

HT2200 Family

Fanless Panel IPCs with Intel® Bay Trail platform



DIGITAL AUTOMATION TECHNOLOGIES

HT2200 - Highlights



- **Fanless Panel IPC** (operating temperature 0÷50°C)
- **ASEM UBIQUITY Basic Win32/64** runtime included
- Intel® **Bay Trail SoC platform** with 64bits architecture
 - **Celeron® J1900** 2Ghz (2.41GHz burst frequency), 4 cores – 4 threads – 2MB L2 cache – 10W
- **RAM** System memory expandable up to **8GB**
- **Wide range of 16 mln colors LED backlight TFT LCD displays**
 - 4:3 aspect ratio: 10,4", 12,1", 15", 17" (5:4), 19" (5:4)
 - 16:9 aspect ratio: 10,1" (16:10), 12,1" (16:10), 15,6", 18,5", 21,5", 24"
- **Slim** version (SL) for installation with limited depth in the back panel
- Optional **PCI/PCIe** slot (S1 version)
- **3rd gigabit LAN port** optional (S0 and S1 versions)
- **Wireless communication** modules optional (S0 and S1 version)
- **Isolated 24V DC power supply** input with optionally
 - UPS with external battery kit
 - Kit for ATX mode power supply functionality
- For the **first time** an **entry level x86 platform** supports **Win 64bit** operating systems



HT2200 - Features 1/2



	HT2200	HT2200-TF	HT2200-TFX	HT2200-TFM
LED backlight TFT LCD	10,1" (wide 16:10) – 1280x800* 10,4" (4:3) – 800x600 12,1" (4:3) – 800x600 12,1" (4:3) – 1024x768 12,1" (wide 16:10) – 1280x800 15.0" (4:3) – 1024x768 15.6" (wide 16:9) – 1366x768 15.6" (wide 16:9) – 1920x1080 17"(5:4) – 1280x1024 18.5"(wide 16:9) – 1366x768 19" (5:4) – 1280x1024 21.5"(wide 16:9) – 1920x1080 24"(wide 16:9) – 1920x1080		12,1" (4:3) – 800x600 12,1" (4:3) – 1024x768 15.0" (4:3) – 1024x768 17" (5:4) – 1280x1024 19" (5:4) – 1280x1024	10,1" (wide 16:10) – 1280x800* 12,1" (wide 16:10) – 1280x800 15.6" (wide 16:9) – 1366x768 15.6" (wide 16:9) – 1920x1080 18.5"(wide 16:9) – 1366x768 21.5" (wide 16:9) – 1920x1080 24"(wide 16:9) – 1920x1080
TOUCH-SCREEN	Resistive 5 wires	Resistive 5 wires	Resistive 5 wires	P-CAP Multitouch
FRONT PANEL	Aluminum	True Flat Aluminum	True Flat Stainless Steel	True Flat Aluminium
PROTECTION GRADE	IP66 – frontal			
PROCESSOR	Intel® Celeron J1900, 2GHz (2.41GHz burst frequency), 4 cores / 4 threads, 2MB L2 cache, 10W, 22nm technology			
VIDEO CONTROLLER	Intel® HD Graphics integrated in microprocessor, 688MHz Turbo, LVDS 8bit/color digital interface			
SYSTEM MEMORY - RAM	1GB or 2GB or 4GB or 8GB (1 x SODIMM DDR3 module)			
MASS STORAGE	SL	1 bootable CFast SATA II embedded on board with external rear access 1 x onboard connector for direct insertion of mSATA SSD SATA II		
	S0/S1	1 bootable CFast SATA II embedded on board with external rear access 1 x onboard connector for direct insertion of mSATA SSD SATA II or 1 x onboard connector for 2,5" SSD/HDD 24x7 SATA II with internal installation kit		
LAN	2 x LAN 10/100/1000Mbps (2 x Intel® I210) 1 x LAN 10/100/1000Mbps (1 x Intel® I210, optional for S0/S1) *			

