

# 6100XIO 6180XIO


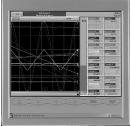
## MODELS

- Colour touchscreen display
- Modbus master
- 32MB non-volatile Flash memory
- Ethernet TCP/IP
- Serial Comms
- Compact Flash
- USB 'plug & play'
- Web Server



## Distributed Graphic Recorders Specification Sheet

Each 6000XIO instrument has an intuitive, touch screen display to enable operators to clearly view process data in varying formats. All have onboard Flash data storage capability, Ethernet communication and Compact Flash Card. Data is stored in a tamper-resistant binary format that can be used for secure, long term records of your process. The 6000XIO is truly designed for today's networked world and can be accessed via a Local Area Network, dial-up connection, Intranet or Internet.

Available Features		
	6100XIO	6180XIO
Display	5.5" 1/4 VGA	12.1" XGA
Comms channels (standard)	18	48
Additional Virtual channels*	36, 96, 128	
Groups	6 standard (12 optional)	
Auditor Features	Auditor or Audit Trail	
Timers	Fitted as standard	
Alarms	4 per channel	
Batch	Optional	
Bridge- Remote viewing software	Lite as standard (Full optional)	
Screen builder	24 screens (optional)	
Security	Unlimited unique user names with configurable access permissions and passwords	
Configuration software	Standard	
Review/Quickchart Lite software	Standard	
Standard views	Vertical and horizontal trending, Vertical and Horizontal Bargraphs, Circular Trend and Numeric Values	
Modbus slaves	16 Standard (32 optional)	

\* Virtual channels can be configured as Maths, Totalisers, Counters or Comms

## Data Logging and Archiving

The 6000XIO recorders have internal Flash memory for secure data storage. They are also able to accept various removable media types (compact flash or USB memory stick). Data stored within the internal memory can be archived to the removable media on demand or at preset intervals. The 6000XIO will give indication of how long its internal memory and that of the removable media installed will last according to the configuration of the recorder.

All 6000XIOs have Ethernet capability. The 6000XIO can be configured to archive to the removable media and / or over Ethernet. Archiving files over Ethernet effectively gives a secure, infinite archiving capacity.

Approximate duration for continuous recording of one Group of six channels, high compression:

Archive Media	Sample Rate						
	0.125s	0.5s	1s	5s	10s	30s	60s
32Mb Internal Flash (approx. 4 million samples)	2.83 days	11.3 days	22.6 days	113 days	226 days	1.86 yrs	3.7 yrs
64Mb CF Card or USB memory stick (approx. 8 million samples)	5.66 days	22.6 days	45.3 days	226 days	1.2 yrs	3.7 yrs	7.4 yrs
256Mb CF Card or USB memory stick (approx. 32 million samples)	22.6 days	90.6 days	181 days	2.4 yrs	4.9 yrs	14.8 yrs	20 yrs
1Gb CF Card or USB memory stick (approx. 125 million samples)	88 Days	354 days	1.9 yrs	9.6 yrs	19 yrs	58 yrs	116 yrs
Ethernet (FTP Server)				Infinite			

## Time Synchronisation (SNTP)

The 6000XIO support Simple Network Time Protocol which, when enabled, updates the instrument time every 15 minutes from the configured SNTP server. The unit can also act as a Unicast SNTP server on the network, allowing client instruments to synchronise with the 6000XIO to a resolution of one millisecond.

## Batch Recording

Up to ten user-defined fields can be used to enter batch specific data.

Field Descriptor	Operator entered batch information
– up to 20 characters	– up to 60 characters

The user can choose to log any number of the given fields on start and / or stop of a batch. The information will appear on the chart as a message and cannot be separated from the process data to which it relates.

## Auditor Features

### Auditor

Designed to meet the requirements of the FDA Regulation 21 CFR Part 11 for Electronic Records and Signatures, this software option provides the 6000XIO with additional security such as password ageing, electronic signatures and time stamped audit trail.

