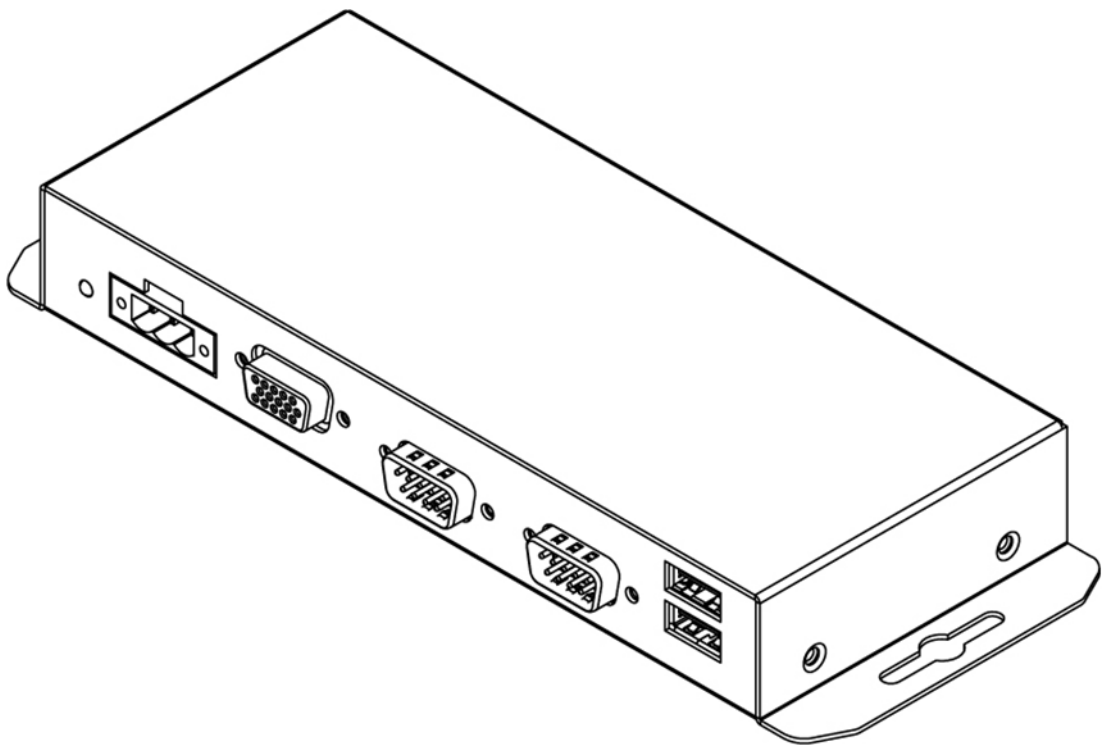


Expansion Box for M800BW-M12 Tablet Computer



CPM800

User Guide

Version 1.0

FCC Statement



This device complies with part 15 FCC rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class "B" digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

European Union



Electromagnetic Compatibility Directive (2014/30/EU)

- EN55024: 2010/ A1: 2015
 - IEC61000-4-2: 2009
 - IEC61000-4-3: 2006+A1: 2007+A2: 2010
 - IEC61000-4-4: 2012
 - IEC61000-4-5: 2014
 - IEC61000-4-6: 2014
 - IEC61000-4-8: 2010
 - IEC61000-4-11: 2004
- EN55032: 2012/AC:2013
- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/35/EU)

- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:2013

This equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

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Disclaimer

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Warranty

Winmate Inc. warranty guarantees that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, we will, at his/her option, repair or replace the defective product at no charge to the customer, provide it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service. If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W14Axxxxxxx means October of year 2014.

Customer Service

We provide a service guide for any problem by the following steps: First, visit the website of our distributor to find the update information about the product. Second, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance.

You may need the following information ready before you call:

- Product serial number
- Software (OS, version, application software, etc.)
- Description of complete problem
- The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products.

Advisory Conventions

Four types of advisories are used throughout the user manual to provide helpful information or to alert you to the potential for hardware damage or personal injury. These are Notes, Important, Cautions, and Warnings. The following is an example of each type of advisory.



