

# ICEFIRE 2

## 10.4" Mobile Clinic Assistant

- 10.4" TFT XGA LCD
- Intel® Atom™ N2800 1.86GHz processor
- Powered by Windows® Embedded Standard 7 P
- Built-in 8GB mSATA storage
- Bluetooth, Wi-Fi, 3.75G wireless with GPS
- 1D/2D barcode reader, 13.56MHz RFID reader
- Dual-mode input (Digitizer + Multi-Resistive Touch)
- Dual hot swappable battery
- Dual Camera:
  - 1.3-megapixel front camera
  - 3.0-megapixel rear camera



## High Performance, Low Power Consumption CPU for Fanless Design

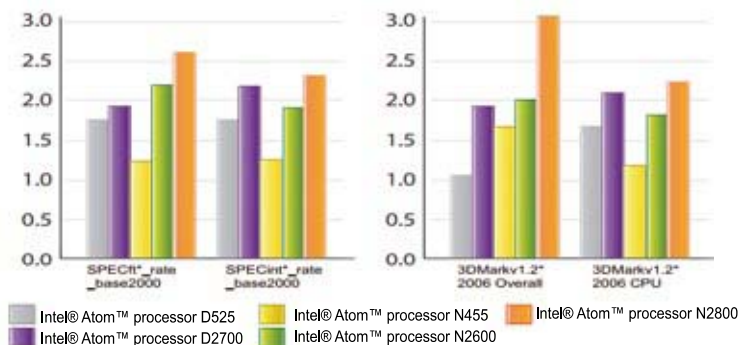
The new generation Intel® Atom™ N2800 processor provides reduced power consumption with high performance suitable for mobile devices in industrial computing. Benefits include:

- Display options include two digital ports supporting extra LVDS/HDMI/VGA interface
- Two times improved graphics with two HD video support
- Faster memory up to DDR3 1066
- Support fan-less design

CPU Specification Comparison			
	ICEFIRE	ICEFIRE2	
Core Functionality	1.67 GHz (N455) 1.8 GHz (D525)	1.6 GHz (N2600) 1.85 GHz (N2800)	
Process Technology / Packing Size	45-nm / 22x22	32-nm / 22x22	
Graphics Base Frequency	200 MHz (N455) 400 MHz (D525)	400 MHz (N2600) 640 MHz (N2800)	
Memory Technology	DDR3 667 (N455) DDR3 800 (D525)	DDR3 800 (N2600) DDR3 1066 (N2800)	
Max Memory Capacity	2GB (N455) 4GB (D525)	2GB (N2600) 4GB (N2800)	
CPU / TDP	D525 / 13W	N2600 / 3.5W	N2800 / 6.5W
Chipset / TDP	ICH8M / 2.4W	NM10 / 1.5W	NM10 / 1.5W
Power kit / TDP	Power / 7W	Power / 3W	Power / 3W
Total	22.4W	8W	11W

Processor Performance

Graphics Performance



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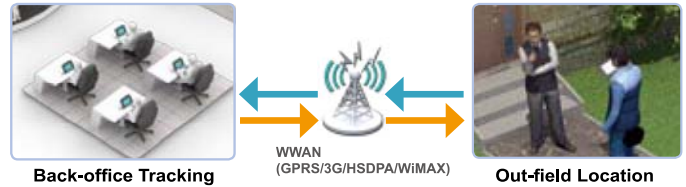
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# GPS Application : Position & Location

Together with wireless network technology (such as 3G), the built-in GPS tracks the exact location of the ICEFIRE users:

- Users can be located on a map to reference his/her own location in relation to other landmarks. With location based services, mobile workers can locate important destinations such as gas stations and customers in an unknown territory.
- Location information obtained from the GPS can be transmitted to the backend office through wireless broadband connectivity, allowing employees to be tracked while they are on the move.



## mSATA Storage

mSATA SSD leverages the speed and reliability of the SATA interface, providing high-performance and cost-effective storage for smaller devices and enabling more compact integration into a wide variety of applications. Compared to the traditional HDD and CF card storage, mSATA has the following advantages:

- Fast re-write capability
- Able to withstand vigorous vibrations
- Small in size



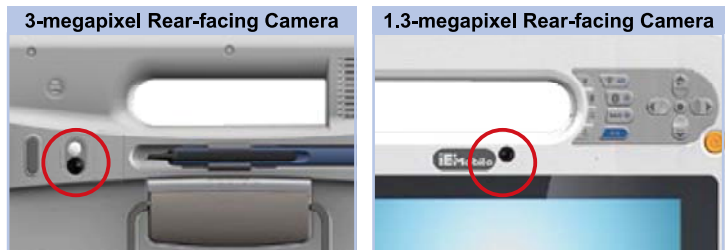
## Flexible Module Expansion Slot

Located at the back of the ICEFIRE 2, the module expansion slot is designed for easy and fast exchange of a variety of modules, including RFID readers. This design brings functional versatility to the ICEFIRE 2 to serve a diverse range of applications.



## Integrated Dual Camera

The ICEFIRE 2 is integrated with two camera, one on the front and one on the rear. The 3-megapixel rear-facing camera can be utilized for photographic and video documentation purposes. The 1.3-megapixel front-facing camera enables unified video communications wirelessly.



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# Daily Patient Record Case Study

## Background

A major Taiwan-based hospital with the second largest patient flow in the country has been changing its paper-based recording system into electronic recording systems. With 1,096 beds, approximately 4,000 outpatient visits per day and a bed occupancy rate of 85%, emergency response and after patient care are the most important services provided by this hospital.

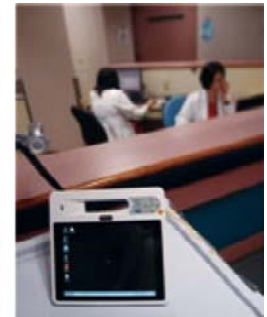
## Challenge

Previously, nurses relied on desktop computers and paper records to monitor patients' daily health information such as food intake, body temperature, and output. Daily records were recorded on a notebook located at each patients' bedside. Nurses found this paper-based method to be inconvenient as the records were easily misplaced or lost. Furthermore, hand written information were often misunderstood or hard to read. The hospital realized it was time to improve its daily patient recording system with an electronic-based system. The institution was in search for a mobile computing solution to enhance nursing efficiency and accuracy.



## Solution

The ICEFIRE 10.4" Mobile Clinic Assistant offers a mobile platform in which nurses can input and store patient information instantly. The built-in hand writing recognition function and the digitizer technology allow nurses to easily write on the tablet surface without mis-touch. In addition, the barcode and RFID readers are very helpful when it comes to identifying patient and medication. The tablet PC can be connected to the hospital's medical database through Wi-Fi, and patient records can be updated or retrieved safely and efficiently.



## Benefits

- 10.4" screen for easy viewing and operation.
- Dual-mode input with digitizer technology and resistive touch for hand writing recognition and mis-touch prevention.
- Built-in 1D/2D barcode and 13.56MHz RFID reader for automatic identification.
- Dual hot swap battery for increased device operation time.
- Ergonomic design for easy carry and easy use.

## Flexible Installation Design



Secure the holder onto the top of the docking station by inserting four retention screws

Move the stand downward. Slide the two latches again to lock the stand into place

## Mounting with Docking Station

The optional docking station of the ICEFIRE2-T10 can be installed on any VESA compliant mounting device. The VESA mount retention screw holes of the docking station are shown in 483H746H Figure 3-13. Follow the instructions in the user manual of the mounting device to mount the docking station securely.



100mm x 100mm VESA Mount

VESA Mounting Retention Screw Holes (Docking Station)

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## Selection Guide

		ICEFIRE			ICEFIRE 2		
Model		ICEFIRE-T10A-HU/2G-32S-R11	ICEFIRE-T10A-TR/2G-32S-R10	ICEFIRE-T10A-ET/2G-32S-R10	ICEFIRE2-T10-HU-R10	ICEFIRE2-T10-TR-R10	ICEFIRE2-T10-ET-R10
Display	LCD Size	10.4" TFT LCD					
	Brightness (cd/m <sup>2</sup> )	350 cd/m <sup>2</sup>					
	Max Resolution	1024 x 768 pixels XGA					
	Viewing Angle	88/88/88/88 Deg.					
	Touch Screen	Resistive Support Multi-touch and Gesture					
	Digitizer	256 levels @ full scale pressure resolution	N/A	N/A	2048 levels@ full scale pressure resolution	N/A	N/A
System	CPU	1.8GHz Intel® Atom™ D525			1.86GHz Intel® Atom™ N2800		
	Chipset	Intel® ICH8M			Intel® NM10		
	Operating System	Microsoft® Windows® Embedded Standard 7 P (WS7P)			Microsoft® Windows® Embedded Standard 7 P (WS7P)		
	Memory	1333MHz 2GB DDR3 SDRAM			1333MHz 4GB DDR3 SDRAM		
	Storage	32GB SSD			mSATA 8G SLC		
Communication	Wireless LAN	Wi-Fi 802.11a/b/g/n			Wi-Fi 802.11b/g/n		
	Bluetooth	Bluetooth V2.1+ EDR (Class 2)			Bluetooth V3.0 + EDR (Class 2)		
	Modem	WCDMA/HSUPA	N/A	N/A	WCDMA/HSUPA	N/A	N/A
	GPS	N/A	N/A	N/A	Option	Option	Option
Data Collection	Camera	3-megapixel and LED Light			1.3-megapixel CMOS camera (Front) / 3-megapixel CMOS camera (Rear)		
	Barcode	1D/2D Imager Scan Engine		N/A	1D/2D Imager Scan Engine		N/A
	RFID	13.56 MHz RFID supports ISO15693 and ISO14443A/B compliant		N/A	13.56 MHz RFID supports ISO 15693 and 14443A/B compliant		N/A
Fingerprint Reader	Yes	Yes	N/A	Yes	Yes	N/A	
Indicators & Buttons	LED Indicators	Power/ Wi-Fi/Bluetooth/ RFID/ Battery Status LED		Power/ Wi-Fi/Bluetooth/ Battery Status/	Power/ Wi-Fi/Bluetooth/ RFID/ Battery Status LED		Power/ Wi-Fi/ Bluetooth/ Battery Status
	Keys	5-way Navigation key/Barcode Scanner/RFID/LED Torch/Camera/Wi-Fi/Bluetooth/SAS/Function Key		5-way Navigation key/ Camera/Wi-Fi/Bluetooth/ SAS/Function Key	5-way navigation key/ Barcode Scanner/RFID/LED Torch/Camera/Wi-Fi/ Bluetooth/SAS/Function Key		5-way navigation key// Camera/ Wi-Fi/ Bluetooth/ SAS/ Function Key
I/O Interface	USB	1 x USB 2.0			1 x USB 3.0		
	LAN	1 x 10/100 Mbps			1 x 10/100/1000 Mbps		
	Audio	1 x 2W Speaker, 1 x Mic in					
	LED Torch	1 x LED Torch	1 x LED Torch	N/A	1 x LED Torch	1 x LED Torch	N/A
Power	Power Adapter	12V @ 5A @ 60W					
	Docking Power Adapter	19V @ 4.74A @ 90W					
	Battery	Dual 11.1V 1880mAh Li-ion Battery					
Environment	Operating Temperature	0°C to +40°C					
	Storage Temperature	-10°C to +60°C					
	Humidity	5%~95% non-condensing					
	Drop Survival	90 cm					
	Environmental Protection	IP 64 compliant front panel					
Certifications	CE/FCC, Medical-grade Class B EN 60601-1/ EN60950	CE/FCC, Medical-grade Class B EN 60601-1/ EN60950	CE/FCC	CE/FCC	CE/FCC	CE/FCC	
Physical Characteristics	Dimensions (LxWxH) (mm)	270 x 265 x 29					
	Weight	1.7 kg	1.7 kg	1.6 kg	1.7 kg	1.7 kg	1.6 kg

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## Ordering Information

Part No.	Description
<b>ICEFIRE: Intel® Atom™ D525 CPU with Windows® Embedded Standard 7</b>	
ICEFIRE-T10A-HU/2G-32S-R11	10.4" TFT-LCD 350 cd/m <sup>2</sup> XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ D525 1.8GHz CPU, Multi-Touch and Digitizer Dual Mode, 2GB DDR3 RAM, HSUPA, 802.11a/b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3-megapixel Camera, LED Torch, 32GB SSD, WS7P RoHS
ICEFIRE-T10A-TR/2G-32S-R10	10.4" TFT-LCD 350 cd/m <sup>2</sup> XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ D525 1.8GHz CPU, Resistive Multi-Touch, 2GB DDR3 RAM, 802.11a/b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3-megapixel Rear Camera, LED Torch, 32GB SSD, WS7P, RoHS
ICEFIRE-T10A-ET/2G-32S-R10	10.4" TFT-LCD 350 cd/m <sup>2</sup> XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ D525 1.8GHz CPU, Resistive Multi-Touch, 2GB DDR3 RAM, 802.11a/b/g/n Wireless, Bluetooth, 32GB SSD, WS7P RoHS
<b>ICEFIRE 2: Intel® Atom™ N2800 CPU with Windows® Embedded Standard 7</b>	
ICEFIRE2-T10-HU-R10	10.4" TFT-LCD 350 cd/m <sup>2</sup> XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ N2800 1.86GHz CPU, Multi-Touch and Digitizer Dual Mode, 4GB DDR3 RAM, HSUPA, 802.11b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3M Pixel Rear Camera, 1.3-megapixel Front Camera, LED Torch, 8GB mSATA, WS7P RoHS
ICEFIRE2-T10-TR-R10	10.4" TFT-LCD 350 cd/m <sup>2</sup> XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ N2800 1.86GHz CPU, Resistive Multi-Touch, 4GB DDR3 RAM, 802.11b/g/n Wireless, Bluetooth, 1D/2D Barcode Scanner, RFID, 3-megapixel Rear Camera, 1.3-megapixel Front Camera, LED Torch, 8GB mSATA, WS7P, RoHS
ICEFIRE2-T10-ET-R10	10.4" TFT-LCD 350 cd/m <sup>2</sup> XGA Industrial Mobile Clinical Assistant with Dual-core Intel® Atom™ N2800 1.86GHz CPU, Resistive Multi-Touch, 4GB DDR3 RAM, 802.11b/g/n Wireless, Bluetooth, 8GB mSATA, WS7P RoHS

