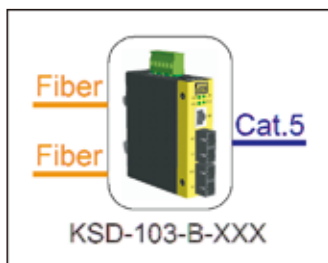
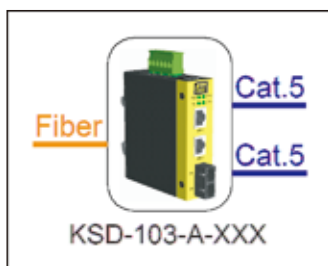




# KSD-103-A, KSD-103-B



## Industrial 3-Port L2 Fast Ethernet Media Converter Switches



Panel Mounting Bracket  
PMB-400



The industrial rated KSD-103 Fast Ethernet switch series supports three switching-base segment communications and benefit the following applications and make fiber deployment easier:

- Copper to fiber bridging converter
- Multimode fiber to single mode fiber bridging converter
- Fiber cable extender
- Cascaded fiber networking

### Key Features:

- Provide 3 switching-base network segments
- Auto MDI/MDI-X crossover function on the TP copper port
- Support IEEE 802.3x flow control for full-duplex operation
- Support Back-pressure flow control for half-duplex operation
- Wide operating temperature range for temperature critical environment
- Support DIN-rail mounting and panel mounting
- Provide two power input types to meet more application needs
- Accept wide power input voltage range for application flexibility
- Industrial-rated Emission and Immunity performance

### Specifications:

|                   |  |
|-------------------|--|
| Forwarding Method | Store-and-forward, Full wire speed switching   |
| Packet Size       | Support 1536 bytes max.  |
| Packet Types      | Transparent conversion with no modification to: <ul style="list-style-type: none"> <li>- Standard IEEE 802.3 Ethernet packet frames</li> <li>- IEEE 802.1Q tagged packet frames</li> <li>- RSTP packet frames</li> </ul> |
| TP Port           | Shielded RJ-45 jack<br>Auto MDI/MDI-X crossover function, auto-negotiation function<br>Supports Cat. 5 UTP cable up to 100m  |
| Fiber (FX) Port   | Multimode ST, SC, Single mode SC, Bi-directional SC<br>MMF 50/125µm, 62.5/125µm fiber cable, SMF 9/125µm cable<br>100Mbps Full-duplex, Far End Fault Indication support  |
| Model Definition  | KSD-103-A: 2 TP ports, 1 FX port, KSD-103-B: 1 TP port, 2 FX ports   |
| Flow Control      | IEEE 802.3x for Full-duplex, Back pressure for Half-duplex   |
| LEDs              | Power status, Port link/activity   |
| DC Power Input    | Screwed terminal block: 2 pairs of +/- contacts<br>DC jack: -D 6.3mm/+D 2.0mm<br>Voltage range: +7 ~ +50VDC, 4W max. @50V DC IN  |
| Relay Output      | Alarm events: power failure, specific fiber port link fault<br>Interface: 2 terminal contacts (30VDC/1A max. or 120VAC/0.5A max.)  |
| Dimension         | 28 x 82 x 95 mm, Weight: 250g  |



### Ordering Informations:

| Model  | KSD-103-A FX<br>KSD-103-B FX1 FX2 | Ref. Distance | Operating Temperature |
|--------|-----------------------------------|---------------|-----------------------|
| -T     | ST MMF                            | 2km           | -30 ~ 70°C            |
| -C     | SC MMF                            | 2km           | -30 ~ 70°C            |
| -C1    | SC MMF                            | 2km           | -30 ~ 70°C            |
| -SL2   | SC SMF                            | 20km          | -30 ~ 70°C            |
| -SL3   | SC SMF                            | 30km          | -30 ~ 70°C            |
| -SL4   | SC SMF                            | 40km          | -30 ~ 70°C            |
| -SL6   | SC SMF                            | 60km          | -30 ~ 70°C            |
| -W3520 | Bi-Di SC SMF                      | 20km          | -30 ~ 70°C            |
| -W5320 | Bi-Di SC SMF                      | 20km          | -30 ~ 70°C            |
| -C1SL2 | FX1: SC MMF<br>FX2: SC SMF        | 2km<br>20km   | -30 ~ 70°C            |

### EMI EMS Safety Environmental Tests:

| Test                  | Standard            | Specifications                              |
|-----------------------|---------------------|---|
| FCC/EMI               | FCC Rule Part 15    | Class B                                     |
| CE/EMC/EMI            | EN55022, CISPR 22   | Class B                                     |
| CE/EMC/Harmonic       | EN 61000-3-2        | < 75 W                                      |
| CE/EMC/VFF            | EN 61000-3-3        | Clause 5                                    |
| CE/EMC/EMS            | EN 55024            |   |
| ESD Test              | IEC 61000-4-2       | Contact: +/-4KV<br>Air: +/-8KV              |
| RS Test               | IEC 61000-4-3       | Strength: 10V/m                             |
| EFT/BURST             | IEC 61000-4-4       | Level 3<br>Power: +/-2KV<br>Signal: +/-1KVV |
| Surge Immunity        | IEC 61000-4-5       | Power: 2KV<br>Signal: 1KV                   |
| CS Test               | IEC 61000-4-6       | Level 3                                     |
| Magnetic Field Imm.   | IEC 61000-4-8       | 50Hz 100A/m                                 |
| Voltage Dips Imm.     | IEC 61000-4-11      | Interruption: C<br>Dips: B                  |
| Safety                | EN 60950, IEC 60950 |   |
| Dielectric Voltage    | IEEE 802.3          | TP, 1500VAC/60sec.                          |
| Insulation Resistance | IEEE 802.3          | TP, 500VDC/10Mohm                           |
| Cold Test             | IEC 68-2-1 Test Ad  | -20°C, 96hrs                                |
| Dry Heat Test         | IEC 68-2-2 Test Bd  | +70°C 40%RH 96hrs                           |
| Damp Heat Test        | IEC 68-2-3          | +60°C 90%RH 96hrs                           |
| Storage Test          | IEC 68-2-48         | -20°C 96hrs<br>+85°C 40%RH 96hrs            |
| Vibration Test        | IEC 68-2-34         | 5~30Hz, 0.5g<br>Operating                   |



FCC Part 15, Class B  
CISPR 22 Class B

### Katron Technologies Inc.

15F-7, No. 79, Sec. 1, Hsin Tai Wu Rd.,  
Hsi-chih District, New Taipei City, Taiwan  
Tel: 886-2-2698-3878  
Fax: 886-2-2698-3873  
E-mail: kti@ktinet.com.tw  
URL: http://www.ktinet.com.tw

### KTI Networks Inc.

10415-A Westpark Drive, Houston,  
TX 77042. U.S.A.  
Tel: 1-713-266-3891  
Fax: 1-713-914-0555  
E-mail: contact@ktinet.com  
URL: http://www.ktinet.com

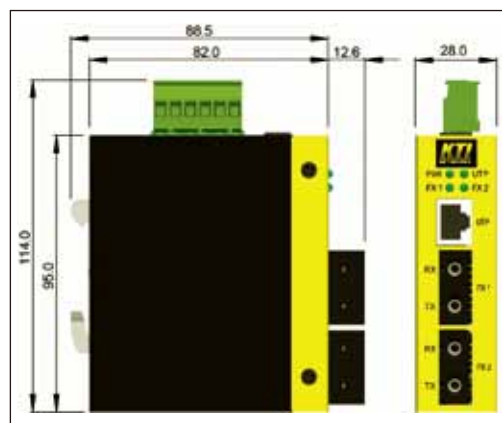
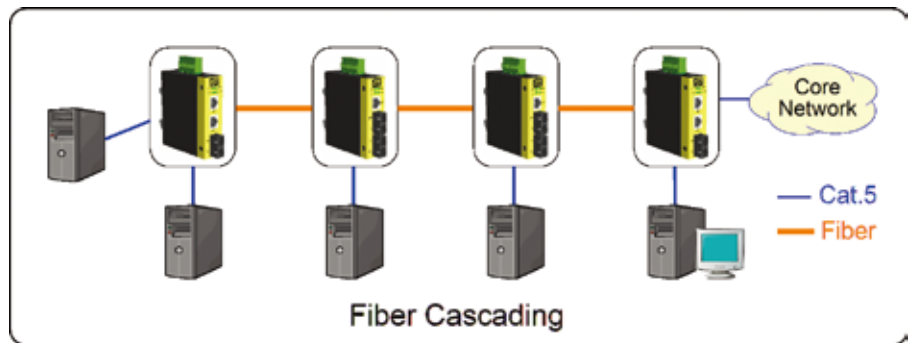
Trademarks: All brand names are trademarks or registered trademarks of their respective holders. This information is subject to change without prior notice.

