Healthcare Information Terminals

Enhancing Patient Satisfaction and Caregiver Productivity

- IP Nurse Call Applications
- Nurse Station Terminals
- Bedside Information Terminals
- Bedhead Unit Terminals
- Medical Cart Computers

One Touch, Right **HIT**

ADVANTECH Digital Healthcare

intel IoT Solutions Alliance Premier

www.advantech.com/digital-healthcare/

Advantech's HIT series systems are available in a wide range of sizes (10 ~ 21.5") to ensure flexible installation in diverse environments.

Real-time data access and delivery

Doctors can review and update medical records on personal mobile devices.

Nurse station terminals are used to manage patient requests, status updates, and ward messages.

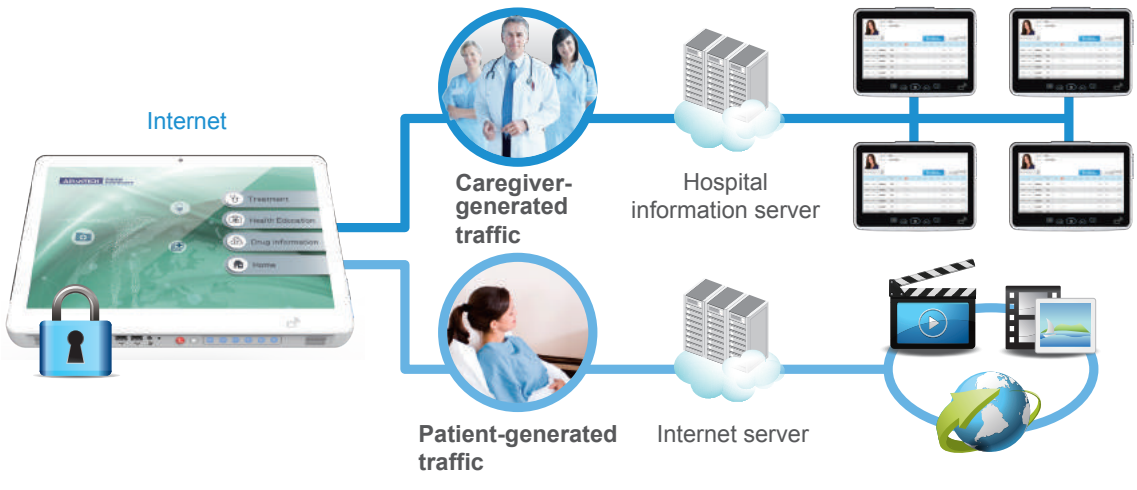
HIT-W121B/153/183

Emergency call alerts are presented on the terminal dashboard.

Nurse Call Button

The red emergency call button and LED indicators can be integrated with a hospital's existing nurse call system and support hardwired functionality to provide continual support in emergency situations or in the event of a power failure.

Enhances Data Security



Rear I/O features dual isolated Ethernet ports to enable separate Internet (patient use) and intranet (caregiver use) traffic andenhance data security

Patient requests and call alerts are also presented on the ward terminal mounted by the door.

The LED light of the specific unit terminal from which the call originated will illuminate to facilitate rapid response.

Patient information and requirements are presented on bedhead unit terminals.

Delivers Optimal Call Quality

Advantech's HIT-W183/W153 features a noise-cancellation handset and dedicated audio codec to guarantee optimal sound quality for nursing assistance calls.

True flat touchscreen

The true flat touchscreen with IP65-rated front panel ensures easy cleaning and maintenance

Ideal system design

Ultra slim and stylish form factor suitable for healthcare and hospitality applications

Medical-grade certification

Medical-grade and ITE certification ensures complete compliance with healthcare regulations

Power over Ethernet technology

Can be equipped with PoE capabilities (HIT-W153) to support the nurse call station control panel

High-performance solution

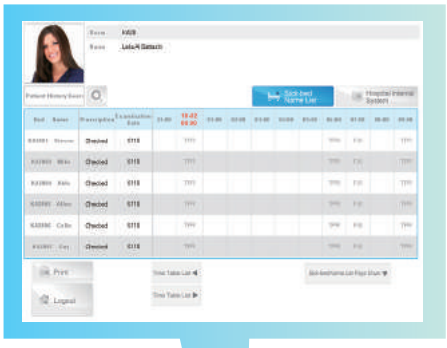
Powered by an all-in-one Intel® Celeron® N4200 processor

