

MX1COST V2.14 – QUOTATION AND DESIGN TOOL FOR *MX1*

MX1COST, the quotation and design-checking tool for VIGILANT MX1 systems, has been upgraded to version V2.14. This version includes new May 2019 pricing and MX1 stock panels FP1150/1/2/3/4/5/6/7. V2.14 is an Australia-only release of MX1COST.

Key new features (V2.05 onwards) include:

- Support for the following new *MX* devices and ancillaries:
 - Gen6 *MX* detectors – 850PH, 850P, 850H and 850PC.
 - Gen6 bases – 4B, 4B-C and 4B-I.
 - Ceiling Tile Adaptor (CTA) and parts.
 - DDM800 Dual Detector Module.
 - Quad IO Module.
 - FV411f FLAMEVision infrared flame detector.
 - SIO800 Single Input/Output Module (V2.10 onwards).
- AS 1668 3U Fan Control Door and expansion kit.
- Brackets for mounting *MX* modules in the *MX1* – FP1062 and FP1063.
- Build-to-Order (BTO) pricing for factory assembly, wiring and testing of the standard 8U and 15U *MX1* panel and in-panel parts.
- Build-to-Order pricing for factory assembly, wiring and testing of panels using 28U x 310 and 40U x 310 cabinets with the large gearplate.
- Warning message if the version of MX1COST is more than 12 months old.
- Loop poll time calculation for *MX* devices including Quad I/O modules.

V2.14 implements new pricing effective May 2019, adds *MX1* stock panels (e.g., FP1150, FP1151, FP1152, FP1153, FP1154, FP1155, FP1156, and FP1157). It also corrects the following issues identified in V2.13:

- Adds flame detectors (e.g., '516.300.412', '516.300.412', and '516.300.421').
- Fixed missing SU0615 in Order List page.
- Remove warning for requiring FP1115/6 when selecting FP1121.

GENERAL

MX1COST is a quoting and design-checking tool for *MX1* systems. The full version allows you to quickly calculate buy and sell prices for the *MX1* panel and associated parts and/or to simultaneously perform basic electrical and mechanical checks to verify that the quoted system is likely to work correctly.

MX1CostV2.14AUW Front Panel Space Available: 0 U
Front Panel Space Used: 0 U

Home [Summary](#) [Order List](#) [All Errors](#) [Help](#) List Price \$0.00
Sell Price \$0.00

[MX1FIP](#) [MXDevices](#) [Ext Parts](#) [BOWS](#) [NonStock](#)

System Title: _____ Salesperson: _____ Customer Purchase Order: _____

Quoted for: _____ Branch: _____ Branch Purchase Order: _____

Requested date: _____ This quote valid until: 13-Jun-19

List Price \$0.00 Discount off list _____

Sell Price \$0.00 BTO Assemble in Factory

CONDITIONS:
All prices are in Australian Dollars
Physical and electrical checks only apply to equipment listed in this order

		Page Subtotals	
			Sell Price
MX1FIP	OK	MX1FIP	\$0.00
MXDevices	OK	MXDevices	\$0.00
External Parts	OK	Ext Parts	\$0.00
BOWS	OK	BOWS	\$0.00
Non Stock Parts	OK	NonStock	\$0.00
Power Supply	OK	Summary	

[Show All Errors](#)

MX1Cost Home Page

MX1COST FEATURES

- Support for standard 8U and 15U *MX1* cabinets plus NZ Slimline format.
- Optional Build-to-Order (BTO) pricing for factory assembly of *MX1* and in-panel parts.
- Support for 28U and 40U panels (Build-to-Order only).
- Automatic selection of available parts based on cabinet choice.
- Regionalised versions: shows only those products suitable for your location.
- Prices in local currency (priced versions).
- Separate versions for engineering (no prices) and training (dummy prices).
- Simple sequential flow from page to page using links:
 - **Home** page – enter the basic quotation information;
 - **MX1FIP** page – select the base *MX1* cabinet plus any additional front panel or internal components required;
 - **MX Devices** page – enter the quantities of *MX* detectors and other devices that will be connected to the *MX1*;
 - **External Parts/Components** page – select other system equipment that will be connected to the *MX1*;
 - **BOWS** page – for pricing a standalone T-Gen2 BOWS/EWS or *MX1*/T-Gen2 Combo arrangement and calculating PSU/battery requirements.
- Continuous top-level checking for mechanical fit or electrical overload as you select equipment, with immediate warnings or error messages.
- Includes reference drawings for front panel and internal equipment mounting.
- System **Summary** page provides a printable report of recommended equipment mounting, *MX* loop performance, and power supply and battery requirements.
- **Order List** page provides a printable report/shopping list of parts to be supplied/ordered. This page can also be used to copy details into a quotation.
- **All Errors** page lists all warnings and errors present, and gives details of the rules that govern them.