### Audit Trail

A sub-set of the Auditor which provides the 6000XIO with a time stamped audit trail. It does not include password ageing and electronic signatures.

## Modbus Master

Allows users to view data from multiple instruments connected either by a local Network connection using Modbus TCP, or a Serial connection using Modbus RTU,

## Reports

Fitted as standard the Reports option provides the 6000XIO with the ability to generate up to 10 simple reports that can be displayed as part of the recorded data. Reports, triggered by an event/job can be configured to contain parameters such as time and date, batch names, process values and user defined messages.

## Dynamic Host Configuration Protocol (DHCP)

Dynamic Host Configuration Protocol, the successor to BootP, allows a 6000XIO host to obtain Network parameters, such as IP address, Subnet Mask, default gateway and DNS server address dynamically. The implementation of DHCP on the 6000XIO significantly reduces the overhead for maintaining a network of instrumentation.

## TECHNICAL SPECIFICATION

### Environmental performance

Temperature limits	Operation:	0 to +50°C
	Storage:	–20 to 60°C
Humidity limits	Operation:	5% to 80% RH (non condensing)
	Storage:	5% to 95% RH (non condensing)
Protection	Bezel and display:	IP65
	Sleeve (rear of panel):	IP20
Vibration (10Hz to 150Hz):		1g peak

### Approvals

#### Electromagnetic compatibility CE, (EMC)

Emissions and immunity: BS EN61326

#### Electrical safety

(BS EN61010): Installation cat. II; Pollution degree 2

#### INSTALLATION CATEGORY II

The rate impulse voltage for equipment on nominal 230V mains is 2500V.

#### POLLUTION DEGREE 2

Normally, only non-conductive pollution occurs. Occasionally, however, a temporary conductivity caused by condensation shall be expected

### Physical

Panel mounting:	DIN43700	
Panel mounting angle:	Vertical	
6100XIO	Bezel size:	144 x 144mm.
	Panel cutout dimensions:	138 x 138mm (both –0/+1mm)
	Depth behind panel:	87.7mm
	Weight:	1.5kg
6180XIO	Bezel size:	288 x 288mm
	Panel cutout dimensions:	282 x 282mm (both –0/+1.3mm)
	Depth behind panel:	70.4mm
	Weight:	3.7kg

### Operator interface

Type:	Colour TFT LCD, with cold cathode backlight, fitted with resistive, analogue, touch panel
Size and resolution	6100XIO: 1/4VGA (320 x 240 pixels) 5.5"
	6180XIO: XGA (1024 x 768 pixels) 12.1"

### Power requirements

Supply voltage:	19.2 to 28.8Vdc (24Vdc nominal)
Power consumed	6100XIO: 20W
	6180XIO: 24W
Fuse:	No user replaceable fuses
Inrush current:	10A max

### Ethernet Communications

Ethernet Port:	10/100Mbps Auto Sensing	
Protocols:	TCP/IP, FTP, DHCP, BOOTP, SNTP, MODBUS, SMTP, ICMP	
Cable	Type:	CAT5
	Maximum length:	100 metres
	Termination:	RJ45 (shielded)

### Serial Communications

No. of Ports:	2
Protocol:	Modbus RTU Master and Slave
Transmission standard:	EIA422 or EIA485 Half Duplex

### Back-up Battery

Type:	Poly-carbonmonofluoride/lithium (BR2330)
Support time (RTC):	1 year min. with recorder unpowered
Replacement period:	3 years
Stored data:	Time; values for totalisers, counters and timers; batch data; Fvalue, Rolling average, Stopwatch etc.

# MECHANICAL INSTALLATION

## 6100XIO

Panel thickness: Max = 22 mm; Min = 2 mm

Panel cutout  
138 mm x 138 mm  
(both -0 + 1 mm)

**PANEL MOUNTING DETAILS**

Installed panel angle: Vertical panels only  
Minimum inter-unit spacing: 50mm. vertical or horizontal

Note: Where multiple units are mounted in close proximity with one another, steps must be taken to ensure that the resulting ambient temperature does not exceed the specified maximum operating temperature of 50 degrees Celsius.