NOTE

A note is used to emphasize helpful information.



IMPORTANT

An important note indicates information that is important for you to know.



CAUTION

A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.



WARNING!

An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.

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About This User Guide

This User Guide provides information about using the Winmate® CPM800 Expansion Box.



Some pictures in this guide are samples and can differ from actual product.

Chapter Descriptions

[Chapter 1, Introduction](#) provides basic instructions on how to use the CPM800.

[Chapter 2, Getting Started](#) provides instructions on connecting the CPM800 to other external devices.

[Chapter 3, Introduction](#) provides instructions on how to connect the CPM800 Extension Box to the M800BW Tablet Computer.

CHAPTER1: INTRODUCTION

Thank you for purchasing Winmate® CPM800 Expansion Box. Winmate® CPM800 Expansion Box is designed for Winmate® M800BW-M12 Tablet Computer. The CPM800 extends the functionality of Tablet Computer and brings a new level of flexibility and rugged design to pocket-sized mobile devices, providing task workers and managers with the power to streamline business processes, increasing productivity and improving public safety service.

The CPM800 Expansion Box has M12/ D-Sub 15 connector to connect to the M800BW, serial port RS-232/422/485, two channels CAN Bus with isolation for a use in a vehicle and two USB 2.0 A Type allowing to connect to an external devices such as a mouse or keyboard.

Product Features

Wimate® CPM800 Expansion Box features:

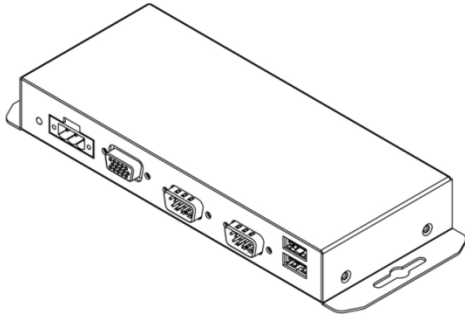
- Works only with the M800BW-M12 Tablet Computer
- Perfectly connects to M800BW-M12 with M12/ D-Sub 15 connector
- Provides extended I/O for the M800BW-M12
- Supports wide power voltage input (9~36V DC) with terminal block
- Compatible with vehicle mounting
- Compact and slim mechanical design

Package Contents

Inspect the equipment for damage. If any equipment is missing or damaged, contact us.

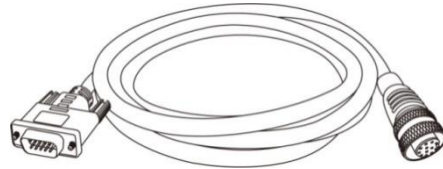
Standard packing list includes:

