

HT700 Family

New Panel PCs with Intel® Atom™ Tunnel Creek E6xx Processor



DIGITAL AUTOMATION TECHNOLOGIES

HT700 - Highlights

- **Fanless Panel PC** (operating temperature 0÷50°C)
- Intel® **Atom™ Tunnel Creek platform** with **E640/E680** processor 1,00-1,60 GHz (2nd generation ATOM processors)
- **Wide range of 16 mln colors LED backlight TFT LCD displays**
 - 4:3 aspect ratio: 6,5", 8,4", 10,4", 12,1", 15"
 - 16:9 aspect ratio: 7" (15:9), 15,6", 18,5"
- Featuring **NEW ASEM STANDARDS** (see page 5)
- Supports **Win 32**, **Win CE** and **Linux** operating systems
- All common **Fieldbuses** available
- **Limited rear depth** (66,6mm)
- Fast **mass storage** write/read performance thanks to SATA II interface



HT700 - Highlights

Entirely **designed**, **engineered** and **manufactured** by ASEM

- Embedded fan-less solution guaranteeing maximum reliability and performances
- IP65 frontal protection rating
- Optional Glass Film Glass touchscreen technology (only for standard Aluminum front panel)
- Operating temperature 0÷50° (0÷45° for LCD sizes > 15,6", 5÷45° with HDD)



HT700 - Long term availability



10 years
availability



2013

2023

2028



+5 years
support/repairs

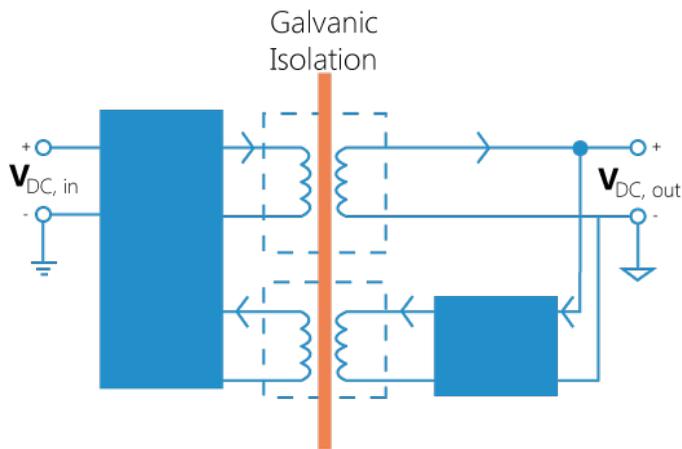
HT700 - New ASEM Standards

A **unique CUT-OUT** for each different size of LCD to ensure:

- Interchangeability among different Panel PC, HMI and Monitor families
- Future mechanical compatibility

Front panel available in three different variants for all new families:

- Aluminum with USB port
- Aluminum True Flat with USB port
- Stainless steel True Flat



Isolated Power supply with galvanic isolation to prevent:

- Common mode noise at low/medium frequencies on the power supply line
 - Ground loop noise
 - Extra-voltage caused by lightning
- and to guarantee
- Power supply with grounded positive terminal (e.g. Japan)

UPS integrated in the internal power supply unit

- With external battery pack - rear of the system mounting
- With external battery pack - standalone wall mounting

