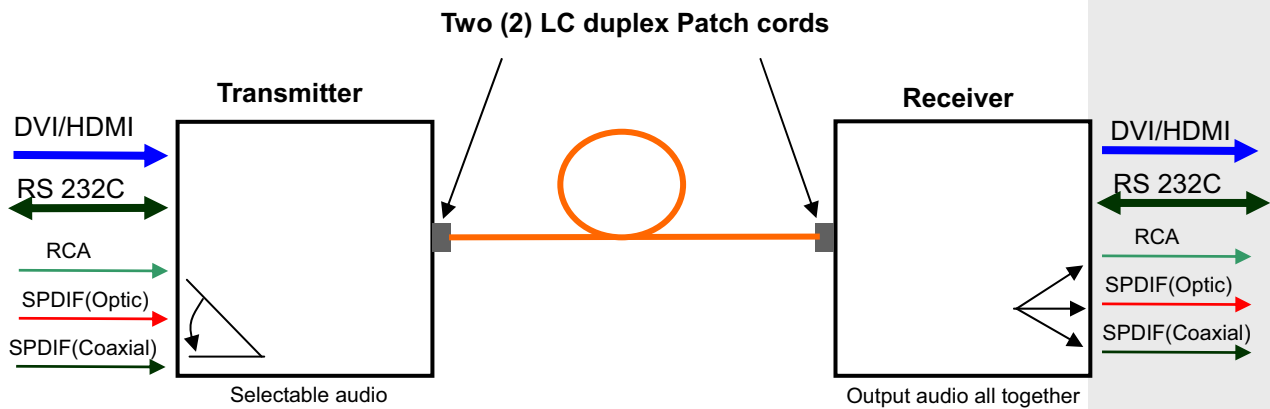


## Stretch HD sources + Audio + RS-232 over All Fiber



### Descriptions

M5-2A2-TR offers integrated extension of digital video, audio and RS-232 interface up to 200m (656ft) for HDMI and up to 2km (6,600 ft) for DVI. It maintains HD video signals up to WUXGA (1920x1200) at 60Hz refresh rate for PC and 1080p for HDTV. It is compatible with full DDC2B and HDCP. It supports connecting one of 3 different audio types in the transmitter; RCA, SPDIF (Optic) or SPDIF (Coaxial) and outputting all 3 audio types.

RS232 serial interface offers device-to-device and device-to-controller connections to build up control system for A/V integration.

It is designed to multiplex and de-multiplex the DVI/HDMI video, digital/analog audio, Display Data Channel (DDC) command interface, High Definition Copy Protection (HDCP) and serial protocol so as to be linked over 4 LC fibers. It gives benefits of all-glass fiber transmission medium, data security, long distance extension up to 2km, easy plug-and-go installation and no RFI/EMI effects. In addition, a non-trivial feature is that both of Single and Multimode optical fibers are applicable.

### Features and Specifications

- ◆ Extends DVI, Audio and RS232 up to 2km if using smart DDC ready button on front panel.
- ◆ Extends HDMI, Audio and RS232 up to 200m with DDC/HDCP.
- ◆ Audio interface: Selectable RCA, SPDIF (Optic) or SPDIF (Coaxial).
- ◆ Serial control data: RS232 with 9 pin D-sub female connector in the transmitter and male connector in the receiver.
- ◆ Video data: WUXGA (1920X1200), 24bit color and 60Hz refresh rate for DVI and 1080p for HDMI.
- ◆ Interconnection between transmitter and receiver: Two(2) Duplex LC patch cords of single or multi mode fiber.
- ◆ Applicable of both single and multi-mode fiber.
- ◆ +12 V DC power supply to each module.
- ◆ Complies with DDC2B/HDCP.
- ◆ Mechanical Dimension of each (W/D/H in mm): 130/260/31



*Extend your Digital Connection!*

## Stretch Multi-media A/V : M5-2A2-TR

### Product Certification

#### EMI and Immunity

The Opticis M5-2A2 extension module has been tested and found to comply with the limits for class A device, pursuant to Part 15 of FCC-rules and EN 55022/55024/61000-3 for CE certification. These limits are designed to provide reasonable protection due normal use with other home network appliance.

