Introduction of MCT-5002FSMSFP+
Signal Loss Alarm Behavior *(Version 1.0)*

Signal Loss Alarm allows users to easily identify and diagnose the linking status by the signal loss status passed to end devices at both sides of MCT-5002FSMSFP+.

If Signal Loss Alarm is enabled (PIN 2 is set to ON), the fiber ports can link up only when both linking conditions are good. In addition, MCT-5002FSMSFP+ will simultaneously stop the optical signal transmission at both sides when the signal loss occurs at one side. The fiber port links will be down to alert the user even the output of optical power exists. Configure Signal Loss Alarm DIP switch as “Enabled” status, it provides users transparent link indication between two network devices interconnected by MCT-5002FSMSFP+.

If Signal Loss Alarm is disabled, MCT-5002FSMSFP+ will fail to transmit the optical signal to the port at the other side when the signal loss occurs at one side. The fiber link from this port will be down even the output of optical power exists, and vice versa.

However, if the end device’s link up is based on the condition of optical power (e.g. EDFA), the fiber ports may link up due to the continuous output of optical power (No Loss of Power occurs) even the signal loss occurs at one side of MCT-5002FSMSFP+.

The following scenarios illustrate the linking status of end devices with “Enabled” or “Disabled” Signal Loss Alarm of MCT-5002FSMSFP+.

Scenario 1-1: When one set of MCT-5002FSMSFP+ connects to two end devices, and Signal Loss Alarm is “Disabled” on MCT-5002FSMSFP+.

In case there is a fault taken place on the fiber cable (See Fig. 1-1), the port link of *FO1* will be down due to the failure of receiving the optical signal. *End Device #2* will also become link-down because it cannot receive the optical signal transmitted from *FO1* fiber port.

End Device #1 will link up due to the reason that it can continuously receive the optical signal transmitted from *FO2* fiber port through *FO1* fiber port. Thus, the network administrator may be unaware of the link fault. Actually, the total network cannot work normally.

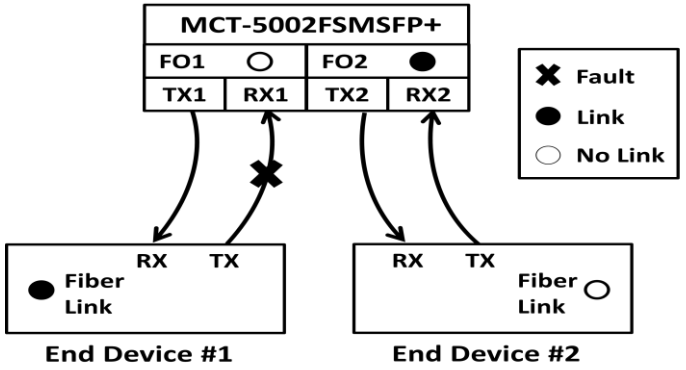

Fig. 1-1

Scenario 1-2: When one set of MCT-5002FSMSFP+ connects to two end devices, and Signal Loss Alarm is “Enabled” on MCT-5002FSMSFP+.

In case there is a fault taken place on the fiber cable (See Fig. 1-2), the port link of *FO1* will be down due to the failure of receiving the optical signal, and the optical signal transmitted to *End Device#1* from *FO2* fiber port through *FO1* fiber port will be blocked as well. Thus, end devices at both sides of MCT-5002FSMSFP+ will link down to alert the network administrator to do the network troubleshooting immediately.

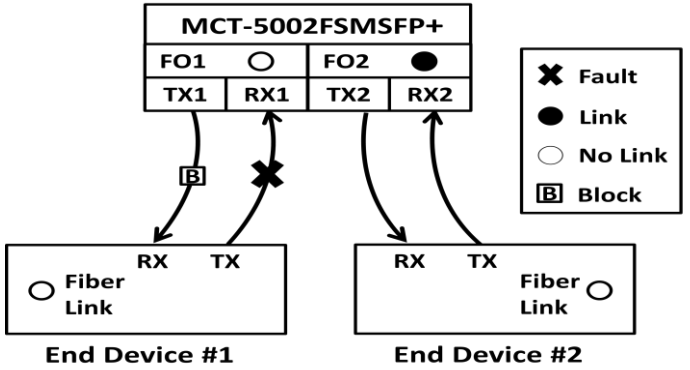

Fig. 1-2

Scenario 2-1: When two sets of MCT-5002FSMSFP+ that link together connect to one end device separately, and the link fault occurs on MCT-5002FSMSFP+ #1's RX1 with "Disabled" Signal Loss Alarm.

In case there is a fault taken place on the fiber cable (See Fig. 2-1), the port link of *FO1* on MCT-5002FSMSFP+ #1 will be down due to the failure of receiving the optical signal. *End Device #2* will also become link-down because it cannot receive the optical signal transmitted from *FO1* fiber port of MCT-5002FSMSFP+ #1.

End Device #1 will link up due to the reason that it can continuously receive the optical signal transmitted from *FO2* fiber port of MCT-5002FSMSFP+ #2 through *FO2* fiber port of MCT-5002FSMSFP+ #1. Thus, the network administrator may be unaware of the link fault. Actually, the total network cannot work normally.