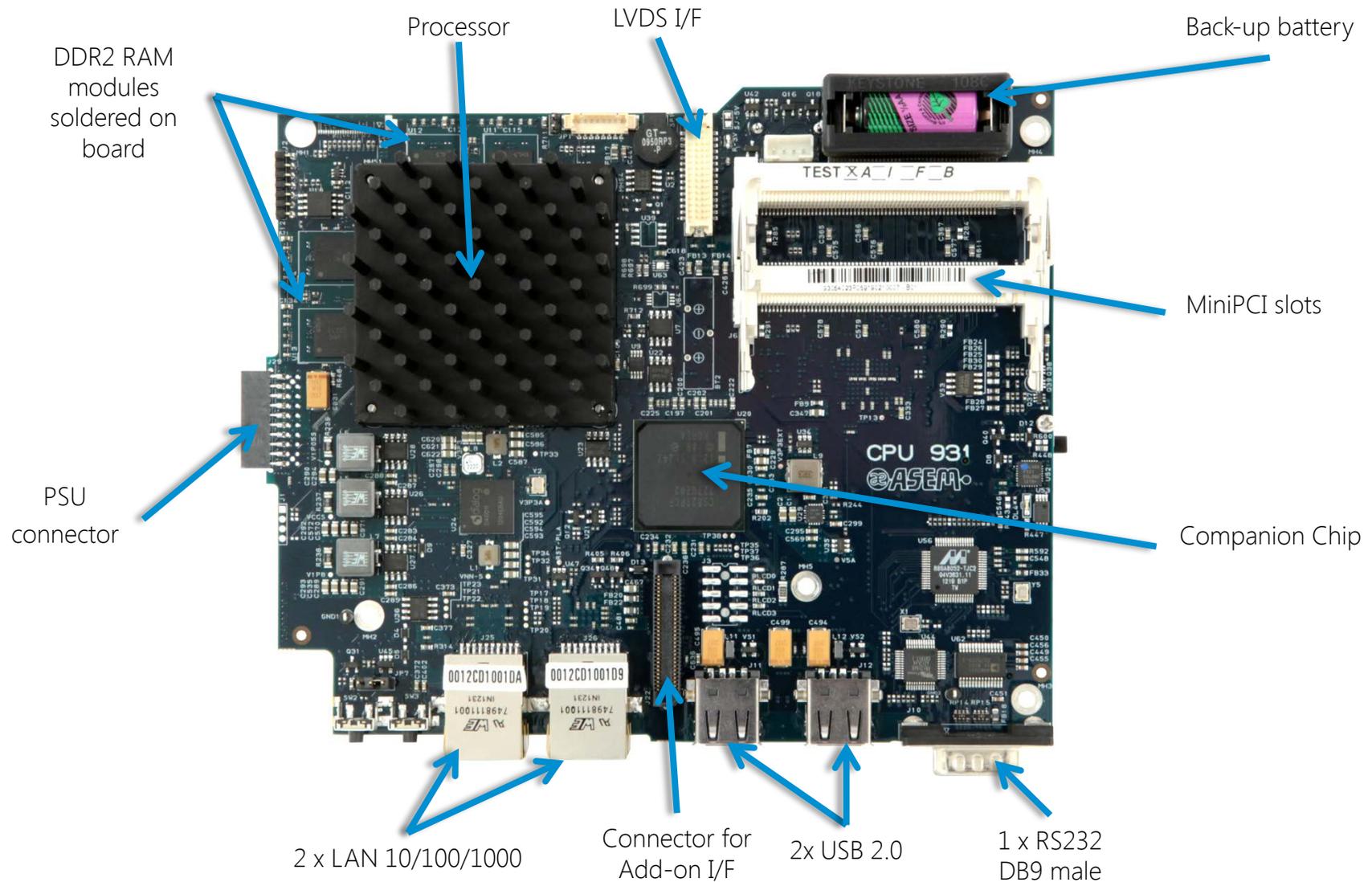
HT700 - Features

NEW ASEM
STANDARDS



LED backlight TFT LCD	4:3 aspect ratio: 6,5", 8,4", 10,4", 12,1", 15" 16:9 aspect ratio: 7" (15:9), 15,6", 18,5"
TOUCH-SCREEN	Resistive 5 wires
FRONT PANEL	Alu / True Flat Alu / True Flat Stainless Steel
PROCESSOR	Intel® Atom™ Tunnel Creek E640 1,0 GHz Intel® Atom™ Tunnel Creek E680 1,6 GHz
RAM	DDR2 SODIMM 1GB / 2GB
MASS STORAGE	- 1 bootable CF embedded on board with external access - SSD SATA Half Slim (only for systems with 6.5" and 7" LCDs) - SSD / HDD 2,5" SATA (for systems with 8,4" and wider LCDs)
LAN	2 x LAN 10/100/1000 (with Jumbo frames and Wake on LAN functionalities) Intel® 82574L Chipset
USB	2 x USB 2.0 (rear) 1 x USB 2.0 (front, IP65 protection)
SERIAL	1 x RS232 (DB9 male)
POWER SUPPLY UNIT	Input voltage 18 ÷ 32 VDC Optional UPS Power consumption 15W÷30W (+15W with UPS during charge)
O.S. compatibility	Intel® Atom™ Tunnel Creek platform does not support: Win 64, Win 8, Win CE 5.0, Win Ce 6.0 Certified O.S.: Win 32 / Win Embedded Compact 7 Compatible but not certified O.S.: Linux, VxWorks, QNX
CERTIFICATION	CE, cULus (pending April 2013)
ADD-ON INTERFACES (optional – max 1)	- 1 x RS232/422/485 (DB15M) + 1 x USB 2.0 - 1 x RS232/422/485 optoisolated (DB15M) + 1 x USB 2.0
EXPANSION SLOTS	2 x MiniPCI dedicated to ASEM boards

