



# TOTALFLOW

## *Technical Bulletin 117*

### **Analyzer Interface Unit (AIU) Upgrade Offer**

### **Totalflow Technical Bulletin**

Version 1.0, Revision AB (3 June 2004)

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As announced at Totalflow's 2003 Technical Conference, the AIU concept is no longer required when using XSeries devices. XSeries technology supports management of realtime analysis data without need for an AIU. Thus the AIU has been rendered obsolete. This means that the purchase of new AIUs is no longer supported. However, it does not mean that support for installed systems has gone away. Totalflow still offers spare boards and customer service support for installed AIUs.

Even so, as a bridge from the older AIU to our newer XSeries devices, Totalflow offers this upgrade policy, the key elements of which are enumerated below.

- For any returned AIU board, ABB Totalflow will supply an XSeries electronics board for the AIU. This upgrade does not extend to other devices.
- Our recommended upgrade procedure is depicted on the following page of this document. Please make special note of the comments included with the procedure. Any firmware upgrades required by this procedure will be provided at no charge.
- We recommend that you not upgrade AIU systems that are operating properly. Exchanging an AIU will not eliminate all potential sources of problems in a multi-device system. Such things as ground loops, wiring related problems, configuration problems, etc. will still exist as potential sources of system instability. Also, the exchange procedure is relatively complex and could itself represent the potential for exposing new problems if not accomplished with some care and specificity, as depicted in the procedure on the following page.
- This policy is valid throughout 2004 ending December 31, 2004

#### Upgrade Information

ABB will provide one XRC electronics board (P/N 2100355-002) at no cost for anyone requiring an AIU replacement. Customer will need to specify the following when ordering the XRC electronic board:

- FLASH part number – we recommend the one listed below but alternates can be used if requiring IEC support
- Configuration File and associated information
  - Analyzer manufacturer and model number
  - Flow computer part numbers being attached to XRC to receive analytical information (firmware upgrade may be required)
  - Project Engineering may be required to generate appropriate configuration files to match customers installation



The following options are recommended when upgrading an AIU to and XRC therms:

Device	FLASH Part #	Configuration Code	Configuration Part # and Description
XRC	2101052-008 or latest rev.	3EP	2101532-001, XRC therms master (AIU replacement), BTU 8000 communications on com. #2
XRC	2101052-008 or latest rev.	3EO	2101567-001, XRC therms master (AIU replacement), Daniels Danalyzer interface on com. #2

Other FLASH and configuration options are available but the ones above have been specifically designed for XRC's being used to replace our Analyzer Interface Unit (AIU). For other options please contact our Projects group.

Other accessories that may be required when replacing an AIU with an XRC motherboard:

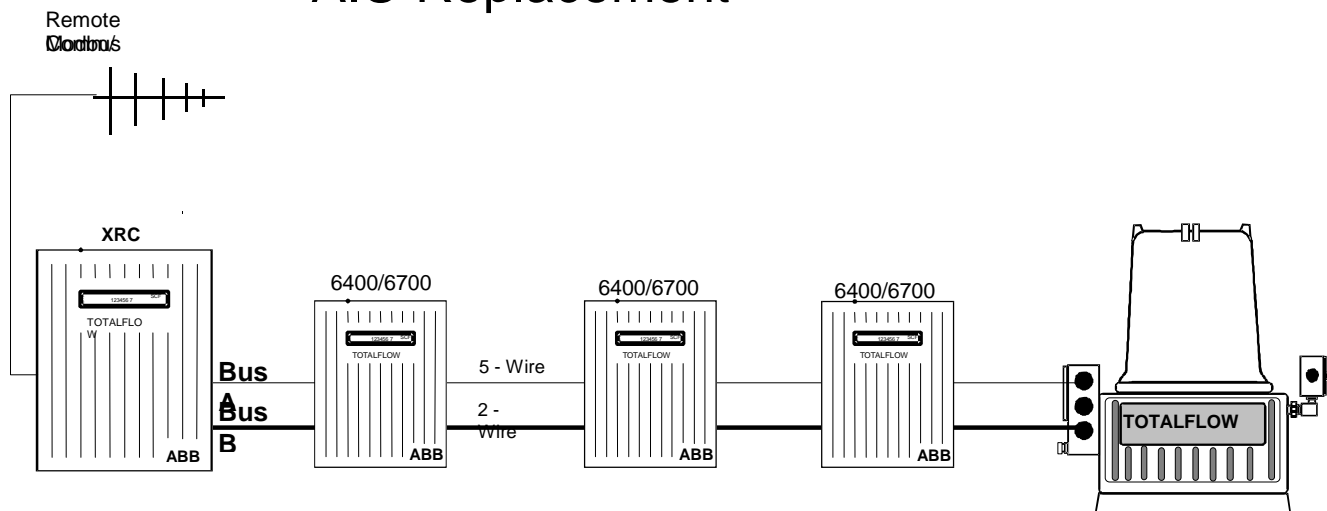
- RS-485 communications cable – P/N 2011648-001 (sold by the foot)
- Slave 6400 or 6700 firmware upgrades (non-Xseries) listed in the table below to support Xseries therms:

Device	EPROM Part #	Description
2015333 Electronic bd.	2101242-001	6400 Gas Orifice, therms slave support
2015333 Electronic bd.	2101243-001	6400 Pulse input, therms slave support
2015382 Electronic bd.	2101244-001	6700 Gas Orifice, therms slave support
2015382 Electronic bd.	2101246-001	6700 Pulse input, therms slave support
2015382 Electronic bd.	2101245-001	6700 Gas Orifice, Expanded I/O support, therms slave support
2105382 Electronic bd.	2101247-001	6700 Pulse input, Expanded I/O support, therms slave support

Order entry will issue a return authorization number for customer to return AIU electronic board. Failure to return the AIU board will result in an invoice for the replacement XRC electronic board. Customer will have 30 days to return the old AIU electronics board.

Once the above information is gathered contact Order Entry at (800) 442-3097 option 1,1. Reference this technical bulletin when ordering parts.

## AIU Replacement



1. Replace the AIU board with the XRC replacement board. Retain and use the existing enclosure, display, power supply and communications equipment.
2. PROMS will need to be replaced in the existing 6400/6700 flow computer electronic board. Firmware support is available for the following boards (any other boards not listed will need to be upgraded):  
  
SEE FIRMWARE UPGRADE TABLE WITHIN THIS DOCUMENT
3. Rewire the communications as depicted above. A second RS485 (BUS B) will need to be added.
  - BUS A – RS485 bus used for remote communications with the field devices (5 wire)
  - BUS B – RS485 bus used for modbus communications to manage the analysis data among the field devices.
4. BUS wiring must be performed according to the following specifications to ensure system reliability
  - All units should be connected in series as indicated in above drawing. DO NOT connect units in a star pattern.
  - The BUS should be terminated at the last device (see wiring instructions)
  - Use a high quality cable, such as Totalflow part no. 2011648-001  
RS485 cable should be foil wrapped with shield, 2 conductor size AWG 22 with nominal impedance of 120 ohms and capacitance of 22 pfd/ft. Additional conductors may be required for RTS, GND and power.