- *MX* Loop checking can quickly be set to “General” for initial estimating, and then to more “Detailed” later for full system design (when devices are allocated to specific *MX* loops).

NOTE: MX1COST does not (yet) support pricing and checking of hazardous area systems using System 800 Intrinsically Safe (IS) *MX* detectors and modules. *MX* loop performance with IS devices must be checked, two loops at a time, using the earlier version of MX1CAL (SF0332).

NOTE: MX1COST does not (yet) provide detailed checking of “IB units” between isolator bases on the same *MX* Loop. It checks only the quantity of isolators needed for a loop based on the device quantity with the IB loading on each isolator based on an average distribution. If you have specific designs that are not average, then MX1CAL (SF0332) can be used to do detailed calculations.

NOTE: BTO design checking of 28U and 40U systems does not include the full capabilities of the large gearplate. The automatic checks are performed as if a 15U gear plate is used, because all its options are known to fit to the large gear plate. Also there are no facilities to specify the fitting of *MX* devices into the *MX1* panel (other than using FP1063 – 4x DDM800 modules). It is intended that future releases of MX1COST will improve on this initial simplification. In the meantime contact Johnson Controls Technical Services if a quotation is required that includes these (or additional) items.

BUILD-TO-ORDER SYSTEMS

If the ***BTO Assemble in Factory*** option on the home page is ticked, or the FZ9041/47, FZ9049/51 28U/40U cabinet options are chosen, MX1COST prices the system as Build-to-Order (BTO) inclusive of factory assembling, wiring and including basic configuration and testing of the MX1FIP and BOWS page components (excluding the batteries).

For the 8U/15U panels MX1COST checks that the selected parts can be fitted to the gearplate. It is somewhat conservative as it allows only the prescribed mounting options for the gearplate and various modules.

For the 28U and 40U panels the large gearplate is fitted, which allows a wide variety of module mounting options (refer drawings 1982-113 for examples). However this release of MX1COST does not include all the possible combinations – just those that can be achieved using the standard 15U gearplate. Also multi-cabinet systems are not yet supported.

For the FZ9041 28 panel the standard 15U MX1 gearplate is fitted. For the FZ9047 40U panel the 18U MX1 gearplate is fitted. Both panels allow one T-Gen2 gearplate (ME0578/9) to be added on the BOWS page.

For all cabinets MX1COST checks the selected 19” rack mounting modules will fit into the chosen cabinet size, and for 28U and 40U cabinets that the display/control modules all fit within the height limitations (750-1850mm) specified in AS 1670.1.

If the required *MX1* system cannot be selected using MX1COST (e.g., involves multiple cabinets or addition of non-standard parts) please contact Johnson Controls Technical Support.

BOWS PAGE

The BOWS page allows selection and pricing of standalone T-Gen2 Grade 3 or 2 systems, or for combo MX1/T-Gen2 panels to be defined.

For combo MX1/T-Gen2 panels select FZ9041 or FZ9047 as the base MX1 panel and enter the MX1 parts on the MX1FIP page. On the BOWS page the usage details of the cabinet is copied across and the T-Gen2 parts can be added (e.g., add ME0578/9 gearplate and the T-Gen2 parts). Combo panels are automatically priced as BTO.

COMPATIBILITY

MX1COST is an Excel spreadsheet with embedded macros. It requires Microsoft Office 2007 (or later). The online Office 365 package and non-Microsoft packages such as Open Office are not supported.