HT700 - Motherboard 931 top



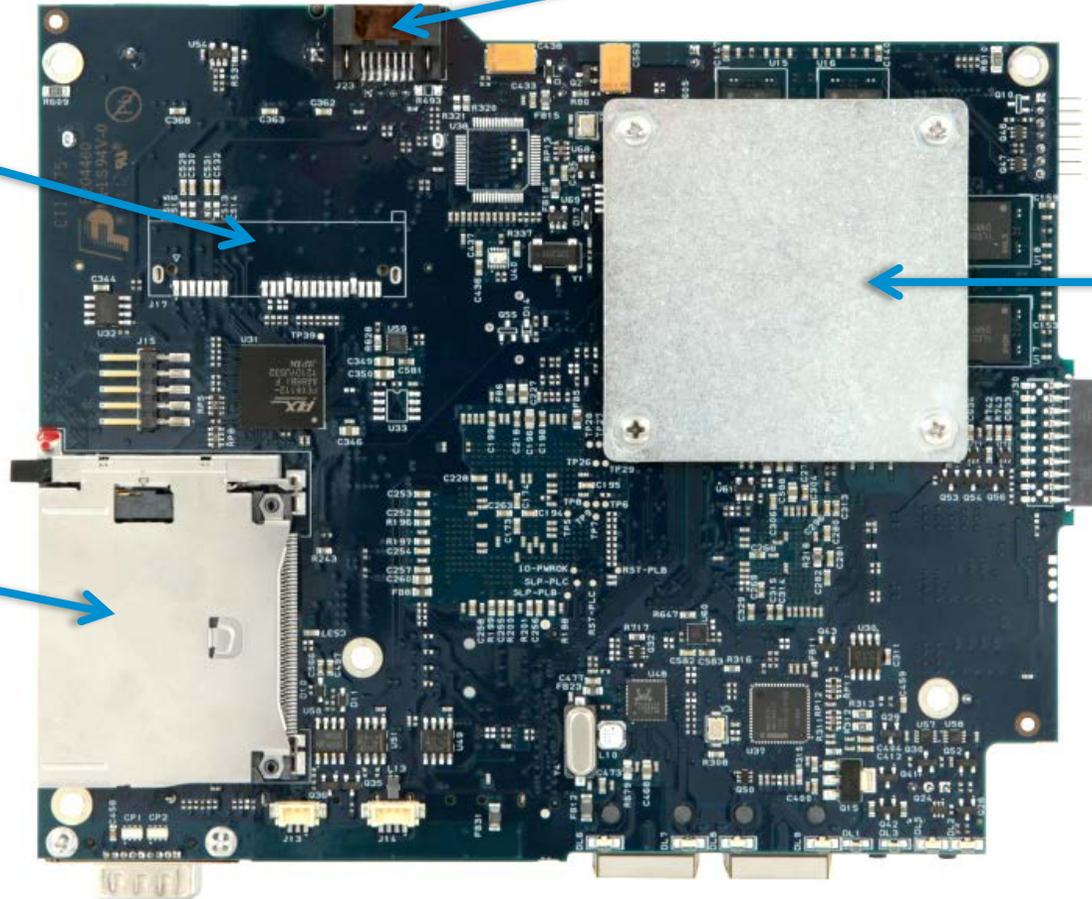
HT700 - Motherboard 931 bottom

SSD/HDD 2,5" SATA connector

SSD SATA II Half Slim connector

Heat spreader

CF Slot external access



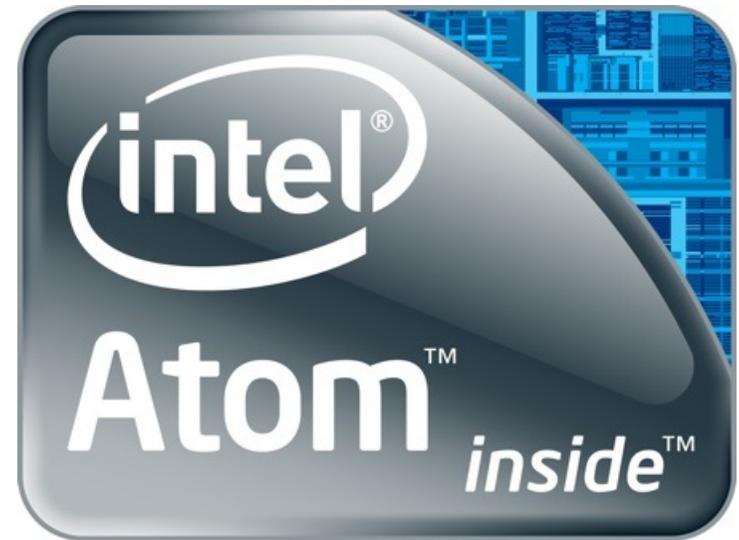
HT700 - Processor

Intel® **Atom™ Tunnel Creek platform** with **E640 or E680** processor
1,00 - 1,60 GHz (FCBGA package)

- 45nm process technology
- L2 Cache - 512Kb
- Low power consumption - 3,6/4,5W TDP

New **integrated graphics engine**

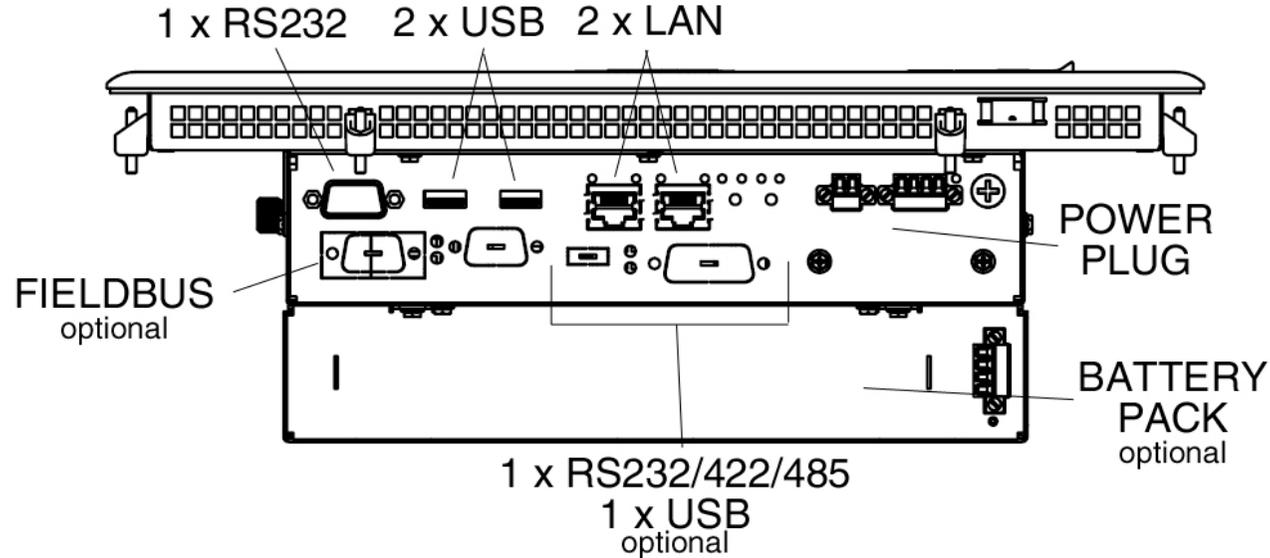
- Intel® GMA 600
- 320/400 MHz Graphics Base Frequency



HT700 - O.S. Compatibility

- Intel® **Atom™ Tunnel Creek platform** does not support:
 - Win 64
 - Win 8/ 2000/ 98/ NT
 - Win CE 5.0 Pro/Pro Plus
 - Win CE 6.0 Pro
- O.S. **certified by ASEM**
 - Win 7 Pro/Ultimate 32bit
 - Win XP Pro 32bit
 - Win Embedded Standard 7E/7P 32Bit
 - Windows Embedded Standard 2009 (XPe SP3) 32bit
 - Windows XPe SP2
 - Win Embedded Compact 7 Pro
- O.S. supported by Intel Atom Tunnel Creek platform but not certified by ASEM
 - Linux
 - VxWorks
 - QNX