## 6180XIO

Panel thickness: Max = 22 mm; Min = 2 mm

Panel cutout = 282 mm x 282 mm  
(both -0 + 1.3mm)

**PANEL MOUNTING DETAILS**

Installed panel angle: Vertical panels only  
Minimum inter-unit spacing: 50mm. vertical or horizontal

Note: Where multiple units are mounted in close proximity with one another, steps must be taken to ensure that the resulting ambient temperature does not exceed the specified maximum operating temperature of 50 degrees Celsius.

## ORDERING CODE

	1	2	3	4	5	6	7	8	9	10	11	12
13	14											

Model	
6100XIO	6100XIO 100mm TFT 1/4VGA Display
6180XIO	6180XIO 180mm TFT XGA Display
1 Internal Memory	
032M	032M byte for history
2 Non-Standard Option	
XXXXXX	Default
3 Memory Card Size	
NOMC	None
128M	128 MByte CF Card
256M	256 Mbyte CF Card
512M	512 Mbyte CF Card
001G	1Gbyte CF Card
4 USB Memory Stick Size	
NOMS	None
064MMS	064 Mbyte USB Memory Stick
256MMS	256 Mbyte USB Memory Stick
512MMS	512 Mbyte USB Memory Stick
001GGMS	1Gbyte USB Memory Stick
5 Warranty	
XXXXX	Standard Warranty
WL005	5 Year Warranty
6 Bridge	
BLITE	Bridge Lite (standard)
BFULL	Bridge Full

7 Review and QuickChart	
RLITE	Review Lite and Review QuickChart Lite (standard)
RFULL	Review Full and Review QuickChart Full
8 Auditor	
NOADT	None
ALITE	Audit Trail
AFULL	Auditor
9 Security Manager	
NOSM	None
SECMAN	Security Manager
10 Groups	
06GROUP	6 Groups (standard)
12GROUP	12 Groups
11 Maths, Totalisers and Counters	
MTC00	None
MTC36	36 virtual channels
MTC96	96 virtual channels
MTC128	128 virtual channels
12 Batch	
NOBATCH	None
BATCH	Batch
13 Screen Builder	
NOSB	None
ADSB	Advanced Screen Builder
14 Master Comms	
MSTR16	Modbus Master Comms for 16 Slaves (standard)
MSTR32	Modbus Master Comms for 32 Slaves

## Eurotherm: International sales and service

**AUSTRALIA** Sydney  
Eurotherm Pty. Ltd.  
T (+61 2) 9838 0099  
E [info.au@eurotherm.com](mailto:info.au@eurotherm.com)

**AUSTRIA** Vienna  
Eurotherm GmbH  
T (+43 1) 7987601  
E [info.at@eurotherm.com](mailto:info.at@eurotherm.com)

**BELGIUM & LUXEMBURG** Moha  
Eurotherm S.A./N.V.  
T (+32) 85 274080  
E [info.be@eurotherm.com](mailto:info.be@eurotherm.com)

**BRAZIL** Campinas-SP  
Eurotherm Ltda.  
T (+5519) 3707 5333  
E [info.br@eurotherm.com](mailto:info.br@eurotherm.com)

**DENMARK** Copenhagen  
Eurotherm Danmark AS  
T (+45 70) 234670  
E [info.dk@eurotherm.com](mailto:info.dk@eurotherm.com)

**FINLAND** Abo  
Eurotherm Finland  
T (+358) 22506030  
E [info.fi@eurotherm.com](mailto:info.fi@eurotherm.com)

**FRANCE** Lyon  
Eurotherm Automation SA  
T (+33 478) 664500  
E [info.fr@eurotherm.com](mailto:info.fr@eurotherm.com)

**GERMANY** Limburg  
Eurotherm Deutschland GmbH  
T (+49 6431) 2980  
E [info.de@eurotherm.com](mailto:info.de@eurotherm.com)

**HONG KONG & CHINA**  
Eurotherm Limited North Point  
T (+85 2) 28733826  
E [info.hk@eurotherm.com](mailto:info.hk@eurotherm.com)

**Guangzhou Office**  
T (+86 20) 8755 5099  
E [info.cn@eurotherm.com](mailto:info.cn@eurotherm.com)

**Beijing Office**  
T (+86 10) 6567 8506  
E [info.cn@eurotherm.com](mailto:info.cn@eurotherm.com)

**Shanghai Office**  
T (+86 21) 6145 1188  
E [info.cn@eurotherm.com](mailto:info.cn@eurotherm.com)

**INDIA** Chennai  
Eurotherm India Limited  
T (+91 44) 24961129  
E [info.in@eurotherm.com](mailto:info.in@eurotherm.com)

**IRELAND** Dublin  
Eurotherm Ireland Limited  
T (+353 1) 4691800  
E [info.ie@eurotherm.com](mailto:info.ie@eurotherm.com)

**ITALY** Como  
Eurotherm S.r.l  
T (+39 31) 975111  
E [info.it@eurotherm.com](mailto:info.it@eurotherm.com)

**KOREA** Seoul  
Eurotherm Korea Limited  
T (+82 31) 2738507  
E [info.kr@eurotherm.com](mailto:info.kr@eurotherm.com)

**NETHERLANDS** Alphen a/d Rijn  
Eurotherm B.V.  
T (+31 172) 411752  
E [info.nl@eurotherm.com](mailto:info.nl@eurotherm.com)

**NORWAY** Oslo  
Eurotherm A/S  
T (+47 67) 592170  
E [info.no@eurotherm.com](mailto:info.no@eurotherm.com)

**POLAND** Katowice  
Invensys Eurotherm Sp z o.o.  
T (+48 32) 2185100  
E [info.pl@eurotherm.com](mailto:info.pl@eurotherm.com)

**SPAIN** Madrid  
Eurotherm España SA  
T (+34 91) 6616001  
E [info.es@eurotherm.com](mailto:info.es@eurotherm.com)

**SWEDEN** Malmo  
Eurotherm AB  
T (+46 40) 384500  
E [info.se@eurotherm.com](mailto:info.se@eurotherm.com)

**SWITZERLAND** Freienbach  
Eurotherm Produkte (Schweiz) AG  
T (+41 55) 4154400  
E [info.ch@eurotherm.com](mailto:info.ch@eurotherm.com)

**UNITED KINGDOM** Worthing  
Eurotherm Limited  
T (+44 1903) 268500  
E [info.uk@eurotherm.com](mailto:info.uk@eurotherm.com)  
[www.eurotherm.co.uk](http://www.eurotherm.co.uk)

**U.S.A.** Leesburg VA  
Eurotherm Inc.  
T (+1 703) 443 0000  
E [info.us@eurotherm.com](mailto:info.us@eurotherm.com)  
[www.eurotherm.com](http://www.eurotherm.com)

ED50

© Copyright Eurotherm Limited 2006

Invensys, Eurotherm, the Eurotherm logo, Chessell, Mini8, Eycon and Wonderware are trademarks of Invensys plc, its subsidiaries and affiliates. All other brands may be trademarks of their respective owners.

All rights are strictly reserved. No part of this document may be reproduced, modified, or transmitted in any form by any means, nor may it be stored in a retrieval system other than for the purpose to act as an aid in operating the equipment to which the document relates, without the prior written permission of Eurotherm limited.

Eurotherm Limited pursues a policy of continuous development and product improvement. The specifications in this document may therefore be changed without notice.

The information in this document is given in good faith, but is intended for guidance only. Eurotherm Limited will accept no responsibility for any losses arising from errors in this document.