### **SH Blackline**

## SH10, SH12, SH15 and SH21





The powerful computer for industry of the series **SH Blackline** in display sizes SH 10, SH 12, SH 15 and SH 21 offer highly-sensitive multi-touch technology behind safety glass.

# Industrial PC with multitouch panel behind safety glass

The IPC have been developed and produced in-house. They are designed especially for operation in rough environments.

For this reason the series **SH Blackline** is made of modern industry-proven components, which ensure reliable performance under extreme conditions.



The strong 4 mm anti-glare bulletproof glass layer above the screen withstands acid, cleaning fluids and disinfectants as well as extreme operational demands. Behind the glass there is a projective and capacitive touch panel. A special sensitivity control allows for reliable gesture control – and this even when wearing gloves.

In its slim and light chassis the IPC contains either an energy saving AMD<sup>®</sup> DualCore-, Intel<sup>®</sup> DualCore- or Intel<sup>®</sup> QuadCore-processor. By using LED displays they operate without any problems in temperature range of -35°C to +55°C.

The IPC **Blackline** SH10, SH12, SH15 and SH21 are especially suited for the use in a rough production area, commissioning trucks, incoming goods entrance in logistic centers or cold stores.

#### Highlights

- Multi-Touch operation on the anti-glare glass panel, also when wearing gloves
- Particularly resistant against mechanical impact like shock and vibration
- Good protection against dust and moisture (IP54 to IP65/67)
- Low temperature usage without heating in a temperature range from -35°C to +55°C
- Display with LED backlight, to Full HD in HD quality, 1920 x 1080 at 21 Zoll
- CPU: AMD<sup>®</sup> DualCore 2 x 1 GHz with 2 GB , Intel<sup>®</sup> DualCore 2 x 1,33 GHz with 2 GB or Intel<sup>®</sup> QuadCore 4 x 1,91 GHz mit 4 GB
- □ Windows<sup>®</sup> 7 Prof. and Windows<sup>®</sup> Emb. Standard 7
- D Motion sensor, programmable unit controller
- Extensive options like integrated LEGIC-reader or UHF reader for identification of pallets

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#### Technical data SH Blackline SH10, SH12, SH15 und SH21

Chassis		Coated Aluminium, no-fan design
	Mounting	Bracket for stationary and mobile use
	Size	SH10: 278 x 223 x 66 mm, SH12: 325 x 254 x 66 mm, SH15: 380 x 305 x 67 mm,
	0120	SH21: 555 x 360 x 84 mm
	Weight	SH10: 4,0 kg, SH12: 4,9 kg, SH15: 6,6 kg, SH21: 10,8 kg
Display LED (intern)	Wolgin	SH10: 10,4" Colour-TFT, SVGA 800 x 600, 400 cd/m <sup>2</sup> , 4,8 watt
Display LED (intern)		SH12: 12.1" Colour-TFT, XGA 1024 x 768, 500 cd/m <sup>2</sup> , 9,0 watt
		SH12: 12.1" Colour-TFT, XGA 1024 x 768, 1100 cd/m <sup>2</sup> , 12,0 watt
		SH12: 12:1 Colour -TFT, XGA 1024 x 768, 450 cd/m <sup>2</sup> , 9,5 watt
		SH3: 13,0 Colour -TFT, Full HD 1920 x 1080, 300 cd/m <sup>2</sup> , 19,5 watt
Touch-Screen		Multi-Touch, Projective Capacitive Touch incl. glassfront in carbon design
Architecture	CPU Intel	Intel <sup>®</sup> DualCore 2 x 1,33 GHz with 2 GB or Intel <sup>®</sup> QuadCore 4 x 1,91 GHz with 4 GB
Alchitecture	CPU AMD	AMD® DualCore 2 x 1,55 cm2 with 2 GB
	Sound	On Board: high definition audio incl. amplifier
Software	Operating-System	Windows <sup>®</sup> 7 Professional, Windows <sup>®</sup> Embedded Standard 7, opt.: WEC 7 and Android
JUILWAIE	Emulation/Browser	VT100, VT220, IBM 5250, Citrix Client, Freefloat, Naurtech
Software certified	Linulation/ Drowser	RFID Legic, Mifare, Hitag and UHF, Pick by Voice, SAP
Mass storage	SSD	SSD 80 to 600 GB, industrial incl. write-protect
111033 3101090	CFast	CFast 32 GB, 64 GB, 128 GB
Interfaces below	RS232	2 x RS 232, incl. 5 or 12 VDC available for scanner
	USB	2 x USB 2.0, 1 x USB 3.0
Internal slots	WLAN, WPAN	1 x PCleMini Card for WLAN or combi module WLAN/Bluetooth
	USB	1 x USB 2.0
	Sound	1 x Sound
Interfaces on-top	USB	1 x USB
	SDHC	1 x SDHC
	HDMI	1 x HDMI for monitor connection
	CFast	1 x CFast base
Network connection	WLAN	IEEE 802.11 a / b / g / n, Bluetooth 4.0
	RJ45	Ethernet 10/100/1000 MBit/s on board
Aerial		Dual aerial or TNC, RP-TNC for offset aerial
Power supply (internal) for	AC voltage	110/230VAC, 64 W, 50 to 60Hz
	Direct current	12/24 VDC and 24/48 VDC voltage, 40 W, galvanically isolated,
	Billott durint	voltage lack up to 6V respectively 12V for $>5$ ms bridgeable
	Power consumption	Typically 18 W to 30 Watt, Green Power EUP 2011 < 0,5 Watt idling cycle
Features	Automatic shut-off	Via signal or On/Off Switch at the front
	Front keys	S1-S4, KEY request, light/dark
Environmental conditions	Protective system	IP54 / IP65 / IP67 (after approved assembly of the cable cover)
	Test symbol	CE/FCC Class A
	Temperature ranges	Operation: $-35^{\circ}$ to $+55^{\circ}$ C, Storage: $-40^{\circ}$ to $+70^{\circ}$ C
	Rel. humidity	10% to 90% at 40°C, non-condensing
	Vibration/Shock	Class 5M3 at EN 60721-3-5: 1998 (landcrafts)