BUZZ
15600 | MULTI-TOUCH INFORMATION GATEWAY
Next-generation OR Integration platform based on computer and network technology rather than classical rack-based hardware. Efficiently designed to route medical images, patient data and video sources to be viewed within an OR environment.

- Base unit with brilliant 42" full HD (1920x1080 pixels) multi-touch display
- Ultra-slim infrared touch control replacing mouse and keyboard
- High-performance server-grade workstation with Hexa Core Intel Xeon W3680 CPU (3.33 GHz, 6 cores, 12MB cache), 6 GB of main memory and 320 GB storage
- Routing of any display content to connected external displays
- Video out functionality provides two outputs (multi-touch display and one additional display) from the PC with up to full HD resolution. Additional video-in/out functionality provided through articles #15601 and #15604.
- On-wall mounting for compact all-in-one system setup with workstation attached to touch display
- Integrated sound system with speakers, iPod/iPhone dock and volume control brings digital music in the OR
- CD/DVD drive and USB 3.0 ports at PC and additional USB ports at display for import of medical image data stored on external media
- Seamless extension to fully integrated IGS operating room with next-generation Brainlab IGS, e.g. Curve and Curve ceiling-mounted
- Full integration with databases such as PACS and web-based HIS and documentation such as HD streams and recordings for easy data access
- Fast simultaneous access to e.g. PACS/hospital network and integration with e.g. IGS C-Arms via 2x high-speed network connection (up to 1 Gbit/s each)
- Brainlab Session Sharing: Viewing and control of Buzz from Digital Lightbox or Curve
- Brainlab Session Sharing: Viewing and control of Curve from Buzz
- Customer site pre-requisite for Brainlab Session Sharing: systems connected to local network infrastructure (minimum 100 Mbit/s, recommended 1 Gbit/s, effective network speed 40 Mbit/s, recommended maximum latency 2 ms)
- Intuitive Brainlab operating system for patient-centric data handling, application and display management
- Central "Home Button" ensures intuitive system control
- Intuitive content management of available displays via "drag & drop" functionality
- Streamlined patient-centric access to DICOM and Brainlab xBrain image data from multiple sources (PACS, CD/DVD, USB, Network) - DICOM functionality requires article #30038
- Unified search and load of patient image data from all available sources with optimized usability, including intelligent pre-fetching and buffering of patient image data for increased performance
- Ability to merge different patient data sets
- Export of treatment documentation (e.g. screenshots) and plans to network storage or USB
- HIPAA-compliant feature set including authentication, accountability log and automatic log-off
- Video- and audio-conferencing-ready through built-in webcam and microphone
- Future-proof and scalable solution through modular software concept
- Built-in power supplies for fibre-optical transfer lines
- Requires external power switch for display (not included)

Power Input: 100-240V; 50/60Hz
Power Consumption

Touch Display (incl. transfer lines) Max. 350W
Workstation (incl. transfer lines) Max. 600W

Certificates and Classifications (Workstation and Touch Display)

ETL
IEC 60601-1:2005 (3rd edition)
ANSI/AAMI ES 60601-1:2005/A2:2010
CAN/CSA-C22.2 No. 60601-1:08
SN EN60601-1:2006
IEC 60601-1-2
JIS T 0601-1-2
IP 20 (touch area designed according IP 54 requirements)
CE, RoHS

I/O connections (total, available with article #15601 and #15604)
Total of up to 6 Full HD video outputs
Up to 4 video signals with up to Full HD resolution can be displayed simultaneously
2x USB 2.0 and 2x USB 3.0

ENVIRONMENTAL REQUIREMENTS

Temperature (Operation) 10°C to 35°C [50°F to 95°F],
Temperature (Storage) -10°C to 50°C [-14°F to 122°F],
Humidity (Operation) 20% to 80%. (non-condensing),
Humidity (Storage) 10% to 90% (non-condensing)