- **Expansion Box**



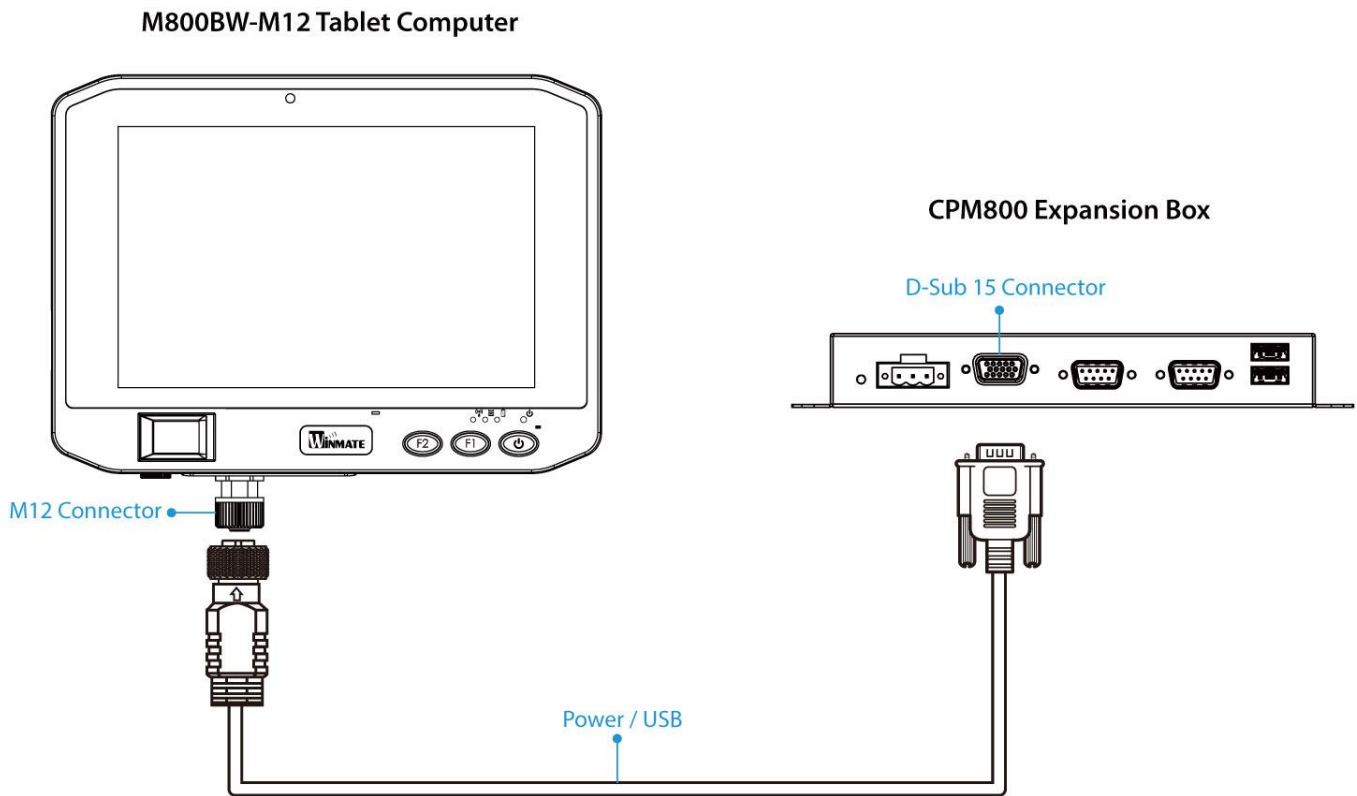
Part Number: 98DT00A0000B

- **M12 to D-Sub 15 Male Cable (2m)**



Part Number: 94E0121150K0

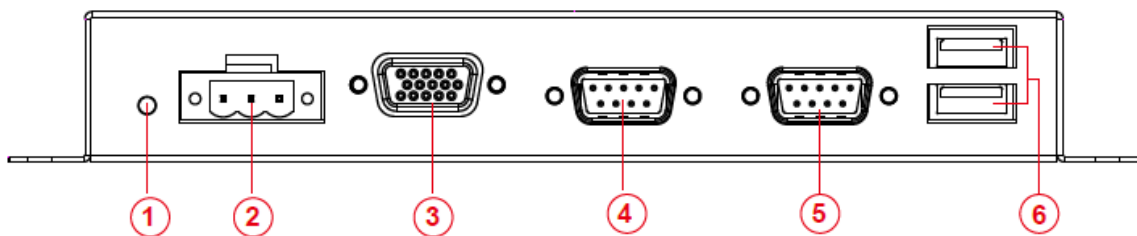
Installation Diagram



Description Of Parts

This section describes I/O layout, mechanical dimensions and LED indicators of the CPM800 Expansion Box.


I/O Layout



No.	Description	No.	Description
①	Green LED for Power status	④	RS-232/422/485 (with 12V / 1A)
②	9-36V DC (Terminal Block)	⑤	Single channel CAN BUS with isolation
③	D-sub 15 to connect the M800BW	⑥	2 x USB2.0

