

Crowcon Technical Note

Document Reference: GEN070

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Document applies to: IRmax and XgardIQ DTM and DD HART Files

XgardIQ and IRmax offer HART communications which provides the user with a host of information and diagnostic data, either remotely to an 'asset management system' (super-imposed on the analogue 4-20mA signal), or locally to a portable HART communicator via intrinsically safe test-points on the gas detector.

Although HART is a long established software protocol for intelligent field devices (gas detectors, level gauges, pressure transmitters etc), the data does require some adaption in order for it to be accessed by the 'asset management' software packages offered by various providers.

Portable HART communicators must also be loaded with the correct 'DD' (device description) software file to enable the information from the product to be read.

DTM Files

FDT Technology is an open and non-proprietary standardized interface that enables field devices to be integrated with automation and asset management software via numerous communications protocols (eg HART, Modbus, Profibus, DeviceNet etc).

A unique 'DTM' (Device Type Manager) file is required for each instrument (ie IRmax or XgardIQ).

This file interfaces between the instrument and the asset management software (eg PACTware and Fieldcare) using the FDT standard. It acts in a similar way to a printer driver software file that needs to be installed on a PC to enable the printer to be used.

In order to integrate IRmax or XgardIQ with these software packages, the user simply needs to download the DTM file and install it (**see Appendix A**).

DD Files

A portable HART communicator may be supplied pre-loaded with a library of DD (device description) files for all products registered with the Fieldcomm Group. If so, the user simply connects to the instrument (eg gas detector) and the HART communicator will recognize the product and load the appropriate menu. In the event that the product is not included in the DD library, the user can download the IRmax or XgardIQ DD file from the Crowcon website and install it (**see Appendix B**).

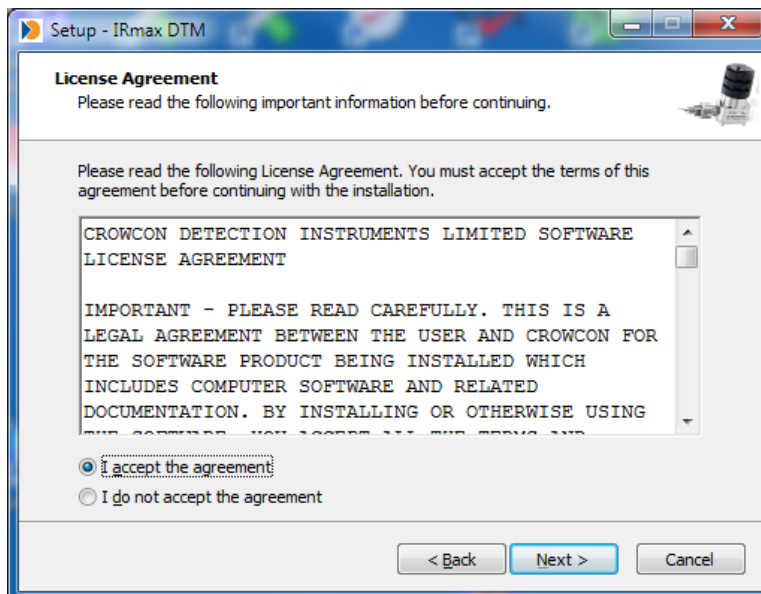
These files can be downloaded from the relevant product 'Downloads' page at the Crowcon website: www.crowcon.com.