INSTALLATION

MX1COST is supplied as a zipped Windows installer (.EXE) file. When run, it installs the necessary files into a folder in the Shared Documents area for All Users, and creates links to these files in the “Vigilant” section of the Programs menu. MX1COST is compatible with both 32-bit and 64-bit versions of Windows 7, 8 and 10.

AVAILABILITY AND LICENSING

Various versions of MX1COST are available to suit different locations, customers, and applications:

SF0433 Australia (List Priced)

SF0477 No Prices (Engineering/design) – Australia

SF0471 No Prices (Engineering/design) – New Zealand

SF0474 Dummy Prices (Training) – Australia

Unpriced versions of the MX1COST installer are available from the [Fireplace](https://www.fireplace.com.au) web site – <https://vigilant-fire.com.au>. Click on the Resources link at the top of the page, select **Downloads ANZ**, then select the appropriate **MX1** section.

Priced versions are available from the secure area of the [Fireplace](https://www.fireplace.com.au) under **Downloads**. Alternatively contact your Johnson Controls representative.

During installation, you are required to accept an end-user licence agreement.

MX1COST has a timeout facility. On start-up if the version you have loaded is more than 12 months old it will warn you to obtain a new version, but still allow you to use it.

UNINSTALLING

Removing MX1COST is straightforward: from the Windows Control Panel, select *Add or Remove Programs*, scroll down to MX1COST and select *Remove*.

VERSION HISTORY

- V2.14 - V2.14 implements new pricing effective May 2019, adds MX1 stock panels ('FP1150/1/2/3/4/5/6/7'), adds flame detectors ('516.300.412' '516.300.412' and '516.300.421'), corrects the following issues identified in V2.13:
- Fix SU0615 not being included in the Order List and Sell Price..
 - Fix missing prices for MX1 loop cards in BTO totals.
 - Remove warning for requiring FP1115/6 when selecting FP1121
 - Fix wrong 'Price Each' in Order list page.
- V2.13 - V2.13 implements new pricing effective November 2018 and corrects the following issues identified in V2.12:
- Removed 'quick build' part selections (i.e. those V2.12 highlighted BTO parts on **MX1FIP** page in dark orange).
 - Fix BTO pricing shown in ENG version/variant.
 - Missing warning on selection of MCP820.
 - Add SU0615 and its validation rule.
 - Add FZ9041/FZ9047 BTO panel in **MX1FIP** and **BOWS** page.
 - Add T-Gen2 Grade 2/3 cabinets and components in **BOWS** page.
 - Adds checking for 850 series detectors fitted to sounder or relay bases.
- V2.12 - V2.12 implements new pricing effective June 2018 and corrects the following issues identified in V2.11:
- Separate the MX device external currents from the MX loop current calculation.
 - Highlight BTO parts on **MX1FIP** page in dark orange.
 - Add more AS7240 speakers in **External Parts** page.
 - Mark T-GEN 50 parts as superseded.
- V2.11 - V2.11 implements new pricing effective December 2017 and adds T-Gen2 parts (standalone parts added in a new BOWS page with its own PSU/battery calculations and some parts added to the MX1FIP page).
- It also corrects the following issues identified in V2.10:
- Fixed min voltage drop formulas on MXDevices page.

- Fixed run-time/macro error when selecting FP1040 8U for hiding non-relevant parts.

V2.10 - V2.10 implements new pricing effective April 2017, adds the SIO800 single input/output module and allows 850P/PH detectors to be used with the D51MX Duct Sampling Unit (DSU). In addition, it is now possible on all tabs to select and copy information from visible cells.

It also corrects the following issues identified in V2.09:

- PSU/battery calculations now correspond to those in AS 1670.1:2015.
- DDM800 and LPS800 alarm loads contribute to loop calculations.
- Loop voltage calculations account for alarm loads.
- Incorrect wiring calculation for Loop 8 in detail mode.
- The number of DDM800 circuits in alarm can be adjusted to suit the site. This will affect the PSU/battery calculations, noting that if used inappropriately an MX1 system could fail to perform as expected.

V2.09 - May 2016 pricing update.
 - Add NTFAST door FP1092.
 - Remove special coloured *MX* base/cover 10-packs.
 - Conditionally include S271f+ for engineering build/variant.
 - The warning message on selection of FP1063 in *MX1FIP* page is shown in detailed mode.