* Only for SL version

HT2200 - Features 2/2



	HT2200	HT2200-TF	HT2200-TFX	HT2200-TFM
USB	1 x USB 3.0 (Type-A, rear) 2 x USB 2.0 (Type-A, rear) 1 x USB 2.0 (Type-A, front)		1 x USB 3.0 (Type-A, rear) 2 x USB 2.0 (Type-A, rear)	
SERIAL	1 x RS232 (DB9M)			
VIDEO OUTPUT	1 x DVI-I (DVI-D + VGA, for VGA output an optional adapter is needed)			
ADD-ON INTERFACES (optional for S0/S1 – max 1)	1 x RS232/422/485 (DB15M)+ 1 x USB 2.0 1 x RS232/422/485 (DB15M) isolated + 1 x USB 2.0 2 x RS232 (DB9M) 2 x USB 2.0 (Type-A)			
FIELDBUS	1 x NETcore X fieldbus *			
WIRELESS COMMUNICATION (optional for S0/S1)	1 x carrier for WiFi module and/or 3G/4G modem *			
EXPANSION SLOTS S1	1 x PCI or PCIe x1 (2.5 Gb/s)			
POWER SUPPLY UNIT	24VDC isolated 24VDC isolated with UPS with external battery kit (optional) ATX Mode push button (optional)			
O.S. CERTIFIED	Windows 7 Pro/Ultimate 32/64bit; Microsoft Windows Embedded Standard 7E/7P 32/64 bit; Microsoft Windows 8.1 Industry Pro; Windows 10 2016 IoT LTSB 64bit Linux		Windows 7 Pro/Ultimate 32/64bit; Microsoft Windows Embedded Standard 7P 32/64 bit; Microsoft Windows 8.1 Industry Pro; Windows 10 2016 IoT LTSB 64bit	
	Other operating systems, such as VxWorks, QNX, etc., have not been certified by ASEM but they are reasonably supported by the Intel platform after verification of compatibility.			
OPERATING TEMPERATURE	0° - 50°C 0° - 45°C with HDD 24x7			
APPROVALS	CE, cULus LISTED (UL 508)			

HT2200 – Wireless communication modules (optional)



		HT2200
Wi Fi Module	Type	Half Mini PCIe module
	Standard	WiFi - IEEE 802.11a/b/g/n ▪ 2.400÷2.4835GHz / 5.15÷5.85GHz Data rate 802.11b: 11Mbps / 802.11a/g: 54Mbps / 802.11n: 300Mbps Bluetooth - V4.0 LE/ V3.0+HS/ V2.1+EDR
	Features	Client / Access point mode (Wi-Fi)
	Security	64/128-bits WEP, WPA, WPA2 (Wi-Fi)
	Sensitivity Rx	WiFi - 802.11a: -73dBm / 802.11g: -74dBm / 802.11n(2,4GHz): -72dBm@HT20, -69dBm@HT40 / 802.11n(5GHz): -69dBm@HT20, -68dBm@HT40 Bluetooth - <0.1% BER at -70dBm
	Antenna	2 x RP-SMA-F connector ▪ antenna not included
Modem 3G	Type	modem 2G/3G/3G+ EDGE/HSPA quadri band up to 5,76Mbps upload / 21,6Mbps download
	Bands	UMTS/HSPA+: B1/B2/B5 ▪ GSM/GPRS/EDGE: 850/900/1800/1900 MHz
	Antenna	1 x SMA-F connector ▪ antenna not included
Modem 4G/LTE	Type	modem 2G/3G/4G LTE pentaband up to 50Mbps upload / 100Mbps download
	Bands	FDD-LTE: B1/B3/B7/B8/B20 ▪ TDD-LTE: B38/B40 ▪ UMTS/HSPA+: B1/B8 ▪ GSM/GPRS/EDGE: 900/1800 MHz
	Antenna	1 x SMA-F connector ▪ antenna not included
Modem 4G/LTE - AM	Type	modem 3G/4G LTE quadri band up to 50Mbps upload / 100Mbps download
	Bands	FDD-LTE: B2/B4/B5/B17 ▪ UMTS/HSPA+: B2/B5
	Antenna	1 x SMA-F connector ▪ antenna not included