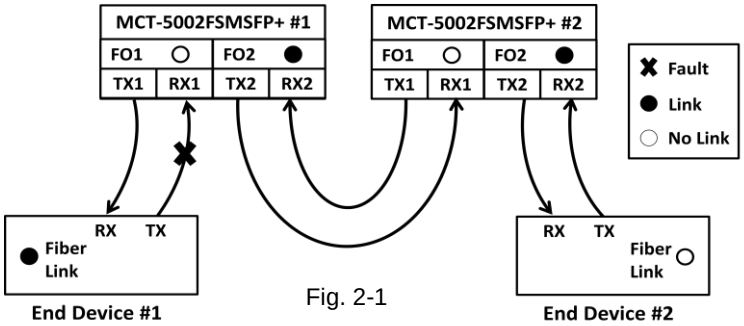

Fig. 2-1

Scenario 3-1: When two sets of MCT-5002FSMSFP+ that link together connect to one end device separately, and the link fault occurs on MCT-5002FSMSFP+ #1's RX2 with "Disabled" Signal Loss Alarm.

In case there is a fault taken place on the fiber cable (See Fig. 3-1), the port link of *FO2* on MCT-5002FSMSFP+ #1 will be down due to the failure of receiving the optical signal. *End Device #1* will also become link-down because it cannot receive the optical signal transmitted from *FO2* fiber port of MCT-5002FSMSFP+ #1.

End *Device #2* will link up due to the reason that it can continuously receive the optical signal transmitted from *FO1* fiber port of MCT-5002FSMSFP+ #1 through FO1 fiber port of MCT-5002FSMSFP+ #2. Thus, the network administrator may be unaware of the link fault. Actually, the total network cannot work normally.

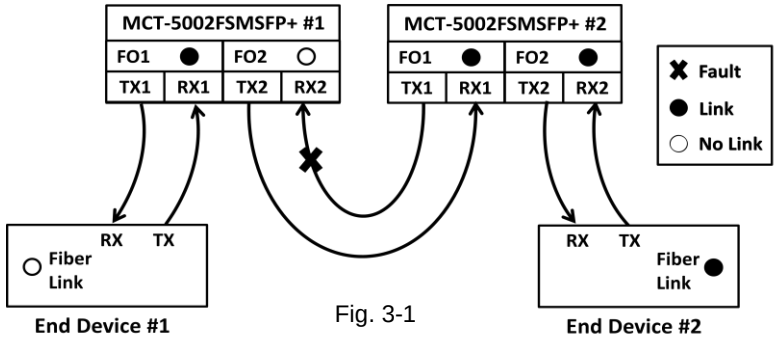

Fig. 3-1

Scenario 2-2: When two sets of MCT-5002FSMSFP+ that link together connect to one end device separately, and the link Fault occurs on MCT-5002FSMSFP+ #1's RX1 with "Enabled" Signal Loss Alarm.

In case there is a fault taken place on the fiber cable (See Fig. 2-2), the port link of *FO1* on MCT-5002FSMSFP+ #1 will be down due to the failure of receiving the optical signal. *End Device #2* will also become link-down because it cannot receive the optical signal transmitted from *FO1* fiber port of MCT-5002FSMSFP+ #1, and the optical signal transmitted to *End Device#1* from *FO2* fiber port of MCT-5002FSMSFP+ #2 through *FO2* fiber port of MCT-5002FSMSFP+ #1 will be blocked as well. Thus, end devices at both sides will link down to alert the network administrator to do the network troubleshooting immediately.

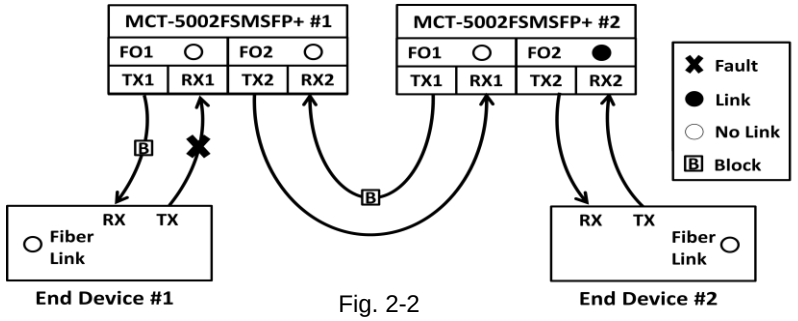

Fig. 2-2

Scenario 3-2: When two sets of MCT-5002FSMSFP+ that link together connect to one end device separately, and the link fault occurs on MCT-5002FSMSFP+ #1's RX2 with "Enabled" Signal Loss Alarm.

In case there is a fault taken place on the fiber cable (See Fig. 3-2), the port link of *FO2* on MCT-5002FSMSFP+ #1 will be down due to the failure of receiving the optical signal. *End Device #1* will also become link-down because it cannot receive the optical signal transmitted from *FO2* fiber port of MCT-5002FSMSFP+ #1, and the optical signal transmitted to *End Device#2* from *FO1* fiber port of MCT-5002FSMSFP+ #1 through *FO1* fiber port of MCT-5002FSMSFP+ #2 will be blocked as well. Thus, end devices at both sides will link down to alert the network administrator to do the network troubleshooting immediately.

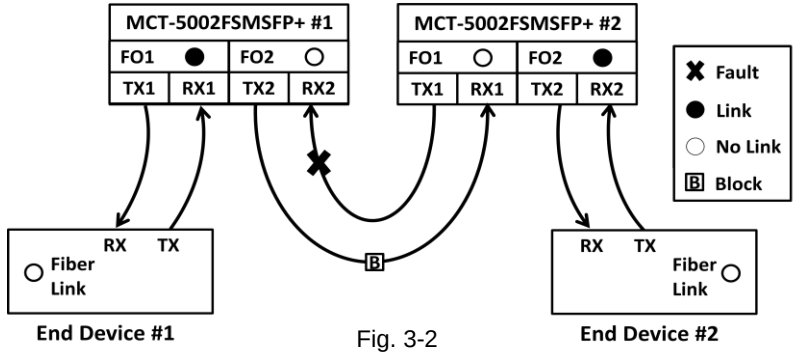

Fig. 3-2