



NEW

DISPLAY PROGRAMMABILE

## TERA12 HE

12.1" TFT ADVANCED DISPLAY



## DESCRIZIONE

TERA12 HE è il display più avanzato nel mercato off-highway. Usa il recente potente processore Freescale IMX6TM, che unisce le caratteristiche di multimedialità avanzata e gestione grafica. Permette grafica 3D, velocità superiore, schermi multitouch capacitivi e look stile tablet, sempre avendo come base di progetto gli standard industriali.

## APPLICAZIONI

- Gru telescopiche o a traliccio di grandi dimensioni
- Gru portuali
- Compattatori e macchine municipali
- Macchine da fondazione e scavo
- Terminal ISOBUS UT per trattori agricoli
- Mezzi anti-incendio

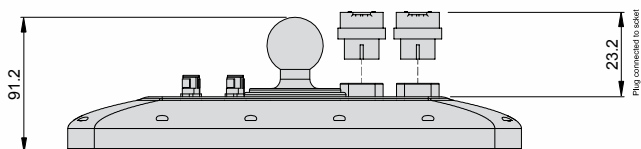
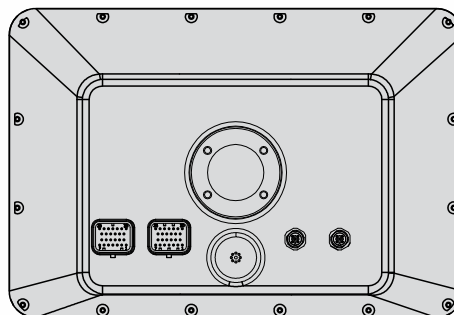
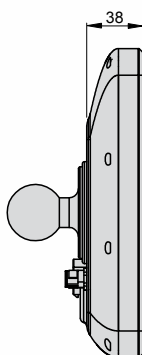
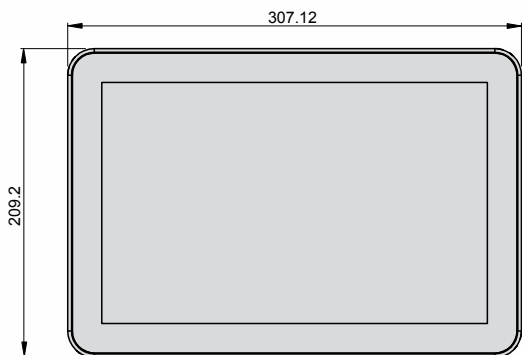
## TERA 12 HE senza tasti - no keys

### MODELLI DISPONIBILI

TERA12 HE LOW: multitouch, senza tasti, caratteristiche base  
 TERA12 HE HIGH: multitouch, senza tasti, full optional

### AVAILABLE MODELS

TERA12 HE LOW: multitouch, no keys, low specs  
 TERA12 HE HIGH: multitouch, no keys, high specs





# TERA 12 HE

## DESCRIPTION

TERA12 HE is the high end display solution for off-highway market. It runs with the latest Freescale iMX6TM processor, that joins strong multimedia capabilities and graphics management. It allows 3D graphics, multitouch capacitive touchscreen, tablet-style looking, always keeping the industrial standards at base of design.

## APPLICATIONS

- High size telescopic or lattice boom cranes
- Harbor cranes
- Compactors and municipalities
- Foundation machines
- Terminal ISOBUS UT for tractors
- Fire fighting machines