#### Eye Safety

The Opticis M5-2A2 extension module has been designed to meet Class 1 eye safety by adapting 1310nm/1550nm transmitter, certified by FDA/CDRH and IEC 60825-1.

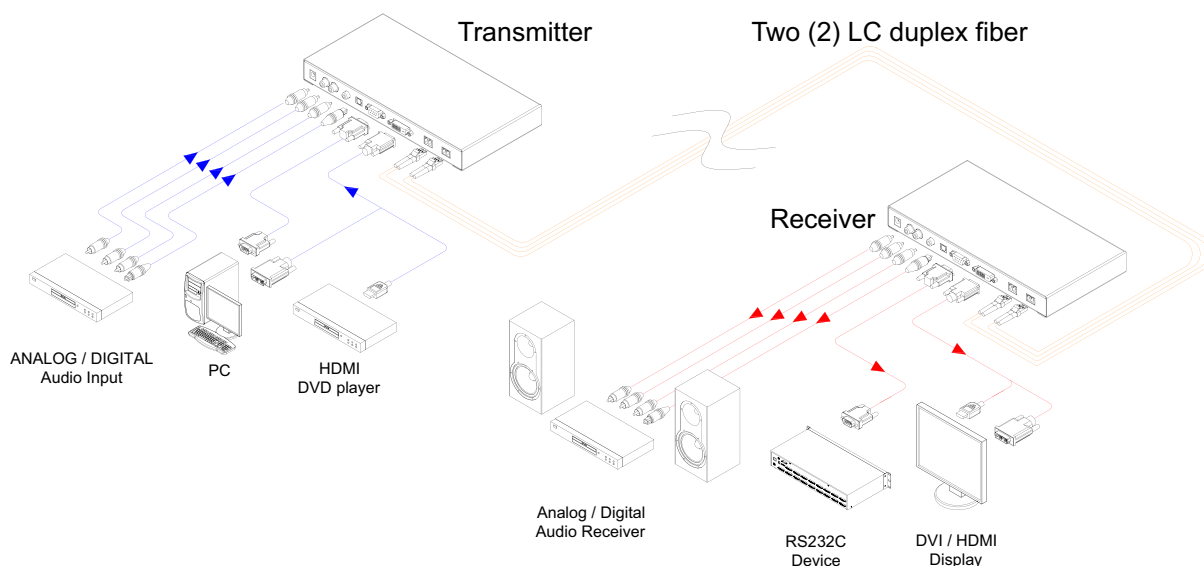
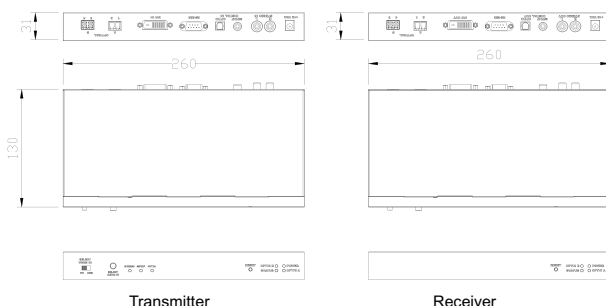
### Recommended Operating Conditions

| Parameter                     | Symbol | Min | Typ | Max  | Units |
|-------------------------------|--------|-----|-----|------|-------|
| Ambient Operating Temperature | $T_A$  | 0   | 25  | + 50 | °C    |
| Storage Temperature           | $T_s$  | -10 |     | + 70 | °C    |
| Storage Humidity              | $H_s$  | 10  |     | 85   | RH%   |

### Electrical Power Supply Characteristics

( $T_A = 0\text{ }^{\circ}\text{C}$  to  $+50\text{ }^{\circ}\text{C}$ , unless otherwise noted)

| Parameter         | Symbol   | Min       | Typ | Max  | Units  |
|-------------------|----------|-----------|-----|------|--------|
| Supply Voltage    | $V_{CC}$ | 11.4      | 12  | 12.6 | V      |
| Supply Current    | TX       | $I_{TCC}$ | -   | 620  | 650 mA |
|                   | RX       | $I_{RCC}$ | -   | 620  | 650 mA |
| Power Dissipation | TX       | $P_{TX}$  | -   | 7.44 | 8.2 W  |
|                   | RX       | $P_{RX}$  | -   | 7.44 | 8.2 W  |



#### Headquarter

Opticis Co., Ltd.  
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Sungnam City, Kyungki-Do, 463-120  
South Korea [www.opticis.com](http://www.opticis.com)

#### North American Office

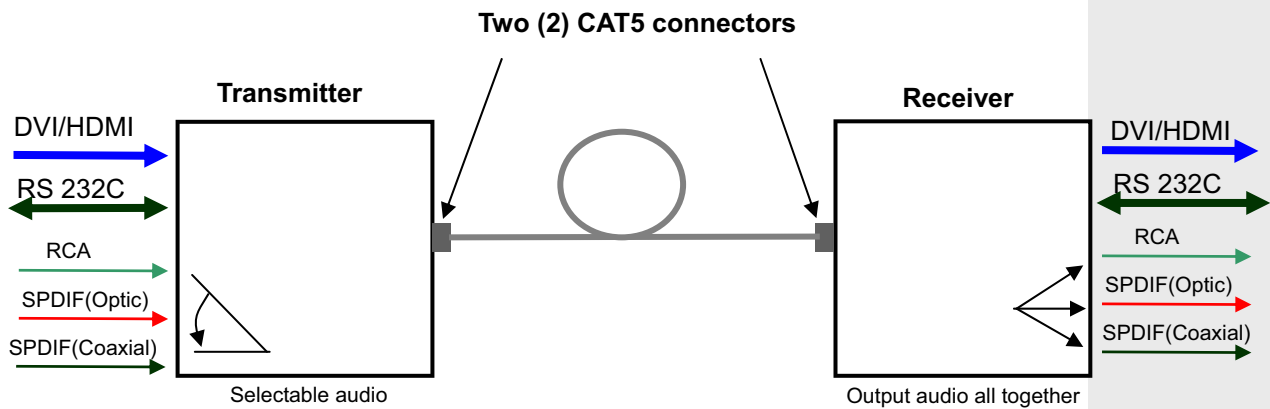
Opticis North America Inc.  
330 Richmond Street, Suite 100, Chatham,  
Ontario N7M 1P7  
Canada

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Ver.1.0 Jan. 25, 08

**[scanmagnetics.com](http://scanmagnetics.com)**

## Stretch HD sources +Audio + RS-232 over CAT5



### Descriptions

M5-2C2-TR offers integrated extension of digital video, audio and RS-232 interface up to 50m (160ft) for HDMI/DVI. It maintains HD video signals up to WUXGA (1920x1200) at 60Hz refresh rate for PC and 1080p for HDTV. It is compatible with full DDC2B and HDCP. It supports connecting one of 3 different audio types in the transmitter; RCA, SPDIF (Optic) or SPDIF (Coaxial) and outputting all 3 audio types.

RS232 serial interface offers device-to-device and device-to-controller connections to build up control system for A/V integration.

It is designed to multiplex and de-multiplex the DVI/HDMI video, digital/analog audio, Display Data Channel (DDC) command interface, High Definition Copy Protection (HDCP) and serial protocol so as to be linked over two CAT5 cables. It gives benefits of easy plug-and-go installation and offers you a cost effective solution for pro A/V system.

### Features and Specifications

- ? Extends DVI, Audio and RS232 up to 50m at WUXGA (1920 x 1200).
- ? Extends HDMI, Audio and RS232 up to 50m with DDC/HDCP at 1080p.
- ? Audio interface: Selectable RCA, SPDIF (Optic) or SPDIF (Coaxial)
- ? Serial control data: RS232 with 9 pin D-sub female connector in the transmitter and male connector in the receiver.
- ? Video data: WUXGA (1920X1200), 24bit color and 60Hz refresh rate for DVI and 1080p for HDMI.
- ? Interconnection between transmitter and receiver: Two(2) CAT5 cables.
- ? +12 V DC power supply to each module.
- ? Complies with DDC2B/HDCP.
- ? Mechanical Dimension of each (W/D/H in mm): 130/240/31