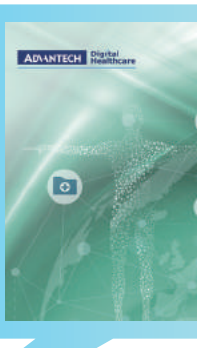
M.2 2230 and 2242

Supports M.2 2230 for Wi-Fi/Bluetooth and M.2 2242 for SSD storage

Rich peripheral options

Can be integrated with diverse peripherals such as a handset, RFID/NFC technology, smart card reader, capture card, barcode scanner, magnetic strip reader, or nurse call button





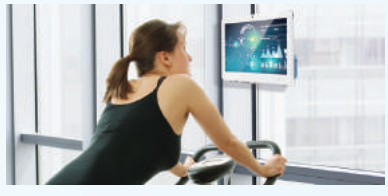
Nurse Station Terminals

Advantech's HIT terminals can be mounted on nurse station counters, medical carts, and patient bedsides to serve as nurse station terminals, mobile medical cart devices, and beside infotainment terminals. These terminals allow healthcare staff to access patient medical records and hospital information systems from any location within the hospital and can be used to retrieve laboratory results, monitor patient vital signs, and document treatment observations and changes. Additionally, medication tracking and administration can be managed through these terminals to reduce paper and potential errors while improving productivity and service quality.

Remote Healthcare Applications *Lightweight, slim design for flexible installation*

Remote Long-Distance Care

Hemodialysis Treatment Center



Fitness Centers

Bed-Head Unit Terminals

Bedhead unit terminals equipped with handsets facilitate communication between patients and nursing staff and can be used to present relevant patient/treatment information. In addition to improving the flow of information, bedhead unit terminals eliminate paper-based hospital processes by enabling staff to update medical records and patient data from nurse station terminals.

Bedside Terminals

Beside terminals support a range of functions that enable patients to watch movies/TV, make phone calls, play games, surf the Internet, send emails, access hospital intranets, and request nurse assistance. Patients can also use the terminals to manage the ward environment, such as adjust beds, lighting, curtains, and other equipment. For healthcare staff, beside terminals can be used to access patients' medical records and test results.

Medical Equipment *Customizable systems for diverse medical solutions*

CT Workstations

Nursing Cart

Medical Treatment Control Panel

Application Stories

Changhua Christian Hospital Implements HIT-W101C Bed-Head Unit Terminals to Improve Data Access

YThe Changhua Christian Hospital (CCH) is an international medical institution with high healthcare standards and the largest medical center located in the Changhua area. In 2016, CCH began a series of reforms aimed at achieving an intelligent hospital. One of the initiatives was to build an intelligent ward (iWard). CCH also wanted to implement digital devices to eliminate paper-based hospital processes. In most wards, handwritten cards on patient bedhead units are used to present patients' basic information. However, such cards do not allow care providers to access additional patient information. Consequently, CCH installed Advantech's HIT-W101C bedhead unit terminals to enable staff to easily access and update patients' medical information, including patient records, physiological measurement results, and the names of the responsible on-duty nurse and attending doctor. The provision of iWard enhances communication between patients and care providers, while the installation of bed-head unit terminals provides doctors with immediate access to patient information, eliminates paperwork, and reduces potential errors.

Austco Adopts Advantech's HIT-W121 for IP Nurse Call Solution

Austco is one of the world's forerunners in providing advanced technologies for nurse call systems. Austco's Tacera Nurse Call System is an integrated hardware-software solution for healthcare communication that connects all devices in a hospital infrastructure using Internet Protocol (IP) technology. Advantech's HIT-W121 terminals with a speech handset are employed in the Tacera solution as nurse station terminals. Equipped with Austco's Tacera Nurse Call software, these HIT-W121 devices display all calls received from ward/bed/corridor devices within the monitored area in real time, allowing nurses to take action according to emergency priority and, if necessary, notify doctors and relevant staff members. Featuring a slim (43 mm), fanless design and IP65 rating for water and dust ingress protection, HIT-W121 is suitable for use as a medical terminal because of the ease of sanitizing the system. The all-in-one design with touchscreen also minimizes peripherals and wiring, making the system easy to install in diverse environments with limited space.

Nurse station terminals enable the centralized management of nurse calls within specific areas by providing nursing staff with a real-time overview of all alarms and events on a single screen in order to streamline workflows and facilitate efficient care. This is expected to improve nurses' situational awareness, alleviate staff fatigue, minimize unanswered calls, and limit searching for caregivers, ultimately resulting in increased staff and patient satisfaction.

Response Care Integrates HIT-W121B as a Multifunctional Solution for Senior Healthcare

Response Care is an American provider of nurse call solutions and communication systems that facilitate the provision of quality care. With the aim of improving care quality, simplifying communication, and increasing safety for care facility residents, Response Care developed a multi-functional solution based on Advantech's HIT-W121B all-in-one terminal. Unlike traditional nurse call master stations, Advantech's HIT-W121B allows staff to monitor task fulfillment and improve operational efficiency. Healthcare providers can mark calls for assistance as "received" to inform patients/care facility residents that they will be attended to soon. After providing assistance, caregivers can then mark the call as "responded" to confirm task fulfillment. Using this system, care providers can respond to every call, map operational processes, and optimize workflows.

This multi-functional solution serves as a modern emergency call center and enables facility administrators to monitor the performance of aging life care professionals. By reviewing workflow reports, administrators can analyze key metrics such as response time, action taken, and call prioritization in order to improve the response quality, increase staff productivity, eliminate wasted time, and ensure prompt and appropriate healthcare.

Model Name		HIT-W101C	HIT-W121B	HIT-W153 / HIT-W183	
System	Processor	NXP i.MX6 quad-core, 1 GHz	Intel® Celeron® J1900, 2 GHz	Intel® Pentium® quad-core N4200, 2.5 GHz (burst)	
	Memory	1 x 2 GB DDR3	1 x 4 GB DDR3L (up to 8 GB)	1 x 4 GB DDR3L (up to 8 GB)	
	Storage	8 GB of eMMC NAND flash	SSD (64 GB default)	M2. 2242 SSD (64 GB default)	
	Web Camera	2 Megapixels	5 Megapixels	5 Megapixels	
	Bus Expansion	NA	2 x Mini PCIe	1 x M.2, 1 x full-size mini PCIe	
Display	Size	10.1" TFT LED panel	11.6" TFT LED panel	15.6" TFT LED panel	18.5" TFT LED panel
	Luminance	250 cd/m2	200 cd/m2	300 cd/m2	350 cd/m2
	Max. Resolution	1280 x 800	1366 x 768	1920 x 1080	
Touchscreen	Type	Projected capacitive	Projected capacitive	Projected capacitive	
Audio	Speakers	2 x 1W	2 x 2W	2 x 3W	
	Microphone	Built in	Built in	Built in	
	Second Audio Codec/Handset	NA	NA	Built in	
I/O Ports	Rear I/O	1 x USB 3.0	1 x USB 3.0	1 x USB 3.0 (default)	
	Vertical I/O	1 x LAN (with optional PoE), 1 x DC jack, 1 x 2-pin green jack, 1 x SMA jack (optional), 1 x COM (isolated), 1 x RJ12	1 x LAN (with optional PoE), 1 x DC jack, 1 x 2-pin green jack, 1 x SMA jack (optional), 1 x COM (isolated), 1 x RJ12	2 x isolated LAN	2 x isolated LAN (1 with PoE support)
				1 x LAN (with optional PoE), 1 x DC jack, 1 x 4-pin green jack, 1 x SMA jack (optional), 1 x RJ12	
	Front I/O	1 x Mic in/line out, 1 x reset button	2 x USB (located at the side), 1 x mic in/line out (located at the side), 1 x barcode scanner (optional), 1 x reset button (optional)	2 x USB 2.0, 1 x TRRS, 1 x barcode scanner (optional), 1 x reset button, 1 x nurse call button (optional)	
				1 x Reading light on/off, 1 x volume up, 1 x volume down, 1 x brightness up, 1 x brightness down, 1 x screen on/off	
Network	LAN (Isolated)	2 x RJ45 10/100/1000 (rear VESA mount)	2 x RJ45 10/100/1000 (rear VESA mount)	2 x RJ45 10/100/1000 (rear VESA mount)	
	Wi-Fi Module	802.11 ac/b/g/n + Bluetooth 4.0 (optional)	802.11 a/b/g/n + Bluetooth 4.0	M.2 2230, 802.11 a/b/g/n/ac + Bluetooth 4.1	
Software	OS	Android 5.1	Windows, Linux, Android	Windows 10, Linux, Android	
Default Module	Smart Card Reader	NA	Default	1 x as standard (with optional second module)	
	RFID	Optional	Default	Default	
Mechanical	Mount Options	Flat wall mount	VESA 75 x 75	VESA 75 x 75 / 100 x 100	
	Dimensions (W x H x D)	247 x 189 x 22 mm	302.5 x 222.25 x 43 mm	398.4 x 280 x 41 mm	465.4 x 321 x 41 mm
	Weight	740 g	2.3 kg	3.3 kg	3.95 kg
	Optional Accessories	Handset kit	Handset kit, magnetic strip reader, barcode scanner, TV tuner	Handset kit, magnetic strip reader, barcode scanner, nurse caller, TV tuner	