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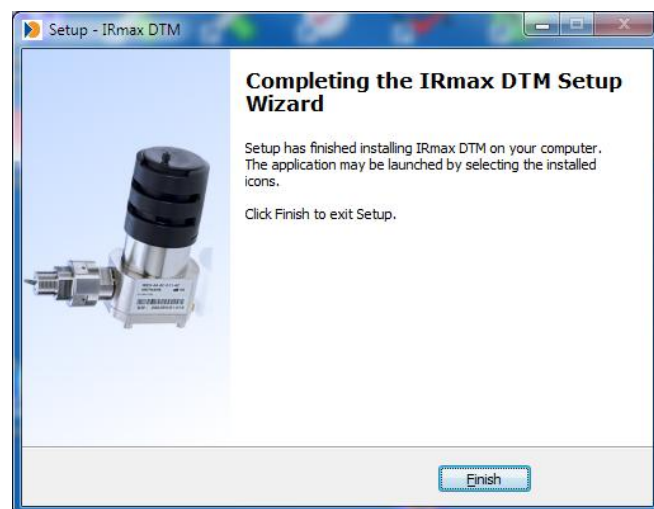
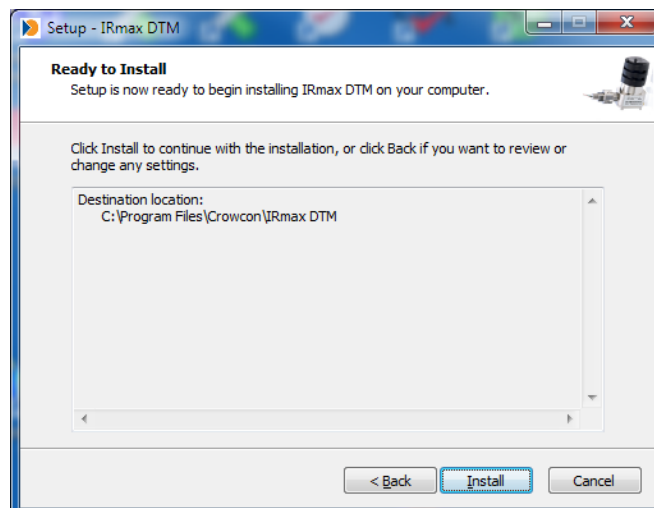
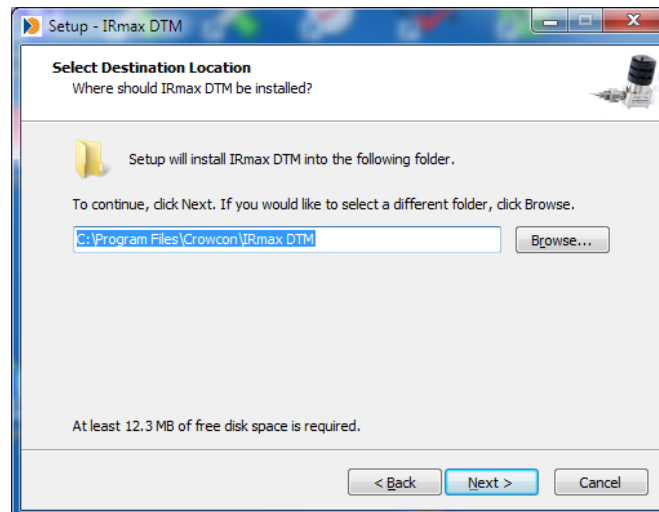
Appendix A – DTM installation

The DTM file we provide for IRmax or XgardIQ is an 'executable' (.exe) file that can be run by users of PACTware, Fieldcare etc. The file can be installed as follows:

Double-click the file; the following windows will appear, simply click 'Next' on each window to complete the installation:

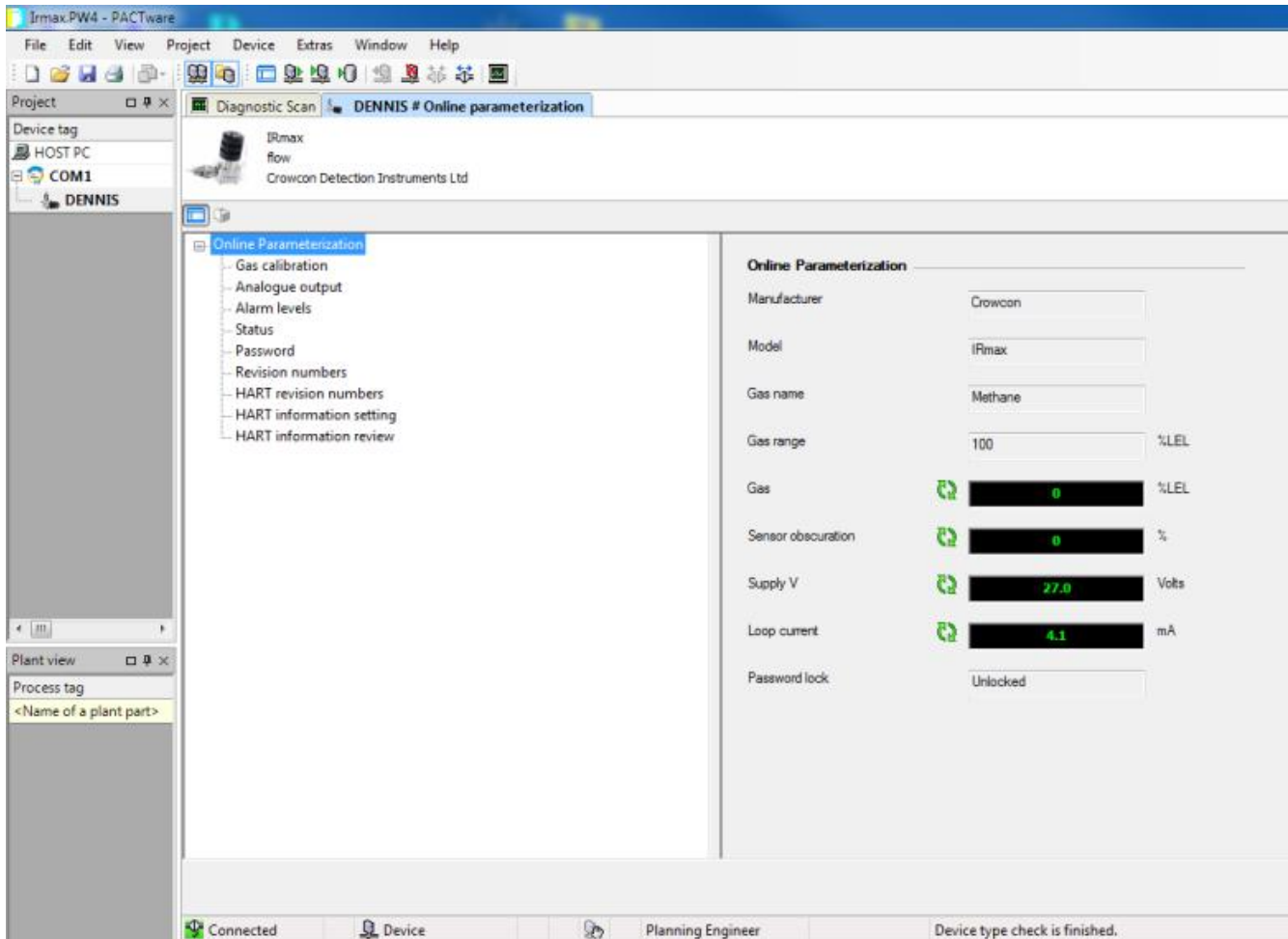


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Example PACTware screen for IRmax:

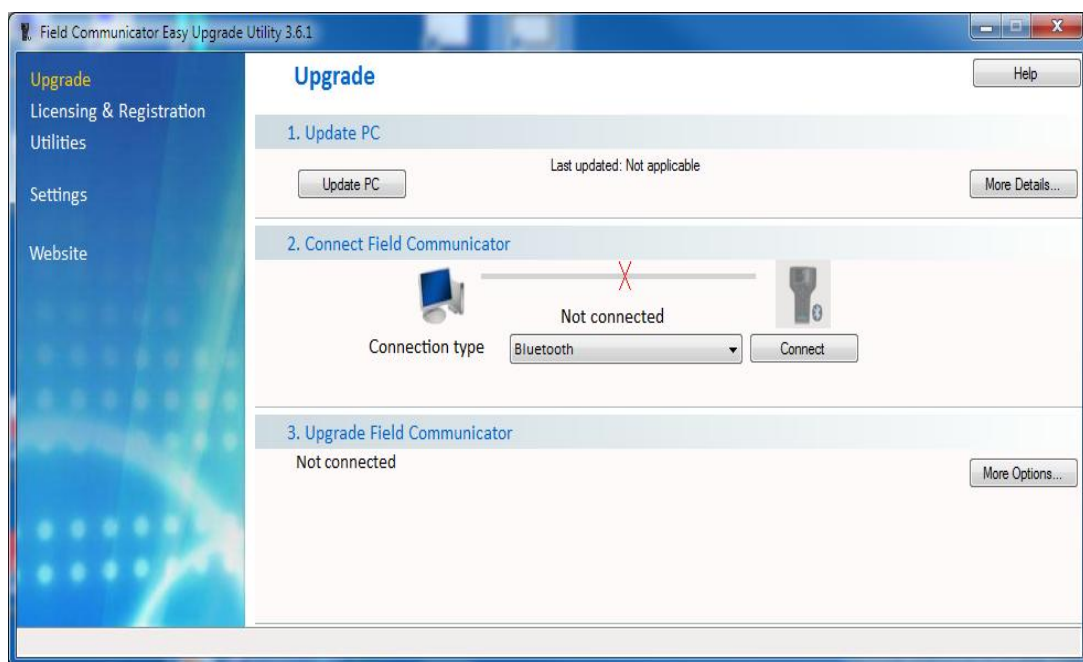


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Appendix B – DD file installation

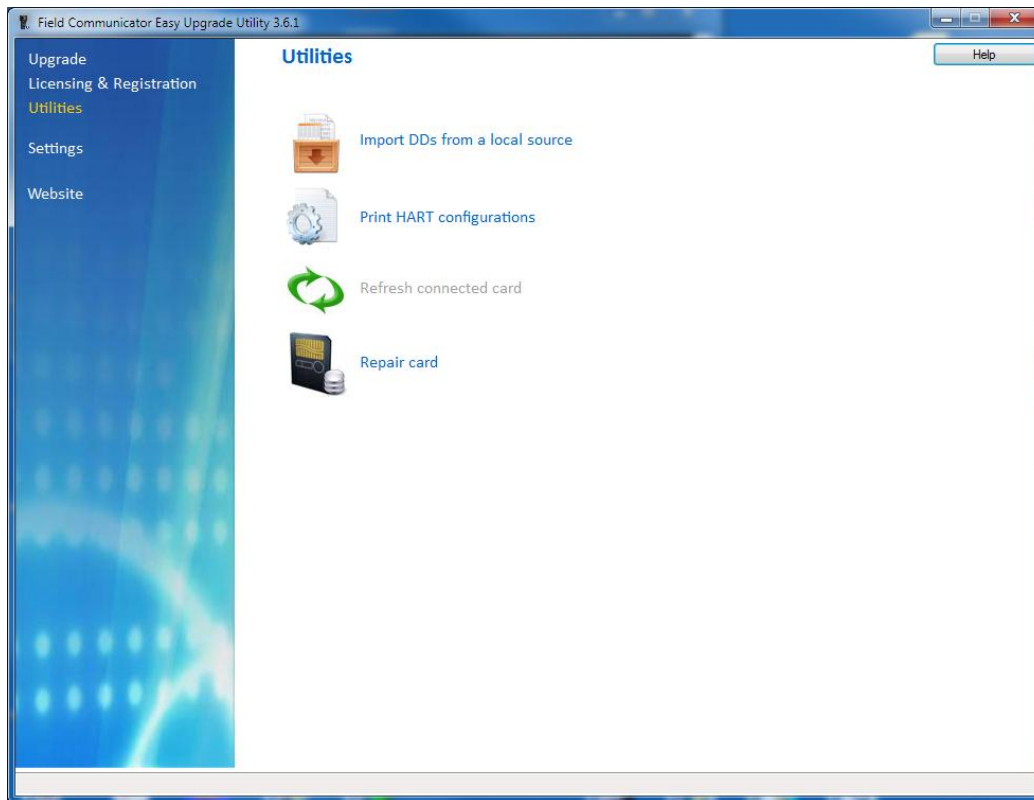
The DD file for IRmax or XgardIQ can be installed on a HART communicator as follows. This example is for an Emerson 475 communicator.

