

Document title

OPTIQ® ORDERBOOK SNAPSHOT AND MDG LITE FEED CONFIGURATION

EURONEXT MILAN CASH AND DERIVATIVES MARKETS

CURRENT AND NEXT RELEASE EXTERNAL USER ACCEPTANCE ENVIRONMENTS

Document type or subject

FEED CONFIGURATION DOCUMENT

Revision number

Revision Number: 1.2

Date

Apr 2023

This document is for information purposes only. The information and materials contained in this document are provided 'as is' and Euronext does not warrant the accuracy, adequacy or completeness and expressly disclaims liability for any errors or omissions. This document is not intended to be, and shall not constitute in any way a binding or legal agreement, or impose any legal obligation on Euronext. This document and any contents thereof, as well as any prior or subsequent information exchanged with Euronext in relation to the subject matter of this presentation, are confidential and are for the sole attention of the intended recipient. Except as described below, all proprietary rights and interest in or connected with this publication shall vest in Euronext. No part of it may be redistributed or reproduced without the prior written permission of Euronext. Portions of this presentation may contain materials or information copyrighted, trademarked or otherwise owned by a third party. No permission to use these third party materials should be inferred from this presentation.

Euronext refers to Euronext N.V. and its affiliates. Information regarding trademarks and intellectual property rights of Euronext is located at <https://www.euronext.com/terms-use>.

PREFACE

DOCUMENT HISTORY

The following table provides a description of all changes to this document.

VERSION NO.	DATE	CHANGE DESCRIPTION
1.0	Jan 2022	Optiq® Market Data Gateway External User Acceptance (EUA) – Virtual and Physical – Environment feed configuration details.
1.1	Nov 2022	Updated connectivity details of MDG Lite Funds ETF Italy
1.2	Apr 2023	Addition of new set of channels for Borsa Italiana integration: “40” (Fixed Income Italy – MOT/ExtraMOT), “41” (Warrants and Certificates Italy (Sedex)) “42” (Fixed Income ETLX (Bond-X)), “43” (Warrants and Certificates ETLX (Cert-X)) and “44” (Equities ETLX)

REFERENCE MATERIAL

The following document, which either should be read in conjunction with this document or which provide other relevant information for the user:

- [Euronext Markets – Optiq MDG Client Specifications](#)
- [Euronext Cash and Derivatives Markets – Optiq MDG External User Acceptance Connectivity](#)
- [Optiq® MDG Lite Client Specifications](#)

SUPPORT

Please find below the contact details:

Optiq Migration : optiqmigration@euronext.com

Belgium	+32 2 620 0585
France	+33 1 8514 8585
Ireland	+353 1 617 4289
Italy	+39 02 4541 1399
Netherlands	+31 20 721 9585
Norway	+31 20 721 9585
Portugal	+351 2 1060 8585
UK	+44 20 7660 8585

FURTHER INFORMATION

For additional information please visit: www.euronext.com/optiq

CONTENTS

PREFACE	2
DOCUMENT HISTORY	2
REFERENCE MATERIAL.....	3
SUPPORT.....	3
FURTHER INFORMATION.....	3
CONTENTS	4
1. INTRODUCTION	5
1.1 SET OF CHANNELS FOR OPTIQ SNAPSHOT AND MDG LITE SERVICES	6
1.2 CHANNEL TYPES AND CHANNEL ID	6
2. OPTIQ SEGMENT – 1. EQUITIES REAL-TIME AND SNAPSHOT CONFIGURATION	8
2.1 MDG SET OF CHANNELS ID 18 – EQUITIES ITALY	8
2.2 MDG SET OF CHANNELS ID 44 – EQUITIES ETLX	9
2.3 MDG SET OF CHANNELS ID 45 – GLOBAL EQUITY MARKET	10
3. OPTIQ SEGMENT – 2. FUNDS REAL-TIME AND SNAPSHOT CONFIGURATION	11
3.1 MDG SET OF CHANNELS ID 39 – FUNDS ETF ITALY	11
4. OPTIQ SEGMENT – 3. FIXED INCOME REAL-TIME AND SNAPSHOT CONFIGURATION	12
4.1 MDG SET OF CHANNELS ID 40 – FIXED INCOME Italy (MOT/ExtraMOT).....	12
4.2 MDG SET OF CHANNELS ID 42 – FIXED INCOME ETLX (Bond-X)	13
5. OPTIQ SEGMENT – 4. WARRANTS & CERTIFICATES REAL-TIME AND SNAPSHOT CONFIGURATION .	14
5.1 MDG SET OF CHANNELS ID 41 – WARRANTS & CERTIFICATES Italy (SEDEX).....	14
5.2 MDG SET OF CHANNELS ID 43 – WARRANTS & CERTIFICATES ETLX (Cert-X)	15
6. OPTIQ SEGMENT – 14. EURONEXT BLOCK	16
6.1 MDG SET OF CHANNELS ID 19 – TRADING AFTER HOURS ITALY	16