V2.08 - The BTO setting is now correctly saved and restored when the file is saved/re-opened.
 - Added an additional clipboard format to allow copy & paste of the Order List page into another Excel spreadsheet.

V2.07 - Missing T-GEN 50 prices in Order List if they are selected from the Ext Parts page.
 - No warnings for MIO800 module selected without matching enclosure boxes or DIN rail kits.
 - Fixed spurious serial ports warning to permit AS1668 controls to be connected in parallel with Loop Cards.
 - Fixed I-HUB selection not being included in serial port assessment.
 - Match *MX* modules against "M520 + D800" instead of "K2142 + D800".
 - Fixed read-only cells being unlocked on *MX* Devices page, such as FP1063 and subtitle cells in Qty column.

- *MX* Devices page now includes rows to allocate in-FIP *MX* devices (e.g., FP1063) to *MX* loops in Detailed Checking mode.
- Rules for checking whether the DDM800s entered in *MX*1FIP page and *MX* Devices pages are matched (loop- or externally-powered DDM800s are independently checked).
- New row in Order List page for entering the special colour required when custom colour 850 base ('517.050.512') is selected from *MX* Devices page.
- 814CH removed from *MX* Devices page.
- A rule of minimum 10 packs of '517.050.513' applied to the selection of custom colour base/cover.

- V2.06
- Correct pricing now used for all items.
 - Copy Order List to Clipboard now uses RTF with embedded tab positions – so formats nicely in Word document.
 - Quantity of free entry items on Order List page increased to 20.
 - Fixed incorrect warning messages when selecting 4B-EM/4B-DHM and ceiling tile adapters.
 - Descriptions for Quad I/O devices improved.
 - 850PC removed from *MX* Devices page.
 - Warning shown if D51MX selected and not enough matching 814 detectors.
 - Removed ordering codes from non-orderable items (now shows Do Not Order).
 - Alarm Load Current entry and calculation added for LPS800
- V2.05
- Support for the following new *MX* devices and ancillaries:
 - Gen6 detectors – 850PH, 850P, 850H and 850PC.
 - Gen6 bases – 4B, 4B-C and 4B-I.
 - Ceiling Tile Adaptor (CTA) and parts.
 - DDM800 Dual Detector Module.
 - FV411f, FV412f, FV413f, FLAMEVision infrared flame detectors.
 - AS 1668 3U Fan Control Door and expansion kit.
 - Brackets for mounting *MX* modules in the *MX1* – FP1062 and FP1063.
 - Build-to-Order (BTO) pricing for factory assembly, wiring and testing of the standard 8U and 15U *MX1* panel and in-panel parts.
 - Build-to-Order pricing for factory assembly, wiring and testing of panels using 28U x 310 and 40U x 310 cabinets with the large gearplate.
 - New pricing as of 1 May 2015.
 - Warning message if the version of MX1COST is more than 12 months old.
- V2.04
- New pricing as of 22 January 2014, shows LIST prices and allows calculation of discounted prices.
 - Added 8U panel, IP networking products, 850 series detectors and bases, and some other parts.
 - Added new general/detailed warnings and errors for IP networking, 8U cabinet and 850 series devices.
 - Extra 4 buy items in 'Order List' page for manual entries.
 - Auto scrolling to top of the tab/page when opened with the item list exceeding the scope of the tab/page view.
 - Various bug fixes.
- V2.03
- Support 8 *MX* loops.
 - Added items – looms, *MX* module enclosures, remote indicator, strobes and speakers.
 - Error page added to give detail of all warnings and errors detected.
 - Added links to some pages, help file, and CAD drawings.
 - External PSU added to External Parts page.

- New warnings and errors for incorrect quantities of *MX* modules and mounting parts, all *MX1* serial port used, and external PSU/battery.
 - Corrected *MX* loop, PSU, and battery calculations for some scenarios.
- V2.02
- Wormald NZ version only – pricing adjustments.
- V2.01
- Fixed alarm current being incorrectly calculated in “general” checking mode – far too high.
 - In “detailed” checking mode the 40 devices per isolator check now correctly includes the in-built isolators of the panel.