HT700 - External Connectors & Interfaces



LAN

- 2 x LAN 10/100/1000 (with Jumbo frames and Wake on LAN functionalities) Intel® 82574L Chipset

USB

- 2 x USB 2.0 (rear) | 1 x USB 2.0 (front, IP65 protection)

SERIAL

- 1 x RS232 (DB9 male)

EXPANSION SLOTS

- 2x MiniPCI for ASEM boards

ADDITIONAL INTERFACES

- 1 x connector for ASEM add-on boards (see page 15)

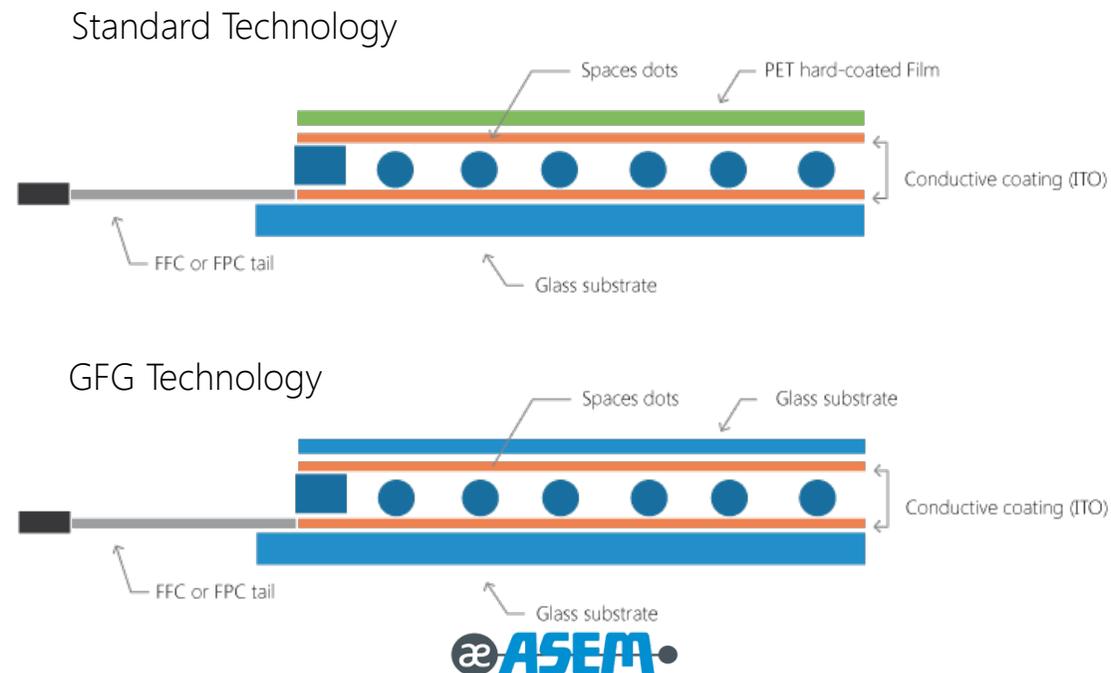
POWER PLUG

- 24V DC isolated
- Input range 18÷32V DC
- Industrial connector

HT700 - Glass Film Glass (option)

The **Glass-Film-Glass technology** add an additional thin glass on the surface

- Greater **resistance** to scratches
- Better products **cleaning**
- Available for standard Aluminum front panel in 12", 15" and 17" sizes



HT700 - Integrated UPS (option)

UPS integrated in the internal power supply unit

- With external battery pack - rear of the system mounting
- With external battery pack - standalone wall mounting

UPS features

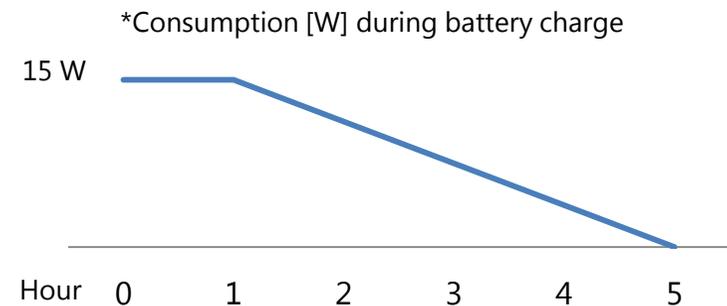
- 12V DC UPS battery backup system
- Input voltage intervention threshold 18VDC
- 25' nominal duration time at 25°C, full charge, 40W load (estimated value)
- 15W max consumption during battery charge*