HT2200 - Motherboard 954, top

Intel® BayTrail SoC processor

LCD LED backlight

LCD LVDS I/F

mSATA SATA II connector

SATA II connector for 2,5" SSD/HDD

Back-up battery

26pin connector for 3rd LAN / NETCore X / Wireless modules

PCI/PCIe riser card connector

PSU module connector

RAM SODIMM DDR 3 socket

60pin-H connector for add-on I/F

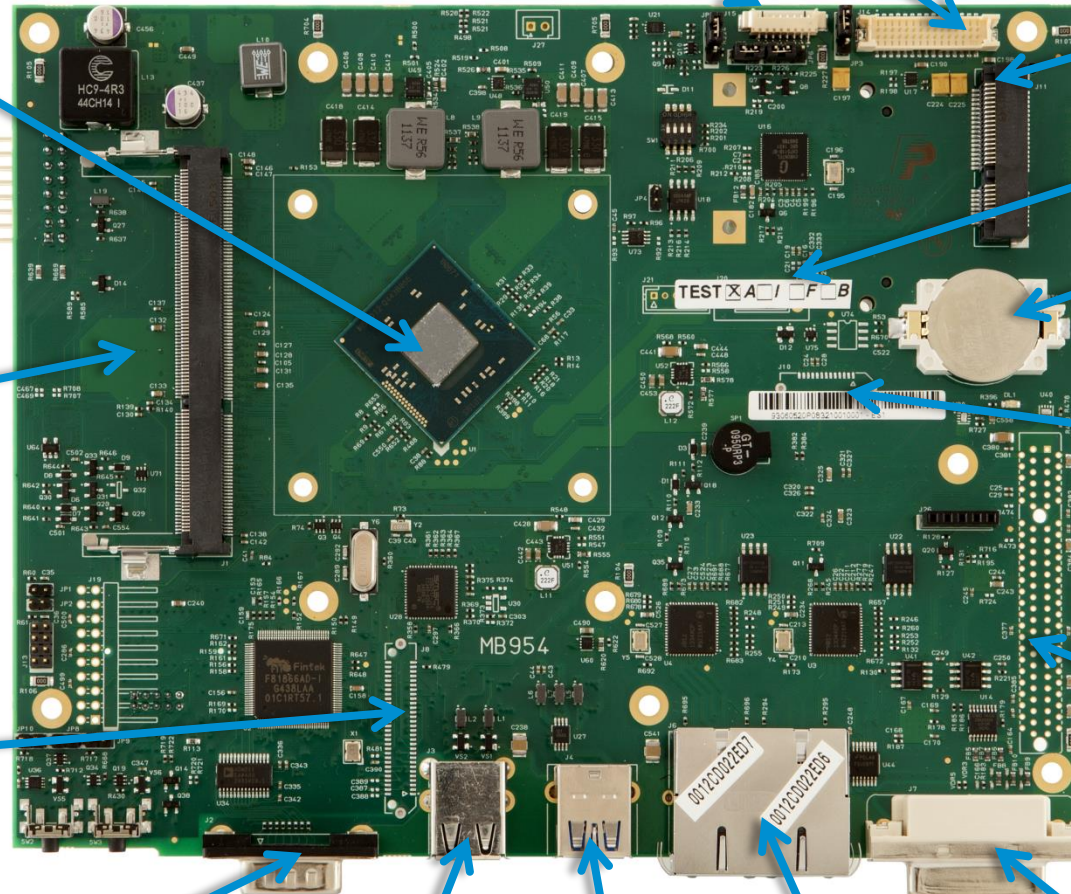
1 x RS232 DB9M

2 x USB 2.0

1 x USB 3.0

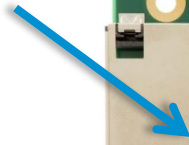
2 x LAN 10/100/1000

1 x DVI-I



HT2200 - Motherboard 954, bottom

CFAST SATA II slot



PSU module connector



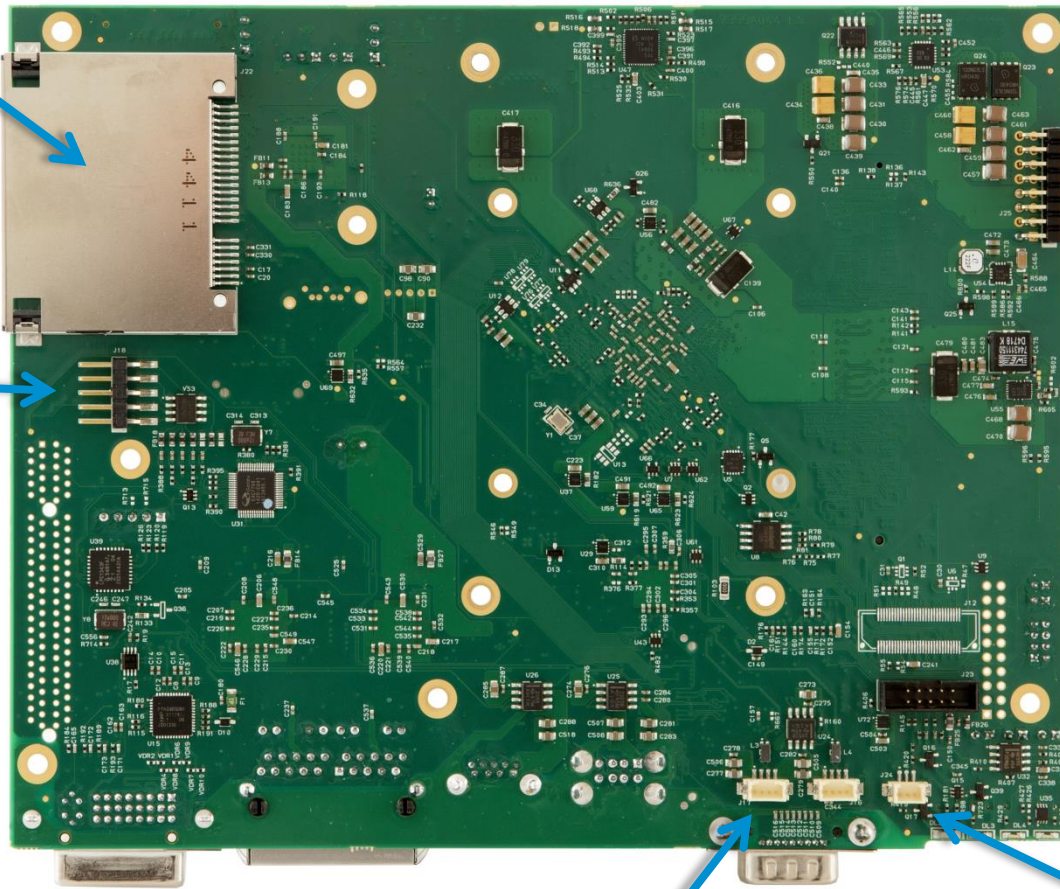
Resistive touchscreen connector



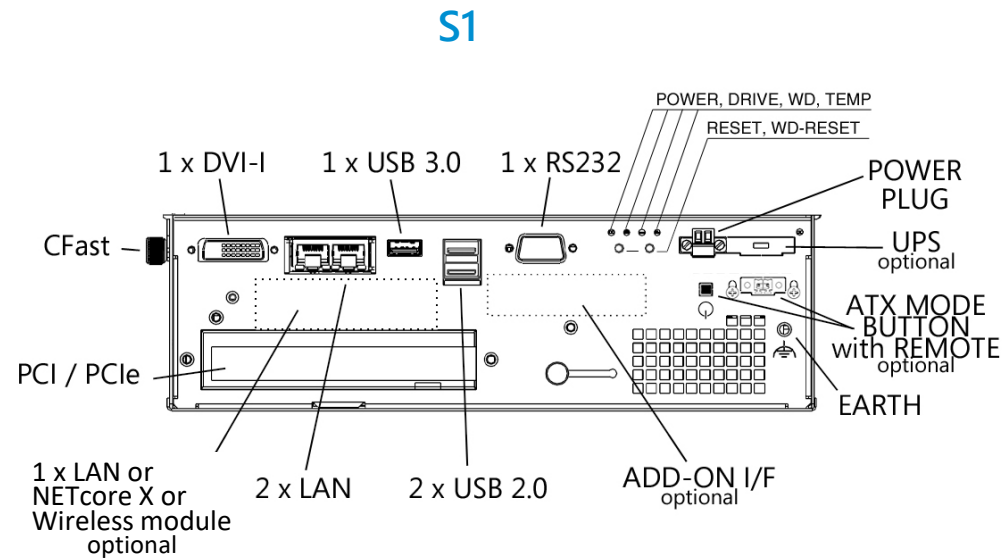
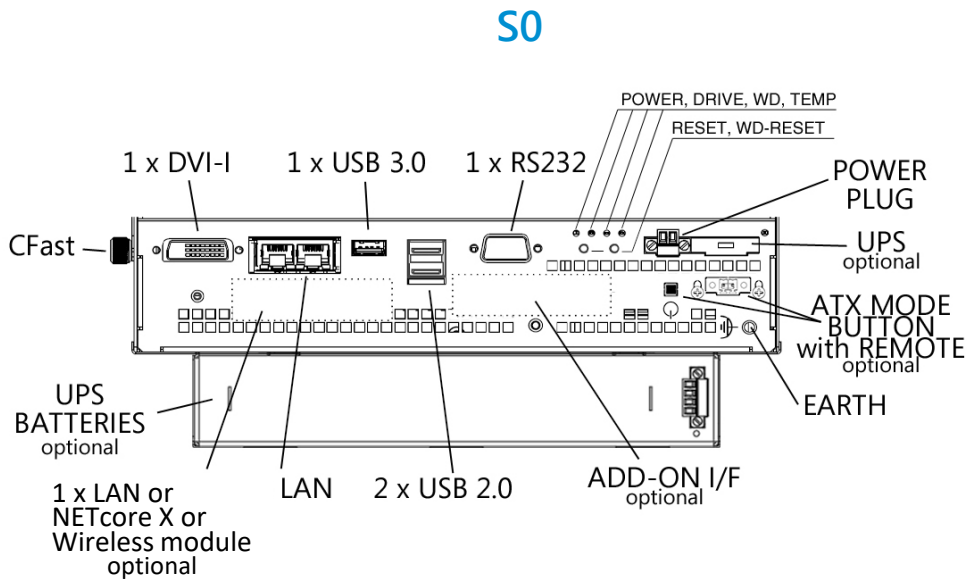
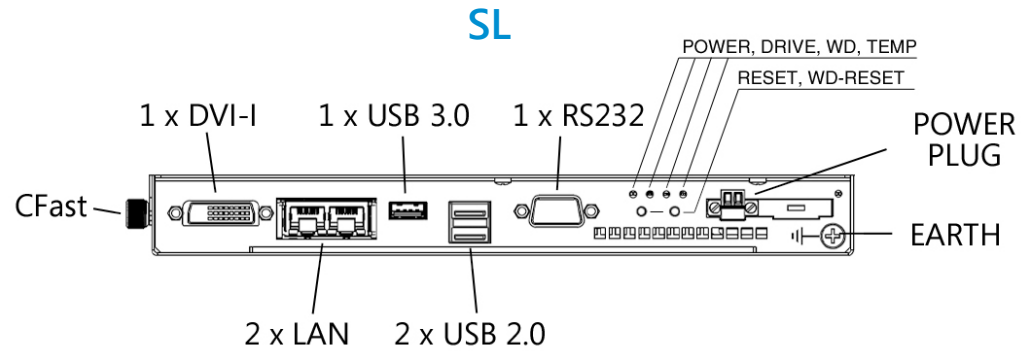
Front USB connector