Model Name		HIT-BX2S			
Processor	CPU	6th Gen Intel® Core™ U-series i7 6600U	I/O Ports	Rear I/O	2 x Ethernet (10/100/1000 Mbps), 2 x COM (with optional isolation COM), 1 x VGA, 1 x HDMI, 2 x USB 2.0, 2 x USB 3.0, 1 x DC jack, 1 x SMA jack TV tuner (optional), 2 x Wi-Fi antenna jack, 1 x line/mic in, 1 x line/headphone out, 1 x power switch, 1 x LED power/HDD indicator
	Base Frequency	2.6 GHz (dual core)/2.4 GHz (dual core)			
	Cache	2/4 MB L3 cache			
Memory	Technology	1 x SODIMM DDR3L, 1600 MHz	Expansion	Mini PCIe	2 x Full-size mini PCIe with SIM holder
	Capacity	8 GB default (2 x 4 GB), supports up to 16 GB	Software	OS	Windows 10 IoT (Ubuntu optional)
	Socket	2 x 204-pin SODIMM	AC/DC Power	Input Voltage	100 ~ 240 VAC, 1.5A @ 50 ~ 60 Hz
Display	Graphics Engine	DirectX 11.3, OpenGL 4.4, OpenCL 2.1 Full AVC/VC1/MPEG2 HW Decode		Output Voltage	Standard grade: 12 VDC, 3.0A max. Medical grade: 12 VDC, 3.75A max.
	VGA	1920 x 1200 @ 60 Hz / 2480 x 1152 @ 60 Hz with reduced blanking		Power Management	ACPI
	HDMI/Display Port	HDMI 1.4a for HD video playback with up to 4096 x 2169 resolution @ 24 Hz		RTC Battery	Lithium 3 V/210 mAH
Communication	LAN	Intel i219 & i210, 10/100/1000Mbps	Physical Characteristics	Dimensions (W x H x D)	205.9 x 58.6 x 224 mm
	WLAN	Wi-Fi 802.11 a/b/g/n, 2T2R		Weight	2.7kg
	Bluetooth	BT 4.0		Mount Options	Compatible with TV mount kits
Audio	Chipset	High Definition (HD) Audio, line in, line out, mic in	Environment	Operating Temperature	0 ~ 40 °C
Storage	mSATA	1 x Full-size		IP Rating	IPX1 entire system
	SATA	1 x HDD/SSD (128 GB SSD default)		Vibration	1G
				Shock	10G
				Certification	CE/FCC/CCC/CB/ITE UL, EN60950, EN60601-1

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