External battery pack

- 2500mAh 12V/6A max lead battery (Pb)
- Full charge in 5 hours
- Lifetime 10y at 25°C, full charge

Software Management Tools

- Smart battery management to extend lifetime
- Battery estimated duration for individual system configuration



HT700 - Mass Storage

Compact Flash

- 1 x bootable CF embedded on board with external access
- Fast write/read performance with SATA II interface



Internal SSD/HDD

- SSD SATA Half Slim (only for systems with 6.5" and 7" LCDs)
- SSD / HDD 2,5" SATA II (for systems with 8,4" and wider LCDs)

Industrial Reliability SSD

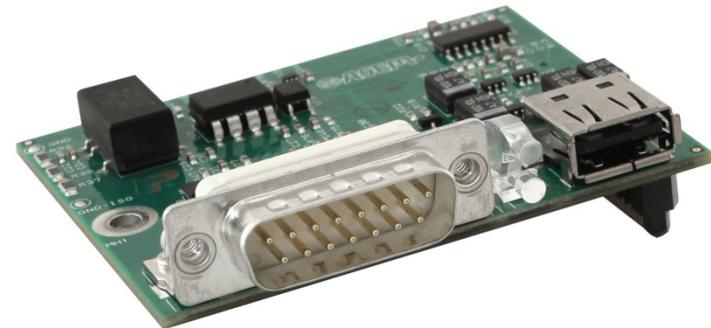
- High thermal and vibration shock resistance

HT700 - ASEM add-on Interfaces (option)

1 x RS232/422/485 (DB15M) + 1 x USB 2.0



1 x RS232/422/485 optoisolated (DB15M) + 1 x USB 2.0



HT700 - Fieldbus MiniPCI Boards (option)

NETcore® X cards enable HT700 to interface all popular fieldbus

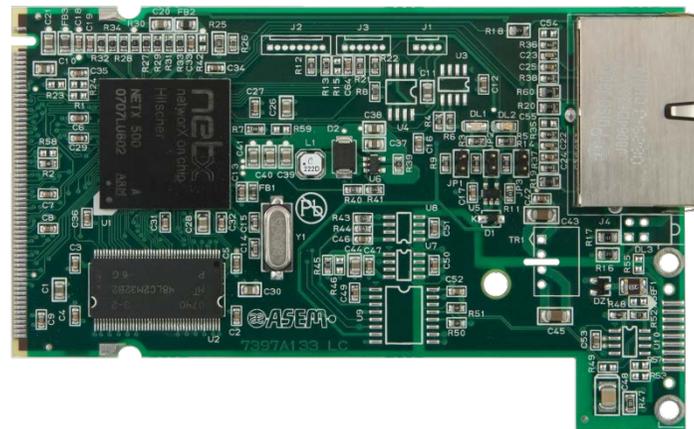
- Master or Slave function
- Available in MiniPCI format

Supported Fieldbuses

EtherCAT®

PROFI®
INDUSTRIAL ETHERNET
NET

EtherNet/IP™



CANopen®

PROFI®
PROCESS FIELD BUS
BUS

CANopen®

HT700 - Digital Input/Output MiniPCI Boards (option)

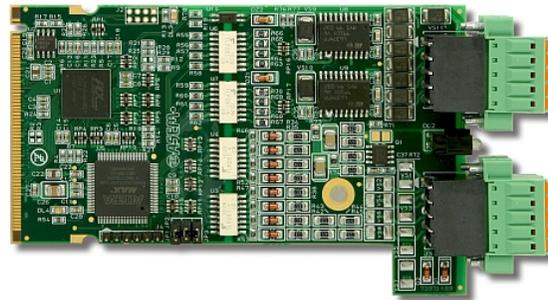
8 D-IN + 8 D-OUT board for **HT series**

Digital Inputs

- 8 Channels
- Sink/Source Type
- Vin min 15 Vdc
- Vin max 30 Vdc
- Max Frequency 10KHz
- Polarity inversion and Extra voltage Protection
- 500 V rms Insulation
- IRQ over IN0