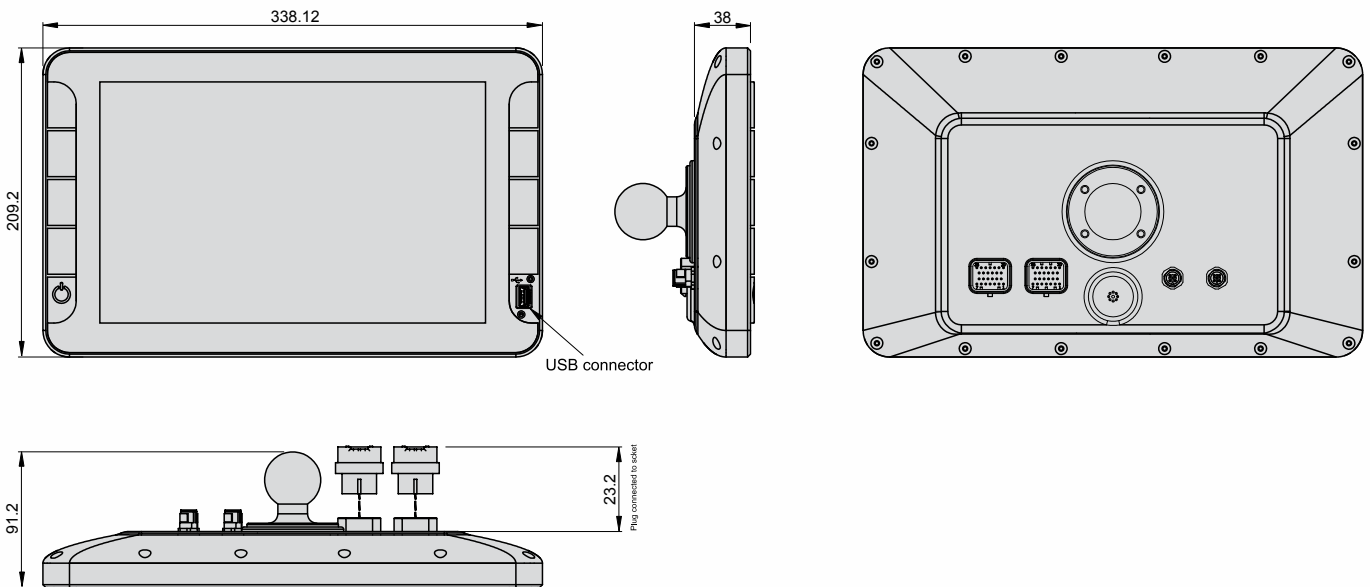
## TERA 12 HE KEY

### MODELLI DISPONIBILI

TERA12 HE KEY LOW: multitouch, 9 tasti, caratteristiche base  
TERA12 HE KEY HIGH: multitouch, 9 tasti, full optional

### AVAILABLE MODELS

TERA12 HE KEY LOW: multitouch, 9 softkeys, low specs  
TERA12 HE KEY HIGH: multitouch, 9 softkeys, high specs





## SPECIFICHE TECNICHE:

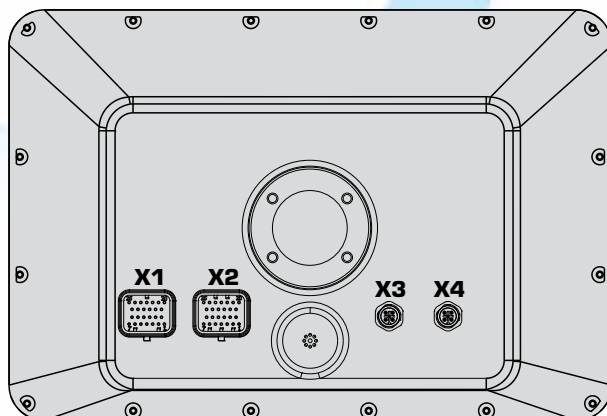
	<b>BASIC</b>	<b>FULL</b>
<b>Tensione di alimentazione:</b>	8 - 32 V	8 - 32 V
<b>Temperatura di funzionamento:</b>	- 30°C ÷ +65°C	- 30°C ÷ +65°C
<b>Grado di protezione:</b>	IP65	IP65
<b>Processore:</b>	Freescale iMx6 Dual Core, 32 bit	Freescale iMx6 Dual Core, 32 bit
<b>Frequenza:</b>	850Mhz	850Mhz
<b>Memoria interna:</b>	8 GB Flash	8 GB Flash
<b>RAM:</b>	1 GB	1 GB
<b>Display:</b>	TFT 12.1", 1280 x 800 pixels, 500 cdm, 750:1 rapp. Contrasto	TFT 12.1", 1280 x 800 pixels, 500 cdm, 750:1 rapp. Contrasto
<b>Display Mode:</b>	16:9, Portrait/Landscape	16:9, Portrait/Landscape
<b>Visibilità al sole:</b>	Si	Si
<b>Touchscreen:</b>	Multitouch capacitivo con tecnologia bonding (funzionamento con guanti)	Multitouch capacitivo con tecnologia bonding (funzionamento con guanti)
<b>RTC:</b>	Si	Si
<b>Wake up mode:</b>	Alimentazione, messaggio CAN, ingresso chiave	Alimentazione, messaggio CAN, ingresso chiave
<b>Tempo di boot:</b>	< 1 sec da stdby, ca 10 da cold boot	< 1 sec da stdby, ca 10 da cold boot
<b>Sensore temperatura interna:</b>	Si	Si
<b>Accelerometro/Giroscopio</b>	Si	Si
<b>Tasti:</b>	4+4 tasti frontali, 1 tasto programmabile come ON/OFF (KEY VERSION)	4+4 tasti frontali, 1 tasto programmabile come ON/OFF (KEY VERSION)
<b>Buzzer:</b>	100 dB, volume regolabile	100 dB, volume regolabile
<b>Porte CAN Bus:</b>	4	4
<b>RS232:</b>	1 port full modem 1 port Linux Terminal	1 port full modem 1 port Linux Terminal
<b>Porte USB:</b>	1 HOST esterna (VERSIONE KEY) 2 HOST su connettore 1 OTG Device su connettore	1 HOST esterna (VERSIONE KEY) 2 HOST su connettore 1 OTG Device su connettore
<b>Video Input:</b>	2 PAL/NTSC in contemporanea	4 PAL/NTSC in contemporanea Video over IP
<b>Ethernet:</b>	-	1 port 10/100
<b>Audio:</b>	-	1 Audio input 1 Audio output (non amplificato)
<b>GPS:</b>	-	1 ricevitore con antenna integrata (3 mt precisione)
<b>Bluetooth LE:</b>	-	Si
<b>Wi-Fi:</b>	-	Si
<b>Lista I/O:</b>	-	4 ingressi analogici/digitali 2 uscite Low/High Side 1A 1 uscita Low Side 0.5A
<b>Connettori:</b>	2 x AMP automotive 26 pin (segnali) 1 x M12 8 pin (video camera)	2 x AMP automotive 26 pin (segnali) 1 x M12 8 pin (video camera)
<b>Sistema operativo:</b>	Linux, Android	Linux, Android
<b>Standards:</b>	EMC industrial, automotive, agricolo ISO 11783 (ISOBUS UT+TC)	EMC industrial, automotive, agricolo ISO 11783 (ISOBUS UT+TC)
<b>Linguaggi di programmazione:</b>	C, C++, QT	C, C++, QT
<b>Programming IDE</b>	VT3, Android Studio	VT3, Android Studio



