Great River Technology

WWW.GREATRIVERTECH.COM

Advanced Video and Data Systems

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Revision B 022822

MC-VCM

Flyable Multichannel Video Converter Module for ARINC 818

The MC-VCM is a flyable building block for mission systems. Connect sensors, cameras, displays, and HUDs. Extend the life of airborne video components by quickly linking them to ARINC 818 architecture.

The MC-VCM increases the switching or conversion capacity of our original single-channel VCM and can be certified to DO-254.

Formats

Each MC-VCM is factory configured for one of the following:

- Four-channel conversion: ARINC 818 to or from other protocols (DVI, VGA, Ethernet, HD-SDI, NTSC/PAL, or STANAG 3350)
- Up to 8-channel (8 in/8 out) ARINC 818 cross-point switching with options for 12x12
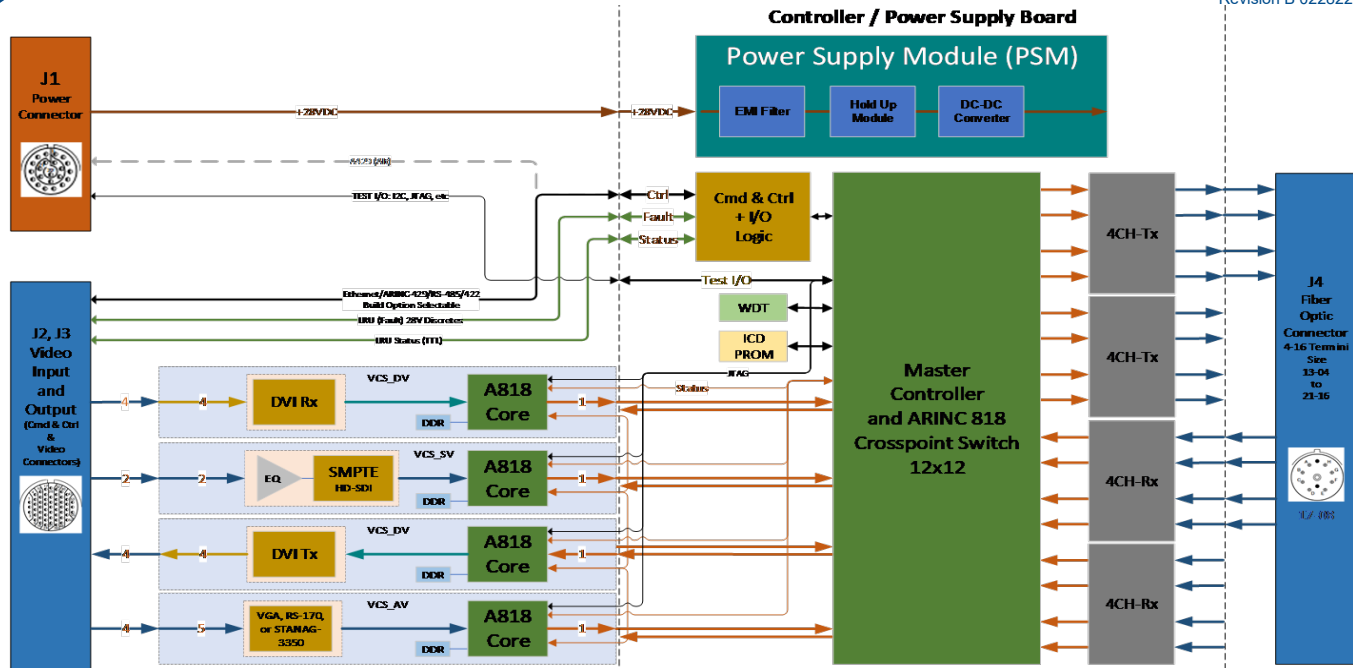
To discuss conversions from other protocols to or from ARINC 818, call.

Features

- 4 channel video conversion to/from ARINC 818 and/or ARINC 818 to ARINC 818 switch (8x8)
- ARINC 818 interface over 850nm fiber
- Multi-ICD capabilities
- Link rates up to 8.5 Gb/s
    - Supports mixed link rates on different channels
- 28 VDC power input per MIL-STD-704F and RTCA DO-160G
- HIRF protected, EMI shielded design
- Command and control options via Ethernet, ARINC 429, and RS-485/422 interface
- Power: 38-48 watt converter for 4 channels (22 watt switch only)
    - 50ms power hold up
- Weight: less than 3.5 pounds
- Conduction and fan cooled options
- Stale video monitoring and reporting
- SEU monitoring and recovery
- Dimensions: 8.0"x6.9"x2.4"

