Distributed by www.texim-europe.com

Distributed by:
TEXIM EUROPE
www.texim-europe.com

華凌光電股份有限公司
WINSTAR WINSTAR Display Co., Ltd.

SMART DISPLAY SPECIFICATION



Think good, Do good, Be good !

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

WEB: https://www.winstar.com.tw *E-mail: sales@winstar.com.tw*

華凌光電股份有限公司
WINSTAR WINSTAR Display Co., Ltd.

SPECIFICATION

CUSTOMER	WINSTAR
MODEL NO.	WL0F0007000D2TFAASA00
CURRENT VERSION	A
RELEASE DATE	2026/07/06

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
Corina Yeh	Ginger Xu	Leo Liu	Jason Chan

APPROVED BY: **(FOR CUSTOMER USE ONLY)**	

TFT Display Inspection Specification: https://www.winstar.com.tw/technology/download.html
Precaution in use of TFT module: https://www.winstar.com.tw/technology/download/declaration.html

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

RECORDS OF REVISION

VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2026/01/14		First issue
A	2026/07/06	p.6	Revised the module dimension
B			
C			
D			
E			
F			
G			
H			
I			

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

Contents

1. Smart Display Classification Information 4
2. Summary 5
3. Product Information 6
4. Contour Drawing.....7
5. Absolute Maximum Ratings.....8
6. Electrical Characteristics.....8
7. BOM.....8
8. Block Diagram.....9
9. Interface 10
10. Reliability 12
11. Product Inspection Check List.....13

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

1. Smart Display Classification Information

W	L	0F	000700	0D2	T	F	AA	S	A	00
1	2	3	4	5	6	7	8	9	10	11

1	W: WINSTAR products			
2	Type: L:Standard K:Customization			
3	Display Type:	Standard:	0H: Character STN 0X: Graphic STN (TAB/COF) 0F: TFT EH: Character OLED EX: OLED (TAB/COF)	0G: Graphic STN 0P: Graphic STN (COG) EG: Graphic OLED EP: OLED (COG)
		Customization:	DH: Character DN: Graphic ED: OLED	DG: Graphic STN 0J: TFT
4	Display size: (diagonal) / Display format: (resolution)	Character STN: Graphic STN:	e.g., 8x1: 000801 16x2: 001602 24x4: 002404 e.g., 128x64: 012864 320x240: 320240	
		TFT Size (inch):	000096-0.96” / 000350-3.5” / 000430-4.3” / 000570-5.7” 000700-7.0” / 000800-8.0” / 001020-10.2” / 001210-12.1” (The last two digits are two digits after the decimal point)	
		OLED:	e.g., 128x64: 012864 Customization: 0001XX	
5	Serial No:	0A1 ~ 0ZZ	Customization STN: 000	
6	Touch Panel Type:	N: Without TP T: RTP G: CTP		
7	Model Interface:	A: CAN B: Bluetooth C:Controller Specified D: RS485 E: RS232 F: USART	G: Logic I/O H: HDMI R: Memory Specified N: Ethernet J: Analog I/O K: USB	L: WIFI M: Zigbee X: Combined Y: Proprietary interface
8	Interface Serial No.:	AA ~ ZZ		
9	Control Category:	S: Smart Display E: Entry N: Non-specified		
10	Special Code:	A → Generic B → Industrial C →Automotive D →Medical K → With Housing		
11	Model code:	00 ~ ZZ		

WINSTAR Display Co.,Ltd. Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

2. Summary

7.0 Inch Smart Display (UART series) Features

1. +12V power supply input with 8V to 35V dynamic range power input, the power consumption is around 5 Watt(WF70D2SYAGDNTA).
2. Self testing after booting function.
3. UART communication interface.
4. Supports UART protocol, default baud rate at 115200Kbps. .
5. Built in 16MB external flash memory to store the font and Object Dictionary Data.
6. Support resistive touch panel (RTP).
7. Build in buzzer and can be controlled by Master Device.
8. Demo set HOST can be used on multiple platforms, such as Computer (with USB to Virtual COM Dongle), MCU, Raspberry Pi .
9. GPIO PIN support With 3.3V.

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

3. Product Information

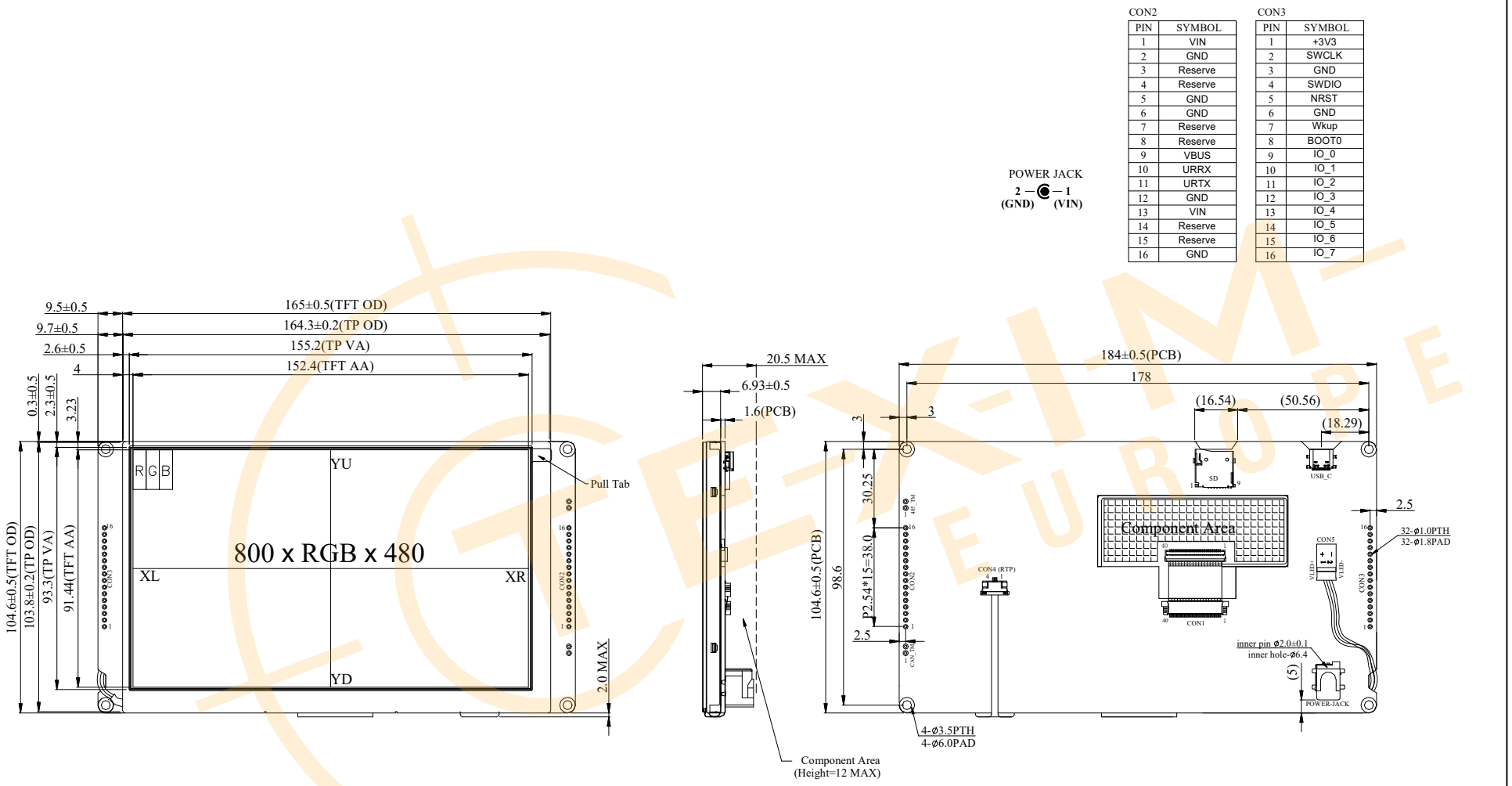
General information

Item	Standard Value	Unit
Operating voltage	8V~35V dynamic	Vdc
Communication Interface	UART	--
MCU	STM32F746	--
SDRAM	16	MB
Flash Memory	16	MB
LCD display size	7.0	inch
Dot Matrix	800 x RGB x 480(TFT)	dot
Module dimension	184(W) x 104.6(H) x 20.5(D)	mm
Active area	152.4 (H) x 91.44(V)	mm
Dot pitch	0.1905(W) x 0.1905(H)	mm
Brightness	Min:750; Typ:850	
LCD type	TFT, Normally Black, Transmissive	
View Direction	85/85/85/85	
Aspect Ratio	15:9	
With /Without TP	With RTP	
Surface	Anti-Glare	

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

4. Contour Drawing



The non-specified tolerance of dimension is ±0.3mm.

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

5. Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	℃
Storage Temperature	TST	-30	—	+80	℃

Note: Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above

1. Temp. ≦60℃, 90% RH MAX. Temp.＞60℃, Absolute humidity shall be less than 90% RH at 60℃

6. Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage	VCC	—	8	12	35	V
Supply LCM current	I(mA)	-	-	385	-	mA

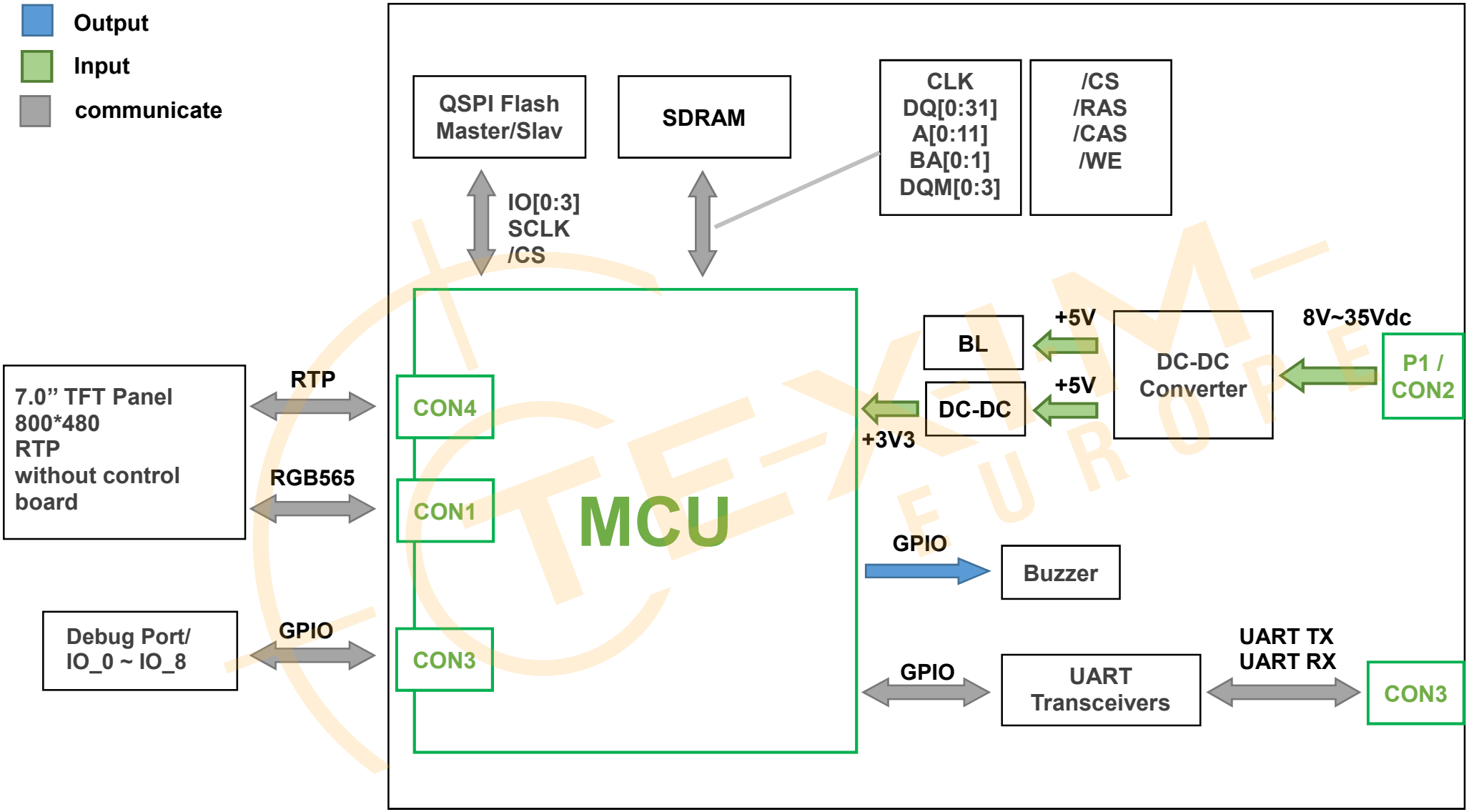
7. BOM

Item	Description	Remark
LCM	WF70D2SYAGDNT0#	
PCBA	SV10007R00D2B00N0100	

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

8. Block Diagram



Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

9. Interface

CON2 definition:

Pin	Symbol	Function	Remark
1	Reserve	-	-
2	Reserve	-	-
3	Reserve	-	-
4	Reserve	-	-
5	Reserve	-	-
6	Reserve	-	-
7	Reserve	-	-
8	Reserve	-	-
9	Reserve	-	-
10	URRX	UART Receiver interface	Input
11	URTX	UART Transceiver interface	Output
12	GND	Power supply GND input	Input
13	VIN	Power supply V+ input	Input
14	Reserve	-	-
15	Reserve	-	-
16	Reserve	-	-