TOUCH DISPLAY

Cleanability Alcohol-based (e.g. Meliseptol, Mikrozid AF Liquid)
Alkylamine-based (e.g. Incidin Plus 2%)
Active oxygen-based (e.g. Perform)
Aldehyde/chloride-based (e.g. Antiseptica Kombi – Flächendesinfektion)

Panel Size 42"
Resolution Full HD (1920x1080)
White Luminance 450cd/m²
Viewing Angle 178° horizontal, 178° vertical
Contrast Ratio Typ. 1200:1
Color Depth 10bit, 1.06 Billion colors
Technlogy Active Matrix TFT, IPS panel
DICOM DICOM preset, re-adjustable in field by Brainlab support
Touch Screen Infrared based multi-touch panel
Glass Tempered safety glass with antireflection
I/O connections 2x USB 2.0 input
Audio Control Direct volume control via touch panel

Dimensions (workstation)

Heighth 648mm
Width 1842mm
Depth total 180mm
Weight total 74kg
Weight without holder wall 60kg

Dimensions (workstation detached from display)

Width Display+Speakers 1309mm
Width design cover 533mm

WORKSTATION

Processor Intel Xeon W3680 (3.33 GHz, 6 cores, 12MB cache)
<table>
<thead>
<tr>
<th><strong>RAM</strong></th>
<th>6 GB DDR3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard disk</strong></td>
<td>320 GB</td>
</tr>
<tr>
<td><strong>Operating system</strong></td>
<td>Windows 7 64-bit (Embedded Standard)</td>
</tr>
<tr>
<td><strong>Graphics</strong></td>
<td>Nvidia Quadro 2000 [PCI Express 2.0, 1 GB RAM]</td>
</tr>
<tr>
<td><strong>I/O connections</strong></td>
<td>2 x LAN 10/100/1000 (galvanically isolated)</td>
</tr>
<tr>
<td></td>
<td>2 x USB 3.0</td>
</tr>
<tr>
<td></td>
<td>1 x CD/DVD writer</td>
</tr>
<tr>
<td><strong>Video Output (incl. Main display)</strong></td>
<td>4 x Full HD DVI output (with article #15601)</td>
</tr>
<tr>
<td></td>
<td>2 x Full HD DVI output (without article #15601)</td>
</tr>
<tr>
<td><strong>Video Input (with article #15601)</strong></td>
<td>Formats: S-Video, Composite, HD-SDI, DVI, RGB/VGA</td>
</tr>
<tr>
<td></td>
<td>Two of the connected video signals can be displayed simultaneously</td>
</tr>
<tr>
<td><strong>Audio</strong></td>
<td>Integrated sound system with speakers, iPod/iPhone dock and volume control. Supported devices: iPod Touch 2nd generation, 3rd generation, 4th generation, iPhone 3G(S), iPhone 4(S)</td>
</tr>
<tr>
<td></td>
<td>Line-Out - for external audio system (e.g. speakers)</td>
</tr>
<tr>
<td></td>
<td>Line-in - for external audio sources</td>
</tr>
<tr>
<td></td>
<td>Microphone-In - for external microphone</td>
</tr>
<tr>
<td></td>
<td>All galvanically isolated</td>
</tr>
</tbody>
</table>

**15610 | IN-WALL MULTI-TOUCH INFORMATION GATEWAY**

Next-generation OR integration platform based on computer and network technology rather than classical rack-based hardware. Efficiently designed to route medical images, patient data and video sources to be viewed within an OR environment.

- Base unit with brilliant 42" full HD (1920x1080 pixels) multi-touch display
- Ultra-slim infrared touch control replacing mouse and keyboard
- High-performance server-grade workstation with Hexa Core Intel Xeon W3680 CPU (3.33 GHz, 6 cores, 12MB cache), 6 GB of main memory and 320 GB storage
- Routing of any display content to connected external displays
- Video out functionality provides two outputs (multi-touch display and one additional display) from the PC with up to full HD resolution. The additional display is either an external display or a secondary in-wall touch display (requires article #15605). Additