



Application Note #1414

Cables & Interconnection for DMC-2000, 2100, 2200

This note describes the recommended cables and interconnection for use with the DMC-2000, 2100 and 2200 controllers. This document is modeled around the DMC-2000 controller, so please take note that where a USB cable is specified, this would be replaced with a user-supplied Ethernet cable when using the DMC-2100 or 2200. Please review the figures below.

DMC-2010 to DMC-2040:

NAME	TYPE	PURPOSE
CABLE-100-xM (1 cable required) (xM refers to length)	1 Meter, 2 Meter, or 4 Meter 100 Pin High Density Cable	Connects the DMC-2000 to an ICM-2900 and provides all connections for Axes A-D except auxiliary encoder inputs.
ICM-2900 (1 required)	Interconnect Module	The ICM-2900 provides screw terminals for access to all signals for Axes A-D except the Auxiliary Encoder Inputs.
CABLE-36-xM (1 cable required) (xM refers to length)	1 Meter or 3 Meter 36 Pin High Density Cable	Connects the DMC-2000 to an ICM-2908 and provides connection for auxiliary encoders Note: This cable is only required if the Extended I/O will be used.
ICM-2908 (1 required)	Interconnect Module	Provides screw terminals for access to the Auxiliary Encoder Inputs. Note: This module is only required if the Auxiliary Encoder Inputs will be used.
CABLE-80-xM (1 cable required) (xM refers to length)	1 Meter or 4 Meter 80 Pin High Density Cable	Connects the DMC-2000 to an IOM-1964-80 Note: This cable is only required if the Extended I/O will be used.
IOM-1964-80	Opto-Isolation Module for Extended I/O. Connects to CABLE-	Provides opto-isolation for extended I/O and allows easy access via screw terminals.

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CABLE-9PIN-D (1 cable required)	6 Ft. Serial Communication Cable	Connects Main serial port to computer
CABLE-USB-xM (1 cable required) (xM refers to length)	2 Meter or 3 Meter Universal Serial Bus Cable	Connects USB IN port to computer Note: This cable is only required if USB will be used

DMC-2050 to DMC-2080:

NAME	TYPE	PURPOSE
CABLE-100-xM (2 cables required) (xM refers to length)	1 Meter, 2 Meter or 4 Meter 100 Pin High Density Cable	1st Cable Connects the DMC- 2000 to an ICM-2900 and provides all connections for Axes A-D except auxiliary encoder inputs. The 2 nd Cable Connects the ICM- 2900 to the DMC-2000 and provides all connections for Axes E-H except auxiliary encoder inputs.
ICM-2900 (2 required)	Interconnect Module	The 1 st ICM-2900 provides screw terminals for access to all signals for Axes A-D except the Auxiliary Encoder Inputs. The 2 nd ICM-1900 provides screw terminals for access to all signals for Axes E-H except the Auxiliary Encoder Inputs.
CABLE-36-xM (1 cable required) (xM refers to length)	1 Meter or 3 Meter 36 Pin High Density Cable	Connects the DMC-2000 to an ICM-2908 and provides connection for auxiliary encoders Note: This cable is only required if the Extended I/O will be used.
ICM-2908 (1 required)	Interconnect Module	Provides screw terminals for access to all Auxiliary Encoder Inputs. Note: This module is only required if the Auxiliary Encoder Inputs will be used.
CABLE-80-xM	1 Meter or 4 Meter 80	Connects the DMC-2000 to an

(1 cable required) (xM refers to length)	Pin High Density Cable	IOM-1964 Note: This cable is only required if the Extended I/O will be used.
IOM-1964-80	Opto-Isolation Module for Extended I/O. Connects to CABLE-80	Provides opto-isolation for extended I/O and allows easy access via screw terminals.
CABLE-9PIN-D (1 cable required)	6 Ft. Serial Communication Cable	Connects Main serial port to computer
CABLE-USB-xM (1 cable required) (xM refers to length)	2 Meter or 3 Meter Universal Serial Bus Cable	Connects USB IN port to computer Note: This cable is only required if USB will be used

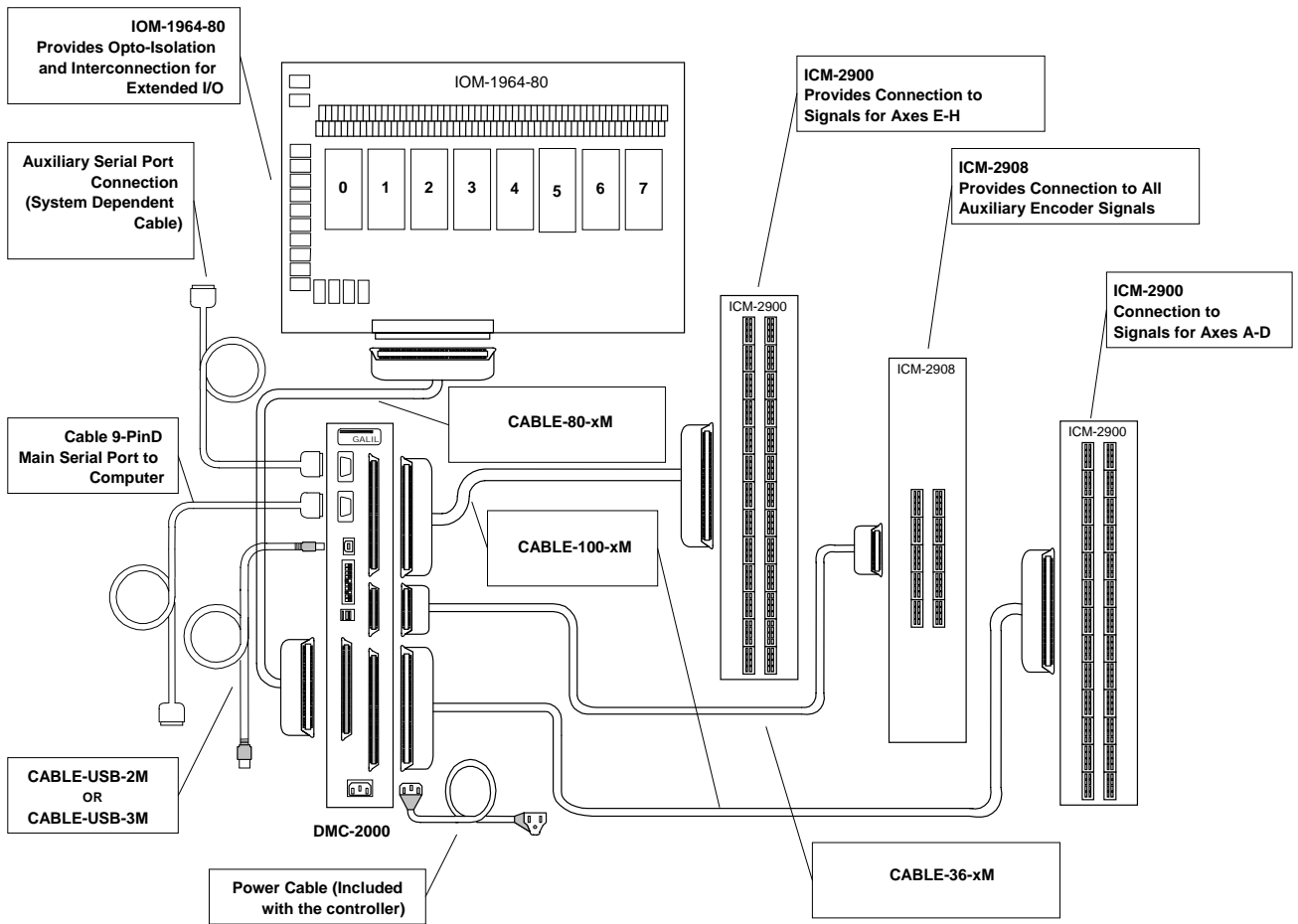


Figure 1. DMC-2080 Controller with recommended cables for system connection.

Note 1: The ICM-2900 and ICM-2908 interconnect modules are recommended. For other methods of interconnection, such as using the ICM-1900, please contact Galil.

Note 2: The IOM-1964-80 opto-isolation unit is recommended for the DMC-2000. This unit provides opto-isolation for the 64 extended I/O signals on the controller. These signals can also be adapted for connection to Grayhill (Model 70GRCM32-HL) and OPTO-22 (model G4PB24) opto-isolation modules using the CB-50-80 adapter board. Please contact Galil for further information.

Note 3: The DMC-2000 can communicate via RS-232 or Universal Serial Bus, or both simultaneously. The figure above illustrates both connections but only one is required for communication. Likewise, a DMC-2100 or 2200 can communicate via RS-232 or Ethernet, or both simultaneously however only one communication connection is necessary.