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

CON3 definition:

Pin	Symbol	Function	Remark
1	+3V3	3.3V power for JTAG interface	Output
2	SWCLK	CLK pin for JTAG interface	Input
3	GND	GND for JTAG interface	Output
4	SWDIO	Data pin for JTAG interface	I/O
5	NRST	Reset pin for JTAG interface	Input
6	GND	GND	-
7	Wkup	(PA0) for system Resume from suspend (Reserve)	WKup,ADC,Timer,Event,I/O
8	BT0	BOOT0 (Normal Low)	Input
9	IO_0	ADC,DAC,Timer,Event,I/O	PA5
10	IO_1	ADC,Timer,Event,I/O	PA6
11	IO_2	ADC,Timer,Event,I/O	PA7
12	IO_3	RST,Timer,Event,I/O	PA8
13	IO_4	RST,Timer,Event,I/O	PC13
14	IO_5	ADC,Timer,Event,I/O	PB11
15	IO_6	RST,Timer,Event,I/O	PA15
16	IO_7	RST,ADC,Event,I/O	PD11

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

10. Reliability

Content of Reliability Test (Wide temperature, -20℃~70℃)

Environmental Test			
Test Item	**Content of Test**	**Test Condition**	**Note**
High Temperature storage	Endurance test applying the high storage temperature for a long time.	80℃ 200hrs	2
Low Temperature storage	Endurance test applying the low storage temperature for a long time.	-30℃ 200hrs	1,2
High Temperature Operation	Endurance test applying the electric stress (Voltage & Current) and the thermal stress to the element for a long time.	70℃ 200hrs	——
Low Temperature Operation	Endurance test applying the electric stress under low temperature for a long time.	-20℃ 200hrs	1
High Temperature/ Humidity Operation	The module should be allowed to stand at 40 ℃,90%RH max	60℃,90%RH 96hrs	1,2
Thermal shock resistance	The sample should be allowed stand the following 10 cycles of operation -20℃ 25℃ 70℃  30min 5min 30min 1 cycle	-20℃/70℃ 10 cycles	——
Vibration test	Endurance test applying the vibration during transportation and using.	Total fixed amplitude : 1.5mm Vibration Frequency : 10~55Hz One cycle 60 seconds to 3 directions of X,Y,Z for Each 15 minutes	3
Static electricity test	Endurance test applying the electric stress to the terminal.	VS=±600V(contact),±800v(air), RS=330Ω CS=150pF 10 times	——

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

Note1: No dew condensation to be observed.
Note2: The function test shall be conducted after 4 hours storage at the normal Temperature and humidity after remove from the test chamber.
Note3: The packing have to including into the vibration testing.

11. Product Inspection Check List

Check samples by meter V_{IN}, I system

Item	No 1	Note
VIN (V)	12	
I System(mA)	382	

Distributed by www.texim-europe.com

Distributed by www.texim-europe.com

WEB: https://www.winstar.com.tw
E-mail: sales@winstar.com.tw
TFT Display Inspection Specification: https://www.winstar.com.tw/technology/download.html
Precaution in use of TFT module:
https://www.winstar.com.tw/technology/download/declaration.html

Distributed by www.texim-europe.com

Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Texim Europe B.V. its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Texim”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Texim makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product.

It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.

Distributed by www.texim-europe.com

Texim Europe - contact details



Headquarters & Warehouse

Elektrostraat 17
NL-7483 PG Haaksbergen
The Netherlands

T: +31 (0)53 573 33 33
E: info@texim-europe.com
Homepage: www.texim-europe.com



The Netherlands

Elektrostraat 17
NL-7483 PG Haaksbergen

T: +31 (0)53 573 33 33
E: nl@texim-europe.com



Belgium

Zuiderlaan 14, box 10
B-1731 Zellik

T: +32 (0)2 462 01 00
E: belgium@texim-europe.com



UK & Ireland

St Mary's House, Church Lane
Carlton Le Moorland
Lincoln LN5 9HS

T: +44 (0)1522 789 555
E: uk@texim-europe.com



Germany

Bahnhofstrasse 92
D-25451 Quickborn

T: +49 (0)4106 627 07-0
E: germany@texim-europe.com



Germany

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: muenchen@texim-europe.com



Austria

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: austria@texim-europe.com



Nordic

Stockholmsgade 45
2100 Copenhagen

T: +45 88 20 26 30
E: nordic@texim-europe.com



Italy

Martin-Kollar-Strasse 9
D-81829 München

T: +49 (0)89 436 086-0
E: italy@texim-europe.com