Digital Outputs

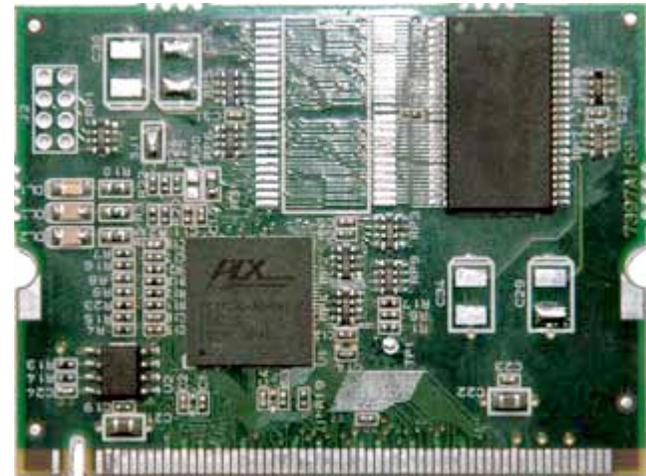
- 8 Channels
- Source Type
- Vin min 15 Vdc
- Vin max 30 Vdc
- Max Output current 100 mA
- Max Frequency 10KHz
- Polarity inversion, Extra voltage, Short circuit and Extra Current Protection
- 500 V rms Insulation
- Frequency generation 1-2047 Hz
- Watch Dog



HT700 - NVRAM MiniPCI Boards (option)

NVRAM Board for HT series

- **Maintenance free**
 - No battery replacement required
- **Fast** and **easy** data access
- 512Kb magnetic RAM
- 3 diagnostic led on board

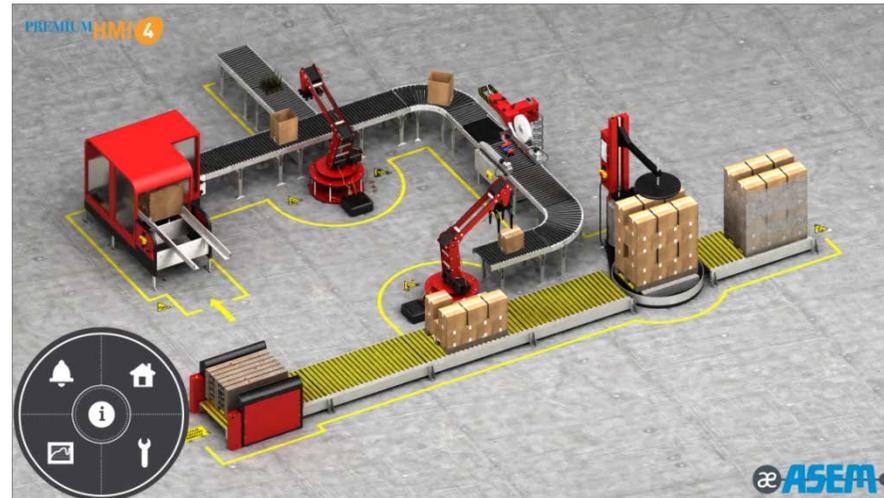


ASEM SOFTWARE FEATURES

Premium HMI Highlights

- Unique development tool
- Projects transversality between ARM and X86 hardware platforms and between Win CE and Win 32/64 operating systems
- Automatic images resizing
- Wide library of vector graphics objects based on Microsoft® XAML technology





Features

- Data logging on relational and textual DB (CSV/XML)
- Networking with client/server architectures and father/child projects
- Modifications traceability on CFR21 Part 11 compatibles applications
- VB script and VB.NET with multithreading execution and online debugger
- Wide range of library vector symbols
- Multi protocol support with data transfer between communication channels
- OPC Client interface
- Report print on PDF and printer
- Remote Control App for iOS and Android devices

