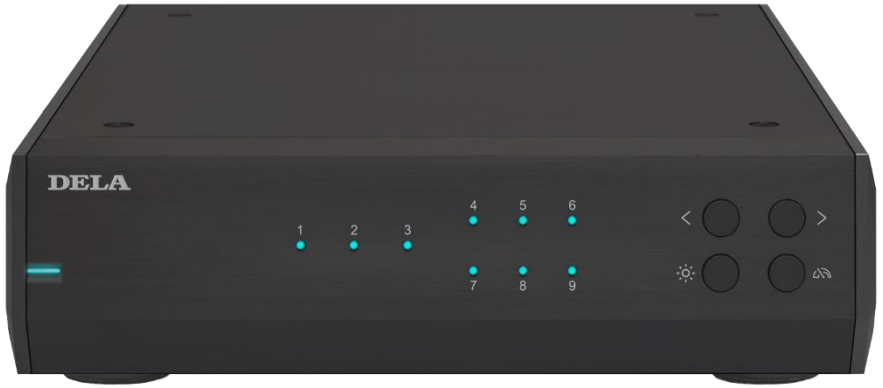
Network Switch S50



Overview – S50

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- We have updated the features and performance of the highly acclaimed "S100," a network switch designed specifically for audio streaming, while maintaining its compact size and condensing its functionality.
- The S50 is DELA’s new standard switch, evolving from the popular "S100" and "S100/2." It features a built-in power supply and a wide range of configuration options.
- As the mainstream switch in DELA’s lineup, the S50 builds upon the foundation laid by the S100.

Feature

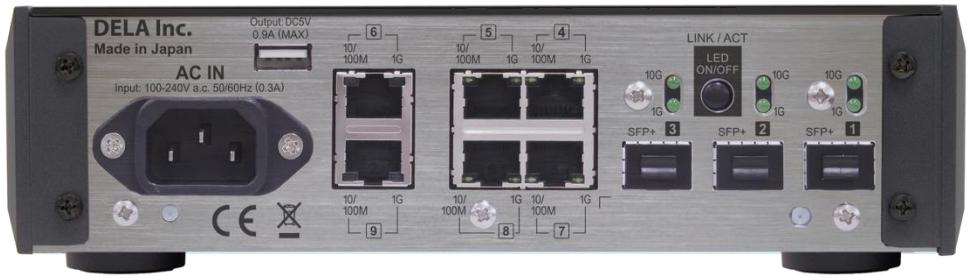
- S50 inherits the well-received 100Mbps ports from the S100, and now all RJ-45 ports can be freely configured to OFF/10M/100M/1000M.
- The advanced SFP port has been upgraded to SFP+ in the S50, with a total of three ports available.
- Additionally, it includes a USB power output port for accessories.

Feature

- The power supply section adopts DELA's Clear Dynamic Power Supply, inherited from the MELCO Music Library N50, and the rear panel is equipped with an IEC inlet.
- The rear panel retains the LED off switch and the user-friendly half-size chassis.
- A new feature allows the power LED to be dimmed.

Difference between S50 and MELCO S100

S50



- Internal power supply
- RJ45 x6, SFP+ x3
- Link speed selectable
- Stainless rear panel
- USB power port

S100

- AC adapter
- RJ45 x8, SFP x2 (no.8 is exclusive)
- Link speed fixed
- Alminum rear panel

Link Speed Selector

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- Link speed affects the sound quality.
- Basically slower is better, but communication stability need to be balanced. The proper speed needs to be selected based on;

  1) the data capacity, which will change, depends on the sampling rate and bit depth,

  2) devices to communicates which has different spec of data hanlding capability

  3) cables to be used for connecting each devices

Front button

Port selection button

Use the left or right button to select the port you want to adjust the link speed for.
The selected port's link speed LED will brighten.
Once selected, press the Link Speed button to change its link speed.

Link Speed button

Press this button to cycle through the available link speeds for the selected port.
The speed you stop on will be the speed set for the port. After a few seconds, the selected port's link speed LED will return to normal brightness, confirming the setting has been applied. You can also press and hold this button to reset the link speed for all ports.
The default setting for all ports is 1 Gbps.

LED brightness button

Link Speed

- SFP+ has 3 options with LED colors below on front panel

  1G : Light Blue (**default**) >> Port will be disabled :Red >> 10G : White

- LAN has 4 options with LED colors below on front panel

  1G : Light Blue (**default**) >> 100M : Green >> 10M : Amber >> Port will be disabled :Red

Important notice

- We recommend disabling any ports that will not be used to optimize sound quality.
- If the link speed of a device connected via an RJ-45 port is slower than that of S50, the link speed will be automatically set to the slower speed.
- If the link speed of a device connected via an SFP+ port doesn't match that of S50, communication will be **unavailable**.

S50	Connected Device		
10G	10G	⇒	available
1G	1G	⇒	available

S50	Connected Device		
10G	1G	⇒	unavailable
1G	10G	⇒	unavailable

3 different type of connections

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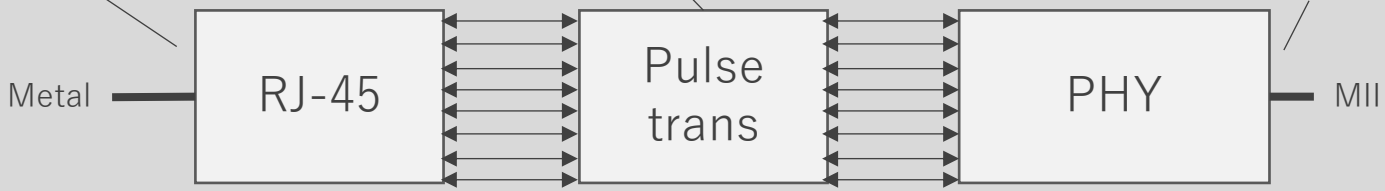
RJ45 Metal cable

Widely useable, but conversion is required to fit

Manual winding for the coil is popular and cause individual differences.

Physical layer : contain relatively more analog circuit.



SFP Fiber cable

Conversion for optical signal is required by Physical Medium Dependent in the module.

SFP Metal cable

The simplest connection

3 different type of connections

DELA™

RJ45
Metal cable

The most common connectors for network audio.
Many options of cables from high end audio accessory brands.
Simple and easy to use, both short length and long length are available.
Data conversion is needed on both sides of devices.

SFP
Fiber cable

Optical isolation will contribute the noise impact from network to audio system.
Not good in short length, but super long lengths are possible.
Data conversion is needed on both sides of SFP module.

SFP
Metal cable

The simplest connection type in the 3 options.
Less burden on modules and devices,
although it cannot be longer lengths.

Important notice

- 3 different types of connections have different benefits. It is not matter of which one is better or worse.
- Which type of connection is good for the user, depends on the system. Connecting devices, cables, and data type.
- There are some cases of breaking SFP port because the user did not unplug properly. **Please make sure of the proper unplugging procedure of SFP module and cables**.

Spec

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- Product size(W x L x H) :

  215 x 274 x 61 mm

- Weight : appx 3kg

- Numbers of ports:

  6 × RJ-45 8-pin

  3 × SFP+

  1 × USB 2.0 (for power supply only)

- Link Speed：

  RJ-45 Port: 10/100 Mbps, 1 Gbps

  SFP+ Port: 1/10 Gbps

- Output Current:

  SFP+ Ports (3 Ports Total):Max. 1.8 A (DC 3.3 V)

  USB Port: Max. 0.9 A (DC 5 V)

Recommended demo process

We recommend listening comparison following steps as below.

Player system can be DELA N1 or N5 & high-end USB-DAC or high-end network streamer with SFP port.

DELA C1 is better for connecting player system and S50.

If no C1 is available, please use C100 or other proper RJ45 cable.

1. Listen with S100 (rear LED OFF)
2. Listen with S50 (all ports are ON & 1G speed, rear LED OFF)
3. Listen with S50, turn OFF non-connected ports (operating port speed is kept as 1G)
4. Listen with S50, turn OFF non-connected ports and change operating ports speed slower (RJ45 cables are used)

Recommended demo process

A single music title can be used for the demo cycle.

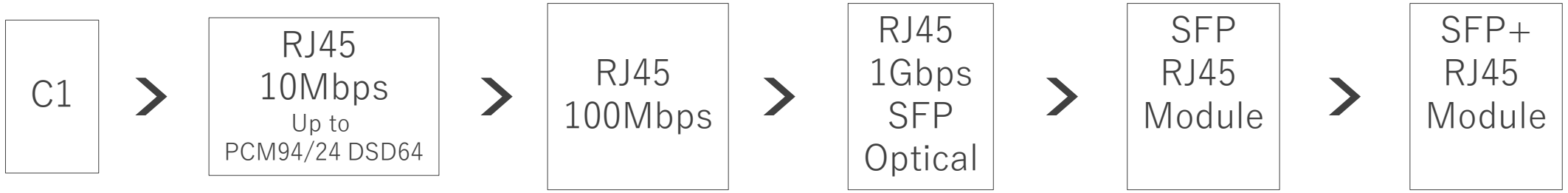
Local file and streaming source comparison can be added,

but focusing on S50 differences from another switch and differences between the settings is more important than the source.

Please avoid comparison between S5 and S50. There is a difference, but both models are new models and want to avoid unnecessary conflict.

Target user is different, so the demo should be done with S50 and MELCO S100.

Reference



- This info is only about Sound Quality in our reference system. Other aspects, such as lengths limitation, port compatibility, other audio devices and cable quality, are not considered.
- This info can be applied for all connecting devices, such as streamer, server and Wi-Fi router.
- Stability changes depends on the device connected and transporting data.
  For example, if 100Mbps cause issue, it should be changed to 1Gbps.
- SFP optical could improve SQ especially in case of noisy devices, such as computer, Wi-Fi router and IT server.