*Extend your Digital Connection!*

## Stretch Multi-media A/V : M5-2C2-TR

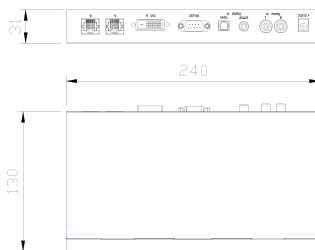
### Recommended Operating Conditions

| Parameter                     | Symbol | Min | Typ | Max  | Units |
|-------------------------------|--------|-----|-----|------|-------|
| Ambient Operating Temperature | $T_A$  | 0   | 25  | + 50 | °C    |
| Storage Temperature           | $T_s$  | -10 |     | + 70 | °C    |
| Storage Humidity              | $H_s$  | 10  |     | 85   | RH%   |

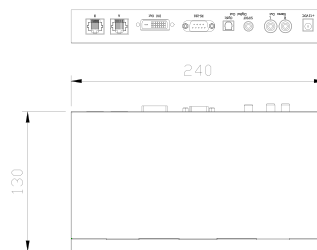
### Electrical Power Supply Characteristics

( $T_A = 0\text{ }^{\circ}\text{C}$  to  $+50\text{ }^{\circ}\text{C}$ , unless otherwise noted)

| Parameter         | Symbol   | Min       | Typ | Max  | Units |
|-------------------|----------|-----------|-----|------|-------|
| Supply Voltage    | $V_{CC}$ | 11.4      | 12  | 12.6 | V     |
| Supply Current    | TX       | $I_{TCC}$ | -   | 380  | 400   |
|                   | RX       | $I_{RCC}$ | -   | 390  | 420   |
| Power Dissipation | TX       | $P_{TX}$  | -   | 4.6  | 5.3   |
|                   | RX       | $P_{RX}$  | -   | 4.7  | 5.3   |



Transmitter

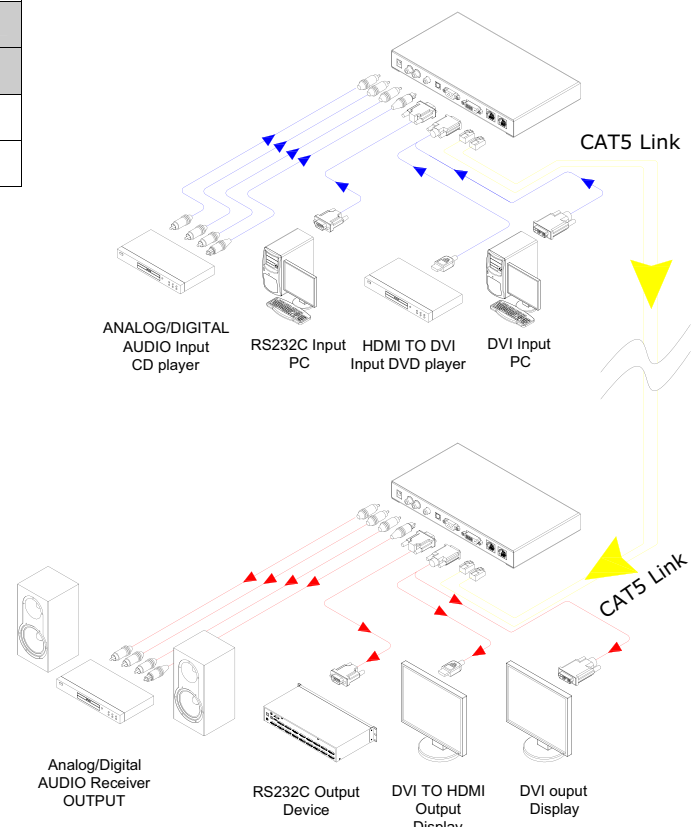


Receiver

### Product Certification

#### EMI and Immunity

The Opticis M5-2C2 extension module has been tested and found to comply with the limits for class A device, pursuant to Part 15 of FCC-rules and EN 55022/55024/61000-3 for CE certification. These limits are designed to provide reasonable protection due normal use with other home network appliance.



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