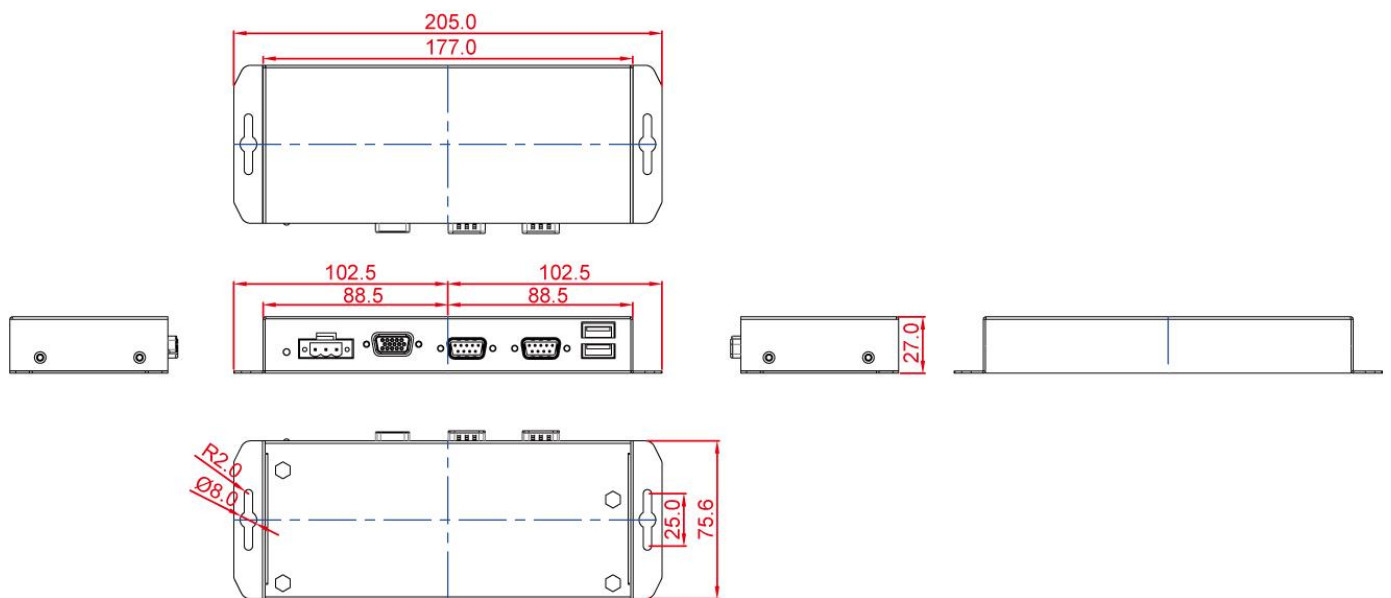
LED Indicators

LED Indicator is located on the front I/O side of the CPM800.

Item	Description	
Power Indicator	Green 	CPM800 is connected to M800BW
	No Light	CPM800 is not connected to M800BW

Mechanical Dimensions

Unit: mm

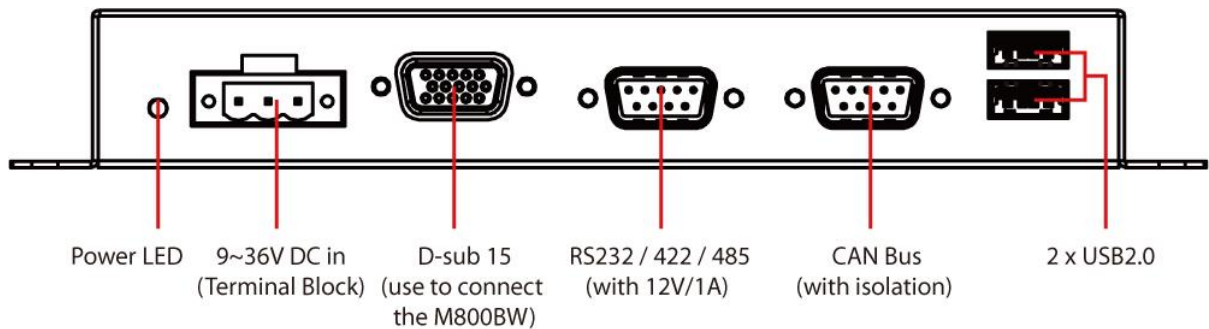


**Note: this is a simplified drawing and some components are not marked in detail.*

CHAPTER 2: GETTING STARTED

This chapter introduces external IO and the installation of PCM800 hardware.