P-CAP Touch connector



HT2200 - Rear Interfaces & Connectors



HT2200 - Processor



- Intel® **Bay Trail SoC** platform (Celeron and Atom processors)
 - 22nm technology process
 - Dual/quad core processors with 64bit architecture (Desktop/Mobile/Industrial)
 - L2 Cache – 512KB / 1MB / 2MB
 - Fast memory - DDR3 1333MHz RAM
 - Low consumption - 3W/10W TDP
- Processor
 - 10 W (Desktop)
 - **Celeron J1900**, 2GHz (2.41GHz burst frequency), 4 cores / 4 threads, 2MB L2 cache
- SoC (System on Chip), no companion chip, all the peripherals are managed directly by the processor

HT2200 - O.S. compatibility

- Intel® **Bay Trail platform** does not support:
 - Win XP Pro 32bit
 - Windows Embedded Standard 2009 (XPe SP3) 32bit
 - Win 2000/ 98/ NT
 - Win CE 5.0 Pro/Pro Plus
 - Win CE 6.0 Pro
- Operating systems **certified by ASEM**
 - Win 10 2016 IoT LTSP 64bit
 - Win 8.1 Industry Pro 32/64bit
 - Win 7 Pro/Ultimate 32/64bit
 - Win Embedded Standard 7E/7P 32/64Bit
 - Linux
- Operating systems supported by the Intel platform but not certified by ASEM
 - VxWorks
 - QNX

HT2200 - Integrated UPS (optional)

UPS integrated in the internal power supply unit

- With external battery pack - rear of the system mounting (solo S0, S1)
- With external battery pack - standalone wall mounting

UPS features

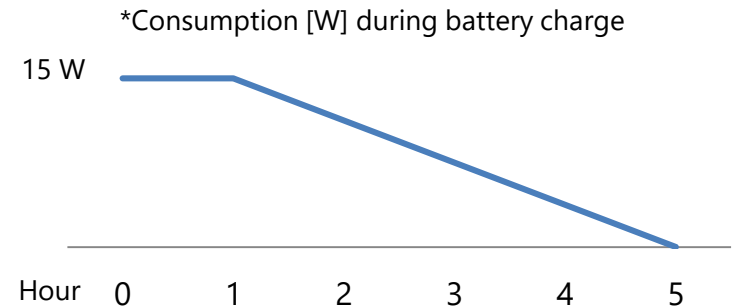
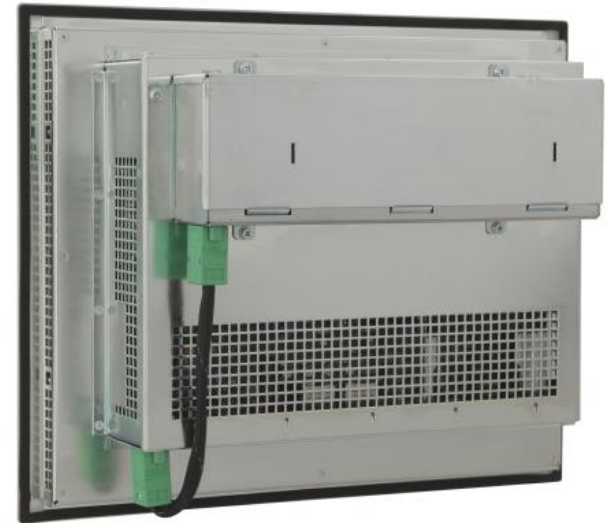
- 12V DC UPS battery backup system
- Input voltage intervention threshold 18V DC
- 10' nominal duration at 25°C, full charge, 5A load (estimated value)
- 15W max consumption during battery charge*

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



HT2200 - Mass Storage

CFast (all versions)

- 1 x bootable CFast SATA II slot on board with external access



SSD mSATA (all versions)

- 1 x onboard connector for direct insertion of mSATA SATA II



2,5" SSD/HDD (version S0 or in S1 alternative to mSATA)