1. INTRODUCTION

This document provides all multicast and TCP/IP addresses required to access the Euronext Optiq® External User Acceptance (EUA) for Optiq Snapshot and MDG Lite services. The document should be read in conjunction with the Euronext Cash and Derivatives Markets – Optiq MDG External User Acceptance Connectivity document, in order to derive a combined view of the Euronext EUA available services.

Only shaped data is provided in the test environment. In order to ensure a Production-like test environment, separate IP addresses and ports are used to replicate the Production ‘shaped’ and ‘unshaped’ configuration.

The Euronext Optiq® Market Data Gateway Next Release-EUA (P-EUA) and the Current Release-EUA (V-EUA) environment are located in Bergamo. The P-EUA and V- EUA Source IP Address ranges are provided in this document and for P-EUA the Source IP Address ranges are provided for the live and standby systems as part of the High Availability mechanism. EUA High Availability (HA) and failover testing will only be conducted on the Next Release test environment (P-EUA).

Customers are requested to allow the P-EUA Source IP Address ranges through their Firewalls. The Connectivity details for V-EUA environments of Optiq Snapshot and MDG Lite services will be provided in due course.

1.1 SET OF CHANNELS FOR OPTIQ SNAPSHOT AND MDG LITE SERVICES

The partitioning of Optiq Snapshot and MDG Lite Channels is aligned with partitioning of Optiq Segments. Only Italy Channels are supported.

Optiq Segment	Number of Partitions	MDG Set Of Channels ID	MDG Set Of Channels Name
1. Equities	4	18	Equities Italy [MTAA, MIVX, EXGM]
		44	Equities ETLX [ETLX]
		45	Italy GEM [BGEM]
2. Funds	1	39	Italy Funds [ETFP, ATFX]
3. Fixed Income	1	40	Fixed Income Italy (MOT/ExtraMOT)
		42	Fixed Income ETLX (Bond-X)
4. Warrants and Certificates	2	41	Warrants and Certificates Italy (SEDEX)
		43	Warrants and Certificates ETLX (Cert-X)
14. Euronext Block	1	19	Italy TAH [XTAH]

1.2 CHANNEL TYPES AND CHANNEL ID

The Channel Types and Channel ID's that are available to each customer depend on the available bandwidth on customer connections to the SFTI Network and the services that were selected in the SFTI® order form. Depending on the Asset Class, the following Optiq Orderbook Snapshot channel types are made available to customers:

1. Pre-trade Multicast services
 - a. MBO – Best 10 Bid and Ask orders
 - b. MBP – Best 10 Bid and Ask price levels

In addition, depending on both the Asset Class and the MDG Lite users access enablement, the following MDG Lite services via TCP connection are made available to customers:

2. MDG Lite
 - a. MBO - Best 10 Bid and Ask orders
 - b. MBP – Best 10 Bid and Ask price levels
 - c. BBBO – Best Bid and Ask price levels
 - d. Full book using Market Update messages (includes Best Bid and Best Offer)
 - e. Full book using Order Update messages (includes Best Bid and Best Offer)
 - f. Post Trade –Full Trade Information
 - g. Reference Data

The Multicast Group IP addresses for Real-time and Snapshot, for Feed A and B are:

Environment	Channel ID	Real-Time/Snapshot	Multicast Group Feed A	Multicast Group Feed B
Current EUA	3(n)xxx	Real-Time	224.0.212.xxx	224.0.213.xxx
	4(n)xxx	Snapshot		
Next EUA	5(n)xxx	Real-Time		
	6(n)xxx	Snapshot		

The Source Multicast IP for MBO/MBP Real-time and Snapshot, and MDG Lite destination Ips for Feed A and B are:

Description	IP Address
Primary IP Address MDG Lite Destination	212.107.95.0/24
Secondary IP Address of MDG Lite Destination	Same as above
Primary IP Address Source of Multicast	212.107.90.0/25
Secondary IP Address Source of Multicast	212.107.90.128/25

2. OPTIQ SEGMENT – 1. EQUITIES REAL-TIME AND SNAPSHOT CONFIGURATION

2.1 MDG SET OF CHANNELS ID 18 – EQUITIES ITALY

Environment	P-EUA	MDGSetOfChannels ID	18
Optiq Segment name	Equities	MDGSetOfChannelsName	Equities Italy

Channel Type	MBO	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.10	PEUA 50010	PEUA 51010	PEUA 52010	PEUA 53010
Multicast Group IP Feed B	224.0.213.10				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.10	PEUA 60010	PEUA 61010	PEUA 62010	PEUA 63010
Multicast Group IP Feed B	224.0.213.10				

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.9	PEUA 50009	PEUA 51009	PEUA 52009	PEUA 53009
Multicast Group IP Feed B	224.0.213.9				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.9	PEUA 60009	PEUA 61009	PEUA 62009	PEUA 63009
Multicast Group IP Feed B	224.0.213.9				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.70:50009	212.107.92.70:51009	212.107.92.70:52009	212.107.92.70:53009
Secondary MDG Lite IP		212.107.92.71:50009	212.107.92.72:51009	212.107.92.73:52009	212.107.92.71:53009

2.2 MDG SET OF CHANNELS ID 44 – EQUITIES ETLX

Environment	P-EUA	MDGSetOfChannels ID	44
Optiq Segment name	Equities	MDGSetOfChannelsName	Equities ETLX

Channel Type	MBO	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.12	PEUA 50012	PEUA 51012	PEUA 52012	PEUA 53012
Multicast Group IP Feed B	224.0.213.12				

Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.12	PEUA 60012	PEUA 61012	PEUA 62012	PEUA 63012
Multicast Group IP Feed B	224.0.213.12				

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.11	PEUA 50011	PEUA 51011	PEUA 52011	PEUA 53011
Multicast Group IP Feed B	224.0.213.11				

Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.11	PEUA 60011	PEUA 61011	PEUA 62011	PEUA 63011
Multicast Group IP Feed B	224.0.213.11				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
Channel Speed		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.72:50011	212.107.92.72:51011	212.107.92.73:52011	212.107.92.73:53011
Secondary MDG Lite IP		212.107.92.73:50011	212.107.92.73:51011	212.107.92.72:52011	212.107.92.72:53011

2.3 MDG SET OF CHANNELS ID 45 – GLOBAL EQUITY MARKET

Environment	P-EUA	MDGSetOfChannels ID	45
Optiq Segment name	Equities	MDGSetOfChannelsName	Global Equity Market

Channel Type	MBO	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.14	PEUA 50014	PEUA 51014	PEUA 52014	PEUA 53014
Multicast Group IP Feed B	224.0.213.14				

Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.14	PEUA 60014	PEUA 61014	PEUA 62014	PEUA 63014
Multicast Group IP Feed B	224.0.213.14				

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.13	PEUA 50013	PEUA 51013	PEUA 52013	PEUA 53013
Multicast Group IP Feed B	224.0.213.13				

Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.13	PEUA 60013	PEUA 61013	PEUA 62013	PEUA 63013
Multicast Group IP Feed B	224.0.213.13				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
Channel Speed		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.71:50013	212.107.92.71:51013	212.107.92.71:52013	212.107.92.71:53013
Secondary MDG Lite IP		212.107.92.70:50013	212.107.92.72:51013	212.107.92.73:52013	212.107.92.70:53013

3. OPTIQ SEGMENT – 2. FUNDS REAL-TIME AND SNAPSHOT CONFIGURATION

3.1 MDG SET OF CHANNELS ID 39 – FUNDS ETF ITALY

Environment	P-EUA	MDGSetOfChannels ID	39
Optiq Segment name	Funds	MDGSetOfChannelsName	Funds ETF Italy

Channel Type	MBO	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.2	PEUA 50002			
Multicast Group IP Feed B	224.0.213.2				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.2	PEUA 60002			
Multicast Group IP Feed B	224.0.213.2				

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.1	PEUA 50001			
Multicast Group IP Feed B	224.0.213.1				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.1	PEUA 60001			
Multicast Group IP Feed B	224.0.213.1				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
Channel Speed		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.70:50001			
Secondary MDG Lite IP		212.107.92.72:50001			