The MC-VCM can operate in rugged environments, such as those encountered in turbo-props and helicopters. See reverse for the specifics.
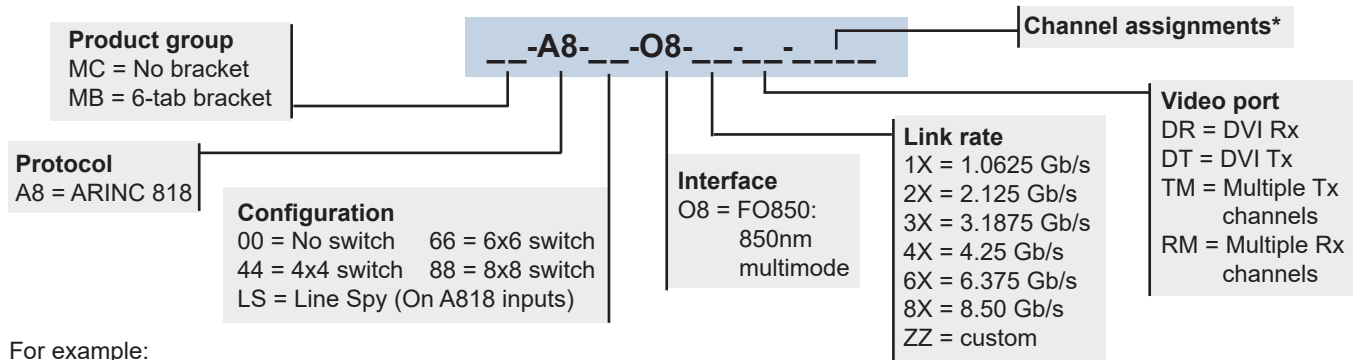
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Controller / Power Supply Board

Call for a discussion of your precise conversion/switching requirements.

Environmental conditions, DO-160G (subject to change)

Sec. 4: Temp and Altitude Overpressure . . A2

Sec. 5: Temperature Variation . . . . B

Sec. 6: Humidity . . . . A

Sec. 7: Shock and Crash Safety . . . . . . B

Sec. 8: Vibrations B/B1

Sec. 9: Explosion Proofness . . . . H

Sec. 10: Water Proofness . . . . Y

Sec. 11: Fluids Susceptibility,
        Cleaning Fluids: . . . . F

Sec. 12: Sand and Dust . . . . D

Sec. 13: Fungus Resistance, Analysis . . . . F

Sec. 14: Salt Spray Testing, Analysis . . . . S

Sec. 15: Magnetic Effect . . . . Z

Sec. 16: Power Input . . . . B (50 ms)

Sec. 17: Voltage Spike . . . . A

Sec. 18: AF Conducted Susceptibility . . . . B

Sec. 19: Induced Signal Susceptibility . . . . ZC

Sec. 20: RF Radiated and Conducted
        Susceptibility . . . . R

Sec. 21: RF Radiated and Conducted
        Emissions. . . . . M

Sec. 22: Lightning Induced Transient . . . . A2J2M2 (shielded)

Sec. 24: Icing. . . . . A

Sec. 25: ESD Susceptibility . . . . A (equipment off)

Sec. 26: Fire, Flammability. C

How to buy

Determine your part number* for MC-VCM as follows:

Product group
MC = No bracket
MB = 6-tab bracket

__ -A8- __ -O8- __ - __ - ____

Channel assignments*

Protocol
A8 = ARINC 818

Configuration
00 = No switch   66 = 6x6 switch
44 = 4x4 switch   88 = 8x8 switch
LS = Line Spy (On A818 inputs)

Interface
O8 = FO850:
    850nm
    multimode

Link rate
1X = 1.0625 Gb/s
2X = 2.125 Gb/s
3X = 3.1875 Gb/s
4X = 4.25 Gb/s
6X = 6.375 Gb/s
8X = 8.50 Gb/s
ZZ = custom

Video port
DR = DVI Rx
DT = DVI Tx
TM = Multiple Tx
    channels
RM = Multiple Rx
    channels

For example:

MB-A8-44-O8-2X-DR-DDDD or MBA844O82XDRDDDD

To order, consult our Distributors page: (https://www.greatrivertech.com/sales). If no distributor is listed for your region or country or if you need additional information about our custom firmware, contact our headquarters in Albuquerque.

*Each character represents a channel: D = DVI;
 E = Ethernet; H = HD-SDI; N = NTSC; P = PAL
 S = STANAG 3350. For example, two
 channels of NTSC and two channels of
 STANAG 3350 = NNSS.