- 1 x onboard connector for 2,5" SSD/HDD SATA II with internal installation kit



HT2200 - Optional add-on boards for versions S0/S1

Position A

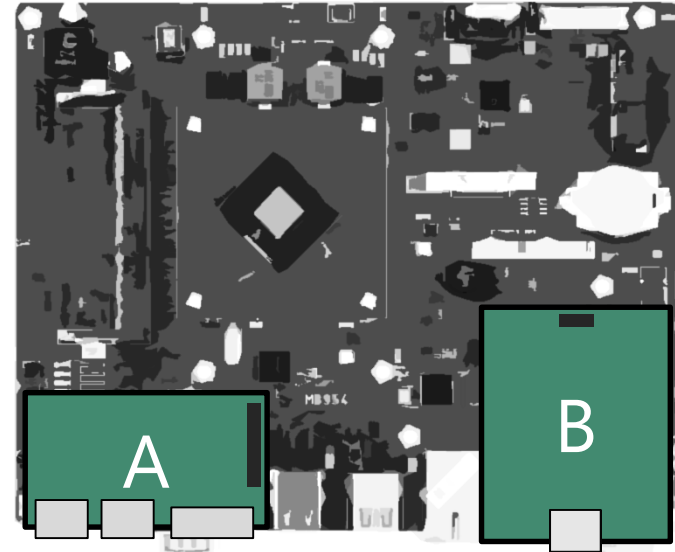
One board among:

- 1 x RS232/422/485 + 1 x USB 2.0
- 1 x RS232/422/485 isol.+ 1 x USB 2.0
- 2 x RS232
- 2 x USB 2.0

Position B

One board between:

- 1 x LAN Gigabit
- 1 x NETcore X fieldbus board
- 1 x Wireless modules carrier



Fieldbus available for NETcore X:
EtherCAT *Master/Slave*
PROFINET *Controller/Device*
EtherNet/IP *Scanner/Adapter*
PROFIBUS *Master/Slave*
CANopen *Master/Slave*

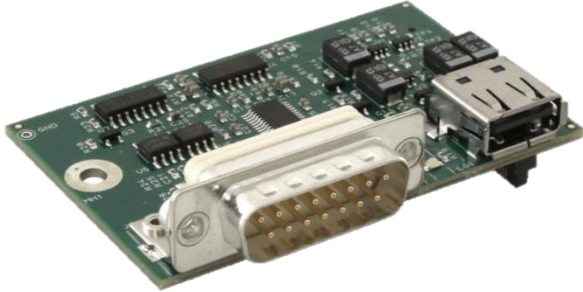
HT2200 - Expansion slot & ASEM add-on

Add-on/Slot \ Version	SL	S0	S1
Add-on	No add-on	Position A (60pin-H), one board among: <ul style="list-style-type: none"> • 1 x RS232/422/485 + 1 x USB • 1 x RS232/422/485 opto + 1 x USB • 2 x RS232 • 2 x USB 2.0 Position B (26pin), one board between: <ul style="list-style-type: none"> • 1 x LAN Gigabit • 1 x NETcore X fieldbus • 1 x wireless modules carrier 	
PCI / PCIe x1	No slot	No slot	1 board among: <ul style="list-style-type: none"> • NETcore X APCI • CAN RAW PCI • Customer PCI/PCIe*

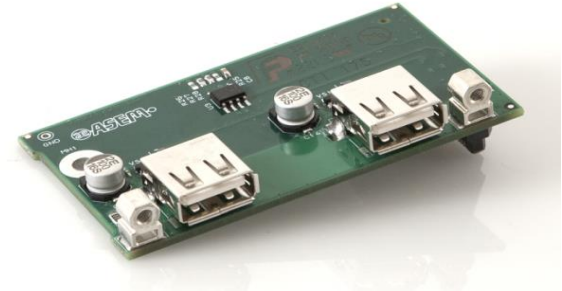
* max 3W

HT2200 - Add-on interfaces Position A (optional)

