

Digital Multi-Converter (DMC)

Multi-Standard Signal Converter

[PRODUCT OVERVIEW]

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Invocon's Digital Multi-Converter (DMC) converts incoming received signals (RX) to various outgoing transmit signals (TX) across LVDS, RS-422, RS-232, and TTL/CMOS electrical standards. The DMC supports up to 7 simultaneous inputs and outputs, enabling fan-out to different electrical standards or signal duplication for extended range and improved signal integrity. Two variants are available: a Flight Variant powered by 28 Vdc and a Lab Variant powered by 5 Vdc.



[CAPABILITIES]

Features & Applications

Key Features

- ◆ **Multi-Standard Signal Conversion**
Converts signals across LVDS, RS-422, RS-232, and TTL/CMOS in a single unit, eliminating the need for multiple discrete converters.
- ◆ **Highly Configurable Fan-Out**
Received signals can be simultaneously routed to different electrical standards or duplicated to route a signal to multiple devices.
- ◆ **Dual Variants**
Available in a Flight Variant (28 Vdc) for operational environments and a Lab Variant (5 Vdc) for ground test and integration work.

Typical Applications

- ◆ **Avionics Integration Testing**
Routes telemetry signals across mixed electrical standards during vehicle integration and pre-launch verification.
- ◆ **Range Instrumentation**
Extends telemetry bitstream range and improves signal integrity at range facilities.
- ◆ **Multi-System Data Distribution**
Fans out a single data source to multiple downstream systems with differing electrical requirements.

Key Specifications

SPECIFICATION	Flight Variant		Lab Variant
ELECTRICAL			
Supported Standards	Configurable for LVDS, RS-422, RS-232, and TTL/CMOS		
Max Simultaneous I/O	7 channels		
Power Connector	PT02E-8-4P circular	2.1 mm DC Power Jack	
I/O Connector	(2x) DB-15		
Input Voltage	9 – 60 Vdc (EMI filtered)	5 Vdc	
Input Current	Nominal 40mA at 28Vdc	Nominal 32mA	
MECHANICAL			
Size (L x W x H)	7.825" W x 3.405" D x 1.703" H - Not Including Connectors		
Weight	Nominal 2.39 lbs.	Nominal 0.76 lbs.	
Case Material	7075 aluminum Alodine coated	ESD-SAFE PLA	
Mounting	Six (6) 1/4-28 x 2.25" fasteners with washers		
ENVIRONMENTAL			
Operating Temperature	-24° to +61°C (Acceptance Levels)	Lab Environment	