External I/O Connectors

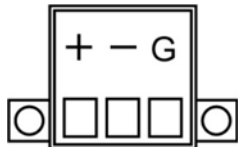



Connector Pinouts

Follow the connector pinouts description to connect external devices to M800BW.

Power Input Connector

CPM800 comes with 3-pin terminal block enables the easy, secure transmission of power.

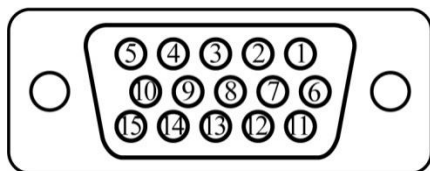




Voltage Minimum Voltage 9V
Maximum Voltage 36V
Maximum Current 4.2A

D-Sub 15 Connector

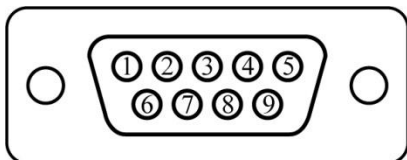
Use a female D-Sub 15 output connector to connect the CPM800 Expansion Box to the M800BW Tablet Computer.



Pin №	Name	Pin №	Name
1	DCIN	2	DCIN
3	DET1	4	NC
5	GND	6	DCIN
7	USB_D+	8	GND
9	NC	10	+5V
11	GND	12	USB_D-
13	GND	14	NC
15	DET2		

COM Serial Port Connector

Serial Port is a D-Sub 9 connector that can be configured to RS-232/422/485 by jumper (12V/ 1A).

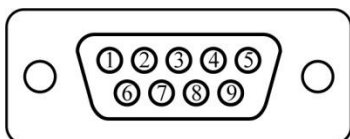


Pin №	RS-232 (default)	RS422	RS485
1	DCD	TxD-	D-
2	RXD	TxD+	D+
3	TXD	RxD+	NC
4	DTR	RxD-	NC
5	GND	GND	GND
6	DSR	NC	NC
7	RTS	NC	NC
8	CTS	NC	NC
9	RI	NC	NC

Refer to [Configuring Serial Port Settings](#) section of this User Guide for instructions on how to change serial port settings.

CAN BUS Connector

Use Single Channel CAN BUS connector to connect the CPM800 to all other in-vehicle systems.



Pin №	Name	Pin №	Name
1	GND	2	CAN_L
3	GND	4	NC
5	NC	6	NC
7	CAN_H	8	GND
9*	+5V/NC		

USB 2.0 Connector

The CPM800 has two USB 2.0 A Type connectors. Use USB 2.0 connector to connect other external devices such as mouse, keyboard to expansion box.