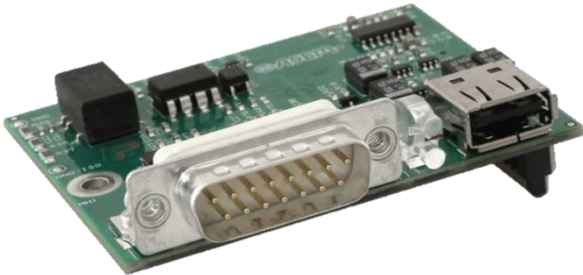
1 x RS232/422/485 (DB15M) + 1 x USB 2.0



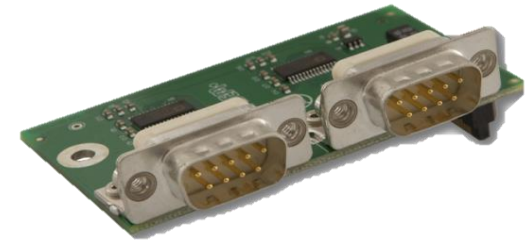
2 x USB 2.0 (Type A)



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

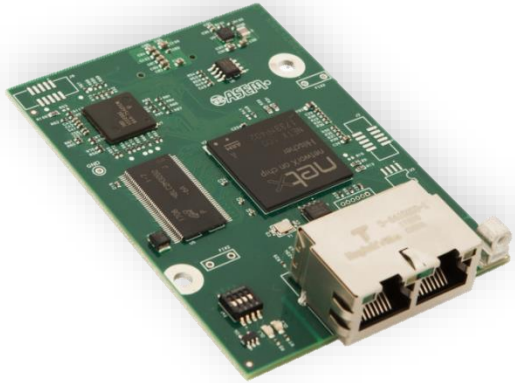


2 x RS232 (DB9M)

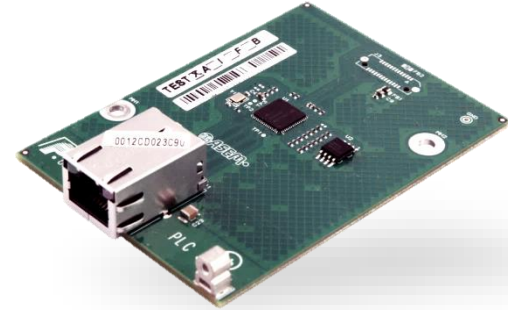


HT2200 - Add-on interfaces Position B (optional)

1 x NETcore X fieldbus



1 x 10/100/1000 Mbps Ethernet (RJ45)

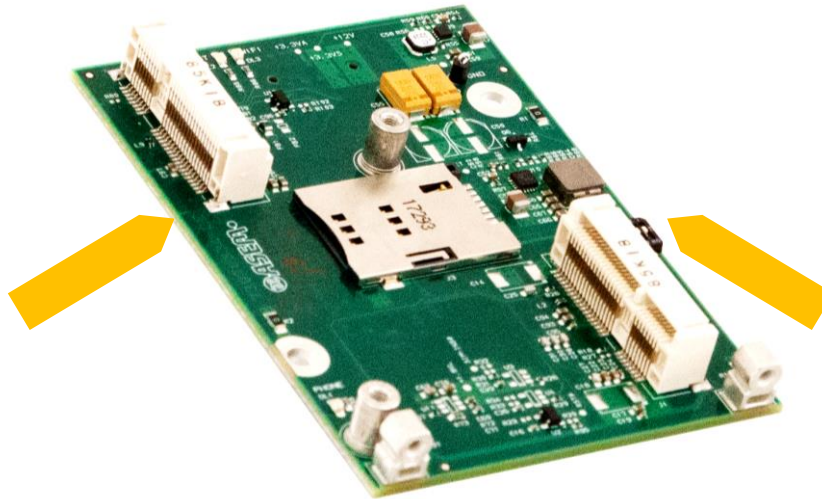


HT2200 – Wireless communication modules (optional)

WiFi half MiniPCle module



Carrier board



Mobile network
2G/3G/4G modem
MiniPCle modules



		3G	4G/LTE	4G/LTE-AM
3G	Europe	✓	✓	-
	North/Latin America	✓	-	✓
	Asia	✓	✓	-
	Africa&Oceania	✓	✓	-
4G/LTE	Europe		✓	-
	North America		-	✓
	Latin America	n.a.	✓	✓
	Asia		✓	-
	Africa&Oceania		✓	-

HT2200 - Long term availability



7/10 years

Product Availability

2015

6/12 months

End Of Life
procedure

Support & Repairs

+ 5 years

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