## Model Variations

Part No.	Digitizer	Touch	Wireless	Bluetooth	3.75G	GPS	Barcode	RFID	Fingerprint Reader	Storage
<b>ICEFIRE: Intel® Atom™ D525 CPU with Windows® Embedded Standard 7</b>										
ICEFIRE-T10A-HU/2G-32S-R11	Digitizer	Resistive Multi-touch	802.11a/b/g/n	Ver. 2.1+EDR, Class 2	Qualcomm	N/A	1D/2D	RFID	Yes	32G SSD
ICEFIRE-T10A-TR/2G-32S-R10	N/A	Resistive Multi-touch	802.11a/b/g/n	Ver. 2.1+EDR, Class 2	N/A	N/A	1D/2D	RFID	Yes	32G SSD
ICEFIRE-T10A-ET/2G-32S-R10	N/A	Resistive Multi-touch	802.11a/b/g/n	Ver. 2.1+EDR, Class 2	N/A	N/A	N/A	N/A	N/A	32G SSD
<b>ICEFIRE 2: Intel® Atom™ N2800 CPU with Windows® Embedded Standard 7</b>										
ICEFIRE2-T10-HU-R10	Digitizer	Resistive Multi-touch	802.11b/g/n	Ver. 3.0+EDR Class 2	Qualcomm	Option	1D/2D	RFID	Yes	8G mSATA
ICEFIRE2-T10-TR-R10	N/A	Resistive Multi-touch	802.11b/g/n	Ver. 3.0+EDR Class 2	N/A	Option	1D/2D	RFID	Yes	8G mSATA
ICEFIRE2-T10-ET-R10	N/A	Resistive Multi-touch	802.11b/g/n	Ver. 3.0+EDR Class 2	N/A	Option	N/A	N/A	N/A	8G mSATA

## Packing List

Item	Part No.	HU	TR	ET
Digitizer Pen	7Z000-SU5E10S06AU00X-RS	•		
Stylus	43125-0002C0-00-RS		•	•
Battery Pack	31603-000016-RS	•	•	
Battery Pack-B	31603-000020-RS			•
Medical-grade Power Adapter (12V/60W)	63040-010060-020-RS	•	•	
Non-Medical-grade Power Adapter (12V/60W)	63040-010060-030-RS			•
User's Manual CD	7B000-000552-RS	•	•	•



## Optional Accessory List

Item	Part No.	Description
Docking Station	ICEFIRE-T10A-DSNM-R10	ICEFIRE Docking Station Without Docking Adapter, Normal type
	ICEFIRE-T10A-DSRG-R10	ICEFIRE Docking Station Without Docking Adapter, Rugged type
Docking Station Power Adapter	19B00-000288-00-RS	Standard power adapter for docking station
	19B00-000289-00-RS	Medical grade power adapter for docking station
	63040-290090-010-RS	Car cigarette power adapter for docking station
Smart Card Reader	ICEFIRE-T10A-SCR01-R10	USB 2.0 (Full Speed) Smart Card Reader Complies with ISO7816-1,2,3 for ICEFIRE-T10A
Battery Pack	31603-000016-RS	11.1V 1880 mAh Battery
Battery Pack-B	31603-000020-RS	11.1V 1880 mAh Battery, Black
Digitizer Pen	7Z000-SU5E10S06AU00X-RS	Digitizer Sensor Pen
Stylus	43125-0002C0-00-RS	Touch Pen
Carrying Case	7Z000-ICEFIRE-T10APOUCH-RS	Black, leather protective bag with shoulder strap

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