Pin №	Name	Pin №	Name
1	+5V	2	Data-
3	Data+	4	GND

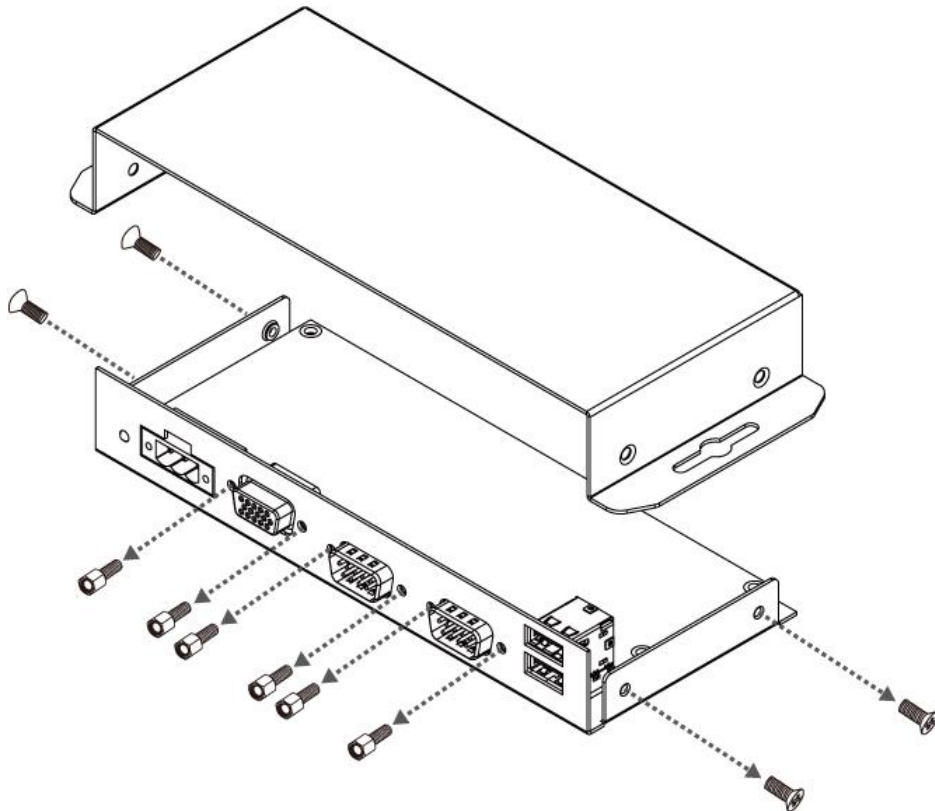
Configuring Serial Port Settings

Jumpers are located on the motherboard. It is required to open the unit to access the jumpers.

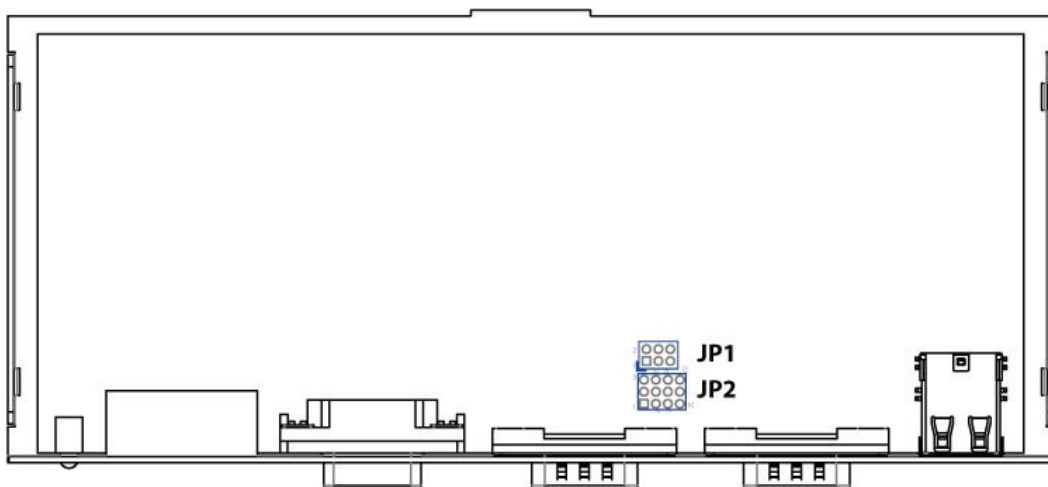
Follow instructions in this section to configure serial port settings.

Open the Casing

1. Undo CPM800 screws on the sides.
2. Undo I/O screws that secure D-sub 15, two D-Sub 9 ports.
3. Remove the top cover.



Location of jumpers on the motherboard:

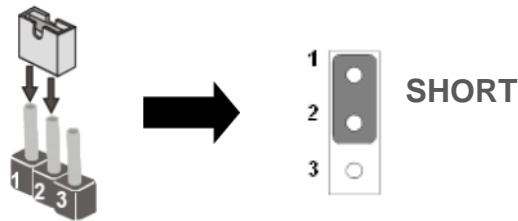


Jumper Settings



A pair of needle nose pliers may be helpful when working with jumpers. If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes. Generally, you simply need a standard cable to make most connections.

The jumper setting diagram is shown below. When the jumper cap is placed on both pins, the jumper is SHORT. The illustration below shows a 3-pin jumper; pins 1 and 2 are short. If you remove the jumper cap, the jumper is OPEN.



To avoid damaging the module, always turn off the power supply before configuring jumper settings.

Both Jumper 1 and Jumper 2 allow setting the Serial Port COM1 configuration. Refer to the table below for PIN assignment.

RS232		RS422		RS485	
JP1	JP2	JP1	JP2	JP1	JP2
<p>RS232</p>	<p>RS232</p>	<p>RS422</p>	<p>RS422/485</p>	<p>RS485</p>	<p>RS422/485</p>

Example: To make RS-232 Settings, set the Jumper 1 Pin 1-2 to the SHORT position, and Jumper 2 Pin 1-2, 4-5, 7-8,10-11 to the SHORT position.

Chapter 3: INSTALLATION

This chapter describes how to connect the CPM800 Expansion Box to the M800BW-M12 Tablet Computer.

How to connect CPM800 to M800BW-M12

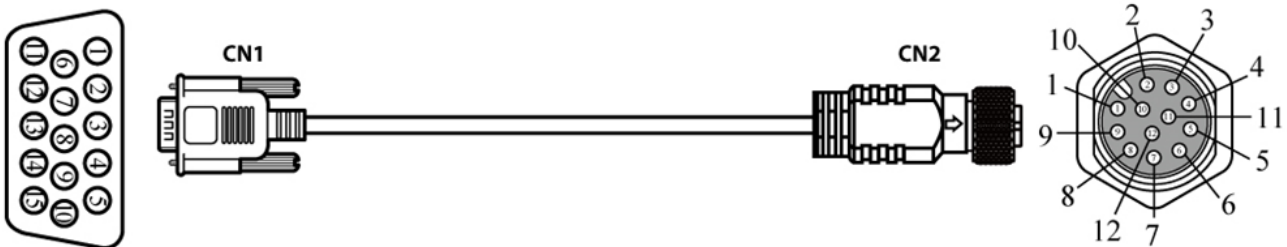
Use Cable Type I: M12 to D-SUB 15 Pin Male Cable (optional accessory) to connect CPM800 Expansion Box to M800BW-M12 Tablet PC.

Connect one side of Cable Type I connector to M12 connector on the M800BW-M12 Tablet PC, and connect another side to D-SUB 15 Pin Male connector on the CPM800 Expansion Box.

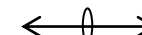
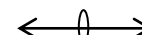
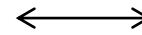
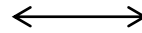
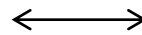
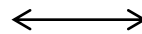
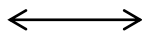
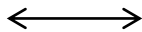
M12 to D-SUB 15 Pin Male Cable (2m)

CPM800 Side

M800BW-M12 Side



Pin No.	Symbol
CN1-3	DET1
CN1-7	USB_D+
CN1-12	USB_D-
CN1-15	DET2
CN1-13	USB_GND
CN1-10	+5V
CN1-5	GND (short)
CN1-8	
CN1-11	
CN1-1	VCC (short)
CN1-2	
CN1-6	
CN1-4	



Pin No.	Symbol
CN2-1	DET1
CN2-2	USB_D+
CN2-3	USB_D-
CN2-6	DET2
CN2-11	USB_GND
CN2-12	USB_VCC
CN2-4	GND (short)
CN2-5	
CN2-10	
CN2-7	VCC (short)
CN2-8	
CN2-9	
CN2-1	

APPENDIX

Appendix A: Product Specifications

		Model Name
		CPM800
Input/ Output	Power Input	1 x 3-Pin Terminal Block
	D-Sub Connector	1 x D-Sub 15 Female (connects to M800BW Tablet)
	Serial Port	1 x RS-232/422/485 select by jumper (12V/ 1A)
	CAN BUS	1 x Single Channel CAN BUS with isolation
	USB Port	2 x USB 2.0
Indicators	Power Indicator	Green LED for power status
Power Management	Power input	9~36V DC input
Mechanical Specifications	Dimensions (W x L x H)	205.0 x 75.6 x 27.0 mm
	Weight	450g
	Housing	Metal steel
Environmental Considerations	Operating Temp.	-20°C ~ +60°C
	Storage Temp.	-30°C ~ +60°C
	ESD (Contact/ Air)	12kV/15kV
Standards and Certifications	CE, FCC	
Accessories	1 x M12 to D-SUB 15 Pin Male Cable (Length 2m)	

**Note: all specifications are subject to change without prior notice.*




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