# SPECIFICHE TECNICHE TECHNICAL SPECIFICATIONS

## TECHNICAL SPECIFICATIONS:

	BASIC	FULL
<b>Power supply voltage:</b>	8 - 32 V	8 - 32 V
<b>Operative temperature:</b>	- 30°C ÷ +65°C	- 30°C ÷ +65°C
<b>Sealing:</b>	IP65	IP65
<b>Main CPU:</b>	Freescall iMx6 Dual Core, 32 bit	Freescall iMx6 Dual Core, 32 bit
<b>Frequency:</b>	850Mhz	850Mhz
<b>Internal memory:</b>	8 GB Flash	8 GB Flash
<b>RAM:</b>	1 GB	1 GB
<b>Display:</b>	TFT 12.1", 1280 x 800 pixels, 500 cdm, 750:1 contrast ratio	TFT 12.1", 1280 x 800 pixels, 500 cdm, 750:1 contrast ratio
<b>Display Mode:</b>	16:9, Portrait/Landscape	16:9, Portrait/Landscape
<b>Sun readability:</b>	Yes	Yes
<b>Touchscreen:</b>	Capacitive multitouch with bonding technology (gloves compatible)	Capacitive multitouch with bonding technology (gloves compatible)
<b>RTC:</b>	Yes	Yes
<b>Wake up mode:</b>	Power supply, CAN message, ignition key	Power supply, CAN message, ignition key
<b>Boot time:</b>	< 1 sec from stdby, about 10 sec from cold boot	< 1 sec from stdby, about 10 sec from cold boot
<b>Internal temperature sensor:</b>	Yes	Yes
<b>Internal accelerometer / gyroscope:</b>	Yes	Yes
<b>Keys:</b>	4+4 softkeys on front panel, 1 softkey programmable also as ON/OFF (KEY VERSION)	4+4 softkeys on front panel, 1 softkey programmable also as ON/OFF (KEY VERSION)
<b>Buzzer:</b>	100 dB, volume adjustable	100 dB, volume adjustable
<b>CAN Bus ports:</b>	4	4
<b>RS232:</b>	1 port full modem 1 port Linux Terminal	1 port full modem 1 port Linux Terminal
<b>USB ports:</b>	1 HOST external (only on KEY) 2 HOST on connector 1 OTG Device on connector	1 HOST external (only on KEY) 2 HOST on connector 1 OTG Device on connector
<b>Video Input:</b>	2 PAL/NTSC simultaneous	4 PAL/NTSC simultaneous Video over IP
<b>Ethernet:</b>	-	1 port 10/100
<b>Audio:</b>	-	1 Audio input port 1 Audio output port (not amplified)
<b>GPS:</b>	-	1 receiver with integrated antenna (3 mt accuracy)
<b>Bluetooth LE:</b>	-	Yes
<b>Wi-Fi:</b>	-	Yes
<b>I/O List:</b>	-	4 analog/digital Inputs 2 Outputs Low/High Side 1A 1 Output Low Side 0.5A
<b>Connector:</b>	2 x AMP automotive 26 pin (signal) 1 x M12 8 pin (video camera)	2 x AMP automotive 26 pin (signal) 1 x M12 8 pin (video camera)
<b>Operating System:</b>	Linux, Android	Linux, Android
<b>Standards:</b>	EMC industrial, automotive, agriculture ISO 11783 (ISOBUS UT+TC)	EMC industrial, automotive, agriculture ISO 11783 (ISOBUS UT+TC)
<b>Programming languages:</b>	C, C++, QT	C, C++, QT
<b>Programming IDE:</b>	VT3, Android Studio	VT3, Android Studio