New Visualization technologies

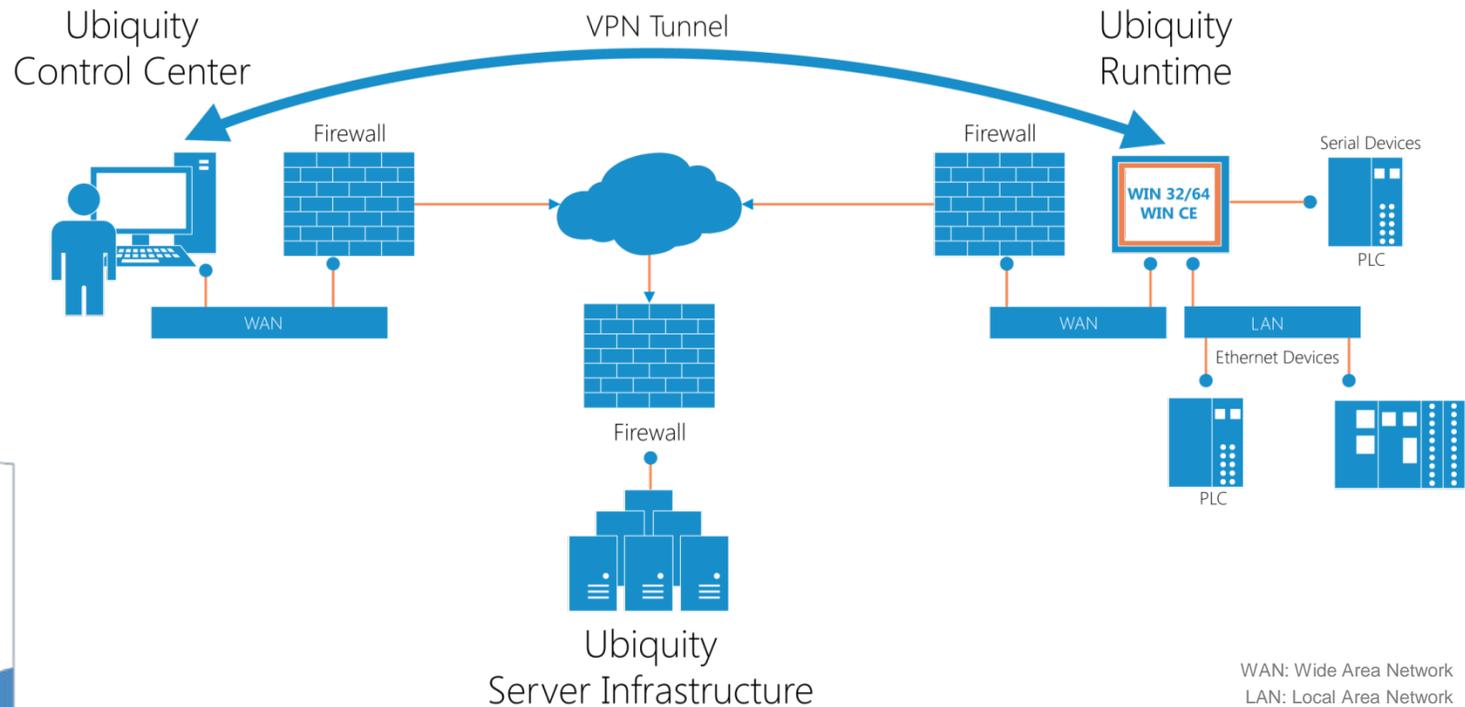
- Vector graphics based on XAML standards
- New and powerful 16 mln colors graphics rendering engine
- Gradient, shading and transparency effects
- Swipe gesture support

Compatibility

- Full compatibility with PremiumHMI previous versions
- Automatic objects conversion in the new graphics format

Ubiquity

The innovative software solution for remote assistance for Win 32/64 and Win CE environments that allows acting and operating on supervision and control systems in remote plants, cancelling distances and eliminating travel expenses.



Remote Access Solution

Ubiquity is addressed to Machine Manufacturers, and allows acting onto remote supervision and control systems installed at customers, as if they were at their own site

Distinctive features

- Proprietary VPN optimized for Industrial Communication
- Does not require additional hardware
- Simple and user-friendly interface
- SSL/TLS protocol encryption and use of certificates
- Automatic «Relay server» selection according to the shortest latency
- Multiple client runtime
- Easy setup, no network or IT expertise required

Possible remote activities

- Remote assistance
- Access, debug and programming of PLCs, HMIs and Automation devices
- Remote machine commissioning
- Application updates and maintenance
- Preventive and predictive maintenance
- Remote desktop, remote process viewer, file management, chat...

A unique solution for machine remote control that makes manufacturers save time and money

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