|                  |  |
|------------------|--|
| Housing          | Enclosed metal with no fan   |
| Mounting Support | DIN-Rail mounting, Panel mounting  |
| Temperature      | Operating Temperature: -30°C ~ +70°C<br>Storage Temperature: -40°C ~ +85°C<br>Relative Humidity: 5% ~ 95% non-condensing |
| Approval         | FCC Class B, CE mark Class B, EN60950-1 safety   |

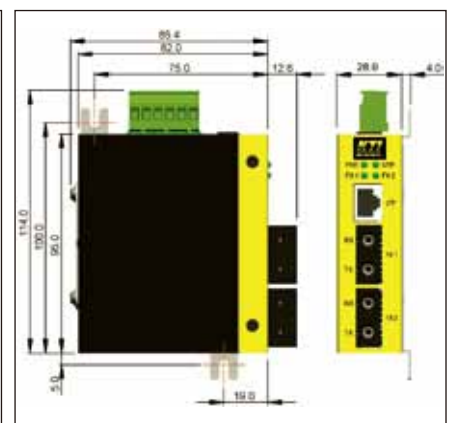
### Fiber Optical Specifications:

| Model                                    | FX & Cable                 | Wavelength             | Tx Power*                   | Rx Sens.         | Rx Max.       |
|--|----------------------------|------------------------|-----------------------------|------------------|---------------|
| <b>KSD-103-A-xxx &amp; KSD-103-B-xxx</b> |                            |                        |                             |                  |               |
| -T                                       | ST MMF                     | 1310nm                 | -20 ~ -14dBm                | -32dBm           | -8dBm         |
| -C                                       | SC MMF                     | 1310nm                 | -20 ~ -14dBm                | -31dBm           | 0dBm          |
| -C1                                      | SC MMF                     | 1310nm                 | -20 ~ -14dBm                | -31dBm           | 0dBm          |
| -SL2                                     | SC SMF                     | 1310nm                 | -15 ~ -8dBm                 | -30dBm           | -7dBm         |
| -SL3                                     | SC SMF                     | 1310nm                 | -15 ~ -8dBm                 | -34dBm           | 0dBm          |
| -SL4                                     | SC SMF                     | 1310nm                 | -5 ~ 0dBm                   | -34dBm           | 0dBm          |
| -SL6                                     | SC SMF                     | 1310nm                 | -5 ~ 0dBm                   | -35dBm           | 0dBm          |
| -W3520                                   | Bi-Di SC SMF               | TX 1310nm<br>RX 1550nm | -14 ~ -8dBm                 | -31dBm           | 0dBm          |
| -W5320                                   | Bi-Di SC SMF               | TX 1550nm<br>RX 1310nm | -14 ~ -8dBm                 | -31dBm           | 0dBm          |
| <b>KSD-103-B-xxx</b>                     |                            |                        |                             |                  |               |
| -C1SL2                                   | FX1: SC MMF<br>FX2: SC SMF | 1310nm<br>1310nm       | -20 ~ -14dBm<br>-15 ~ -8dBm | -31dBm<br>-30dBm | 0dBm<br>-7dBm |

\*Data for 62.5/125µm MMF, 9/125µm SMF



DIN-Rail Dimension



Panel Dimension