## X1

Pin	Funzione - Function	Descrizione - Description
1	+V (+30)	Power Supply Always ON for Stand-by mode
2	CAN3-L	CAN BUS Low (Line 3)
3	CAN4-H	CAN BUS High (Line 4)
4	CAN4-L	CAN BUS Low (Line 4)
5	USB-OTG_D+	USB OTG Data+
6	USB-OTG_D-	USB OTG Data-
7	USB-OTG_VBUS	USB OTG VBUS
8	AUDIO-GND	Audio Signal Ground
9	CAN3-H	CAN BUS High (Line 3)
10	CAN1-H	CAN BUS High (Line 1)
11	CAN1-L	CAN BUS Low (Line 1)
12	USB-OTG_ID	USB OTG ID
13	USB-OTG_GND	USB OTG Ground
14	CAN2-L	CAN BUS Low (Line 2)
15	GND	Ground Signal
16	AUDIO-IN	Audio Signal Input
17	HEADPHONE-RET	Headphone Return
18	HEADPHONE-R	Headphone Right
19	HEADPHONE-L	Headphone Left
20	CAN2-H	CAN BUS High (Line 2)
21	GND	Ground Signal
22	+V (+15)	Switched Power Supply (Main Power)
23	ETH_T+	Ethernet T+
24	ETH_T-	Ethernet T-
25	ETH_R+	Ethernet R+
26	ETH_R-	Ethernet R-

X1: 26 POLES TYCO SUPERSEAL CH3

## X3

Pin	Funzione - Function	Descrizione - Description
1	+VB	Power Supply
2	-VB	Ground
3	VIDEO-IN3	Input Video 3
4	VIDEO-GND	Ground Signal
5	+VB	Power Supply
6	-VB	Ground
7	VIDEO-IN4	Input Video 4
8	GND	Ground Signal

X3: 8 POLES MALE M12 A-CODING CONNECTOR

## X2

Pin	Funzione - Function	Descrizione - Description
1	OUT0	1 A digital output Low/High Side
2	UART2_RX	COM2 - RX Signal
3	USB3_D-	USB3 Data-
4	USB3_D+	USB3 Data+
5	USB3_GND	USB3 Ground
6	USB3_VBUS	USB3 VBUS
7	UART1_CTS	COM1 - CTS Signal
8	OUT1	1A digital output Low/High Side
9	UART2_TX	COM2 - TX Signal
10	UART1_DCD	COM1 - DCD Signal
11	UART1_DSR	COM1 - DSR Signal
12	UART1_RTS	COM1 - RTS Signal
13	UART1_RI	COM1 - RI Signal
14	AIO/DIO	Analog/Digital Input
15	AI1/DI1	Analog/Digital Input
16	UART1_RX	COM1 - RX Signal
17	UART1_TX	COM1 - TX Signal
18	UART1_DTR	COM1 - DTR Signal
19	OUT2	500mA digital output Low Side
20	AI2/DI2	Analog/Digital Input
21	AI3/DI3	Analog/Digital Input
22	GND	Ground Signal
23	USB4_D+	USB4 Data+
24	USB4_D-	USB4 Data-
25	USB4_GND	USB4 Ground
26	USB4_VBUS	USB4 VBUS

X2: 26 POLES TYCO SUPERSEAL CH5

## X4

Pin	Funzione - Function	Descrizione - Description
1	+VB	Power Supply
2	-VB	Ground
3	VIDEO-IN1	Input Video 1
4	VIDEO-GND	Ground Signal
5	+VB	Power Supply
6	-VB	Ground
7	VIDEO-IN2	Input Video 2
8	GND	Ground Signal

X4: 8 POLES MALE M12 A-CODING CONNECTOR





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