4. OPTIQ SEGMENT – 3. FIXED INCOME REAL-TIME AND SNAPSHOT CONFIGURATION

4.1 MDG SET OF CHANNELS ID 40 – FIXED INCOME Italy (MOT/ExtraMOT)

Environment	P-EUA	MDGSetOfChannels ID	40
Optiq Segment name	Fixed Income	MDGSetOfChannelsName	Fixed Income Italy (MOT/ExtraMOT)

Channel Type	MBO	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.4	PEUA 50004			
Multicast Group IP Feed B	224.0.213.4				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.2	PEUA 60004			
Multicast Group IP Feed B	224.0.213.2				

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.3	PEUA 50003			
Multicast Group IP Feed B	224.0.213.3				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.3	PEUA 60003			
Multicast Group IP Feed B	224.0.213.3				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
Channel Speed		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.72:50003			
Secondary MDG Lite IP		212.107.92.71:50003			

4.2 MDG SET OF CHANNELS ID 42 – FIXED INCOME ETLX (Bond-X)

Environment	P-EUA	MDGSetOfChannels ID	42
Optiq Segment name	Fixed Income	MDGSetOfChannelsName	Fixed Income ETLX (Bond-X)

Channel Type	MBO	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.6	PEUA 50006			
Multicast Group IP Feed B	224.0.213.6				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.6	PEUA 60006			
Multicast Group IP Feed B	224.0.213.6				

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.5	PEUA 50005			
Multicast Group IP Feed B	224.0.213.5				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.5	PEUA 60005			
Multicast Group IP Feed B	224.0.213.5				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
Channel Speed		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.73:50005			
Secondary MDG Lite IP		212.107.92.70:50005			

5. OPTIQ SEGMENT – 4. WARRANTS & CERTIFICATES REAL-TIME AND SNAPSHOT CONFIGURATION

5.1 MDG SET OF CHANNELS ID 41 – WARRANTS & CERTIFICATES Italy (SEDEX)

Environment	P-EUA	MDGSetOfChannels ID	41
Optiq Segment name	Warrants & Certificates	MDGSetOfChannelsName	Warrants & Certificates Italy (SEDEX)

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.7	PEUA 50007	PEUA 51007		
Multicast Group IP Feed B	224.0.213.7				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.7	PEUA 60007	PEUA 61007		
Multicast Group IP Feed B	224.0.213.7				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
Channel Speed		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.73:50007	212.107.92.73:51007		
Secondary MDG Lite IP		212.107.92.70:50007	212.107.92.71:51007		

5.2 MDG SET OF CHANNELS ID 43 – WARRANTS & CERTIFICATES ETLX (Cert-X)

Environment	P-EUA	MDGSetOfChannels ID	43
Optiq Segment name	Warrants & Certificates	MDGSetOfChannelsName	Warrants & Certificates ETLX (Cert-X)

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.8	PEUA 50008	PEUA 51008		
Multicast Group IP Feed B	224.0.213.8				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.8	PEUA 60008	PEUA 61008		
Multicast Group IP Feed B	224.0.213.8				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
Channel Speed		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.72:50008	212.107.92.72:51008		
Secondary MDG Lite IP		212.107.92.70:50008	212.107.92.71:51008		

6. OPTIQ SEGMENT – 14. EURONEXT BLOCK

6.1 MDG SET OF CHANNELS ID 19 – TRADING AFTER HOURS ITALY

Environment	P-EUA	MDGSetOfChannels ID	19
Optiq Segment name	Block	MDGSetOfChannelsName	Trading After Hours Italy

Channel Type	MBO	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.16	PEUA 50016			
Multicast Group IP Feed B	224.0.213.16				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.16	PEUA 60016			
Multicast Group IP Feed B	224.0.213.16				

Channel Type	MBP	Channel ID /Port			
Real-time					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.15	PEUA 50015			
Multicast Group IP Feed B	224.0.213.15				
Snapshot					
Channel Speed	100M	Partition 1	Partition 2	Partition 3	Partition 4
Multicast Group IP Feed A	224.0.212.15	PEUA 60015			
Multicast Group IP Feed B	224.0.213.15				

Channel Type	MDG Lite	Channel ID /Port			
Real-time					
Channel Speed		Partition 1	Partition 2	Partition 3	Partition 4
Primary MDG Lite IP		212.107.92.71:50015			
Secondary MDG Lite IP		212.107.92.73:50015			