1. Install and run the field communicator 'Easy Upgrade Utility' (this should be provided with the communicator).



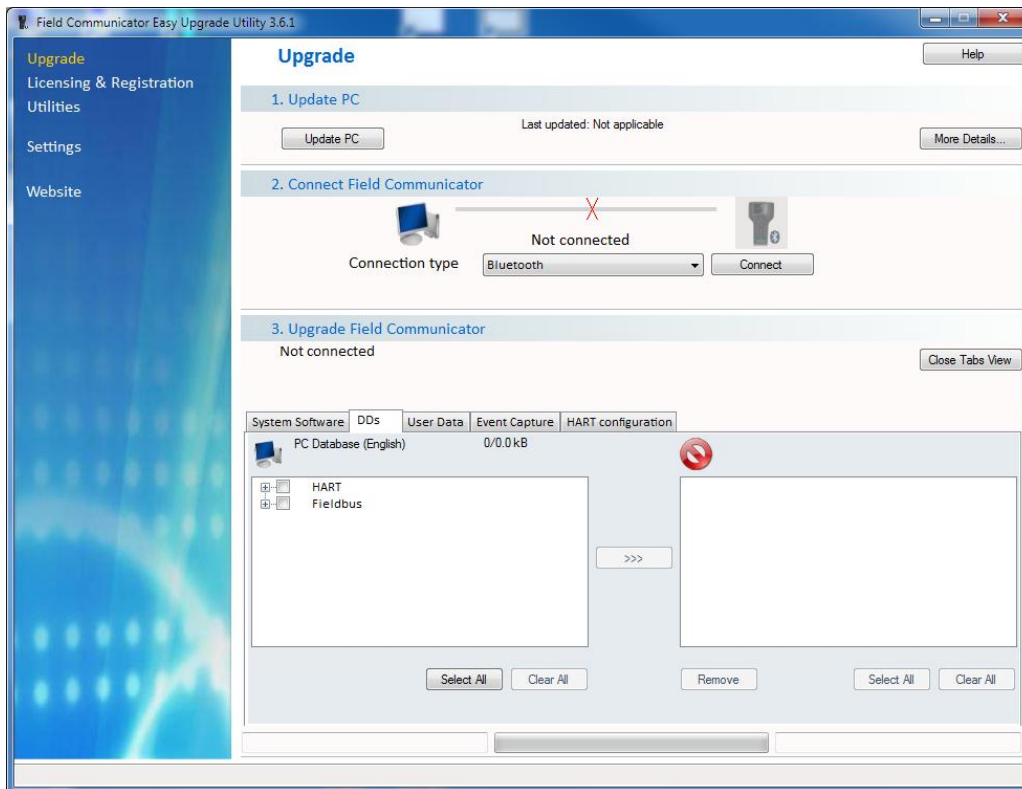
2. Follow the steps suggested by the Utility in sequence:
 - a. Upgrade PC to ensure that the Utility is the most recent.
 - b. Connect to the Field Communicator. This can be via Bluetooth (if the Field Communicator is Bluetooth licensed); IrDA or Card Reader.
 - c. Upgrade the Field Communicator to ensure the software in the Communicator is the most recent.
3. Import the Crowcon supplied DD files.
 - a. On the left select 'Utilities' (see next page).

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- b. Select 'Import DDs from a local source'.
 - c. Select 'Browse' and select the folder where the IRmax or XgardIQ DD is located on the PC, then click OK to import:
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4. To download DDs to the Field Communicator:
 - a. Select "More Options" (see screen-shot on Point 1 on the previous page).
 - b. Select the DDs tab (see next page).

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- c. Click the '+' to expand the HART option, and scroll down to Crowcon. Click the '+' and select the DD to transfer to the Field Communicator. Click the '>>>' button to transfer to the Field Communicator.

References and further information:

HART communications: <https://fieldcommgroup.org/>

FDT technology: <https://fdtgroup.org/>

PACTware software: <http://www.pactware.com/en/home.html>

Fieldcare software: <http://www.endress.com/en/Field-instruments-overview/software-solutions-process-automation/device-configuration-fieldcare-sfe500>

Emerson 475 Field Process Communicator: <http://www.emerson.com/en-us/automation/asset-management/field-device-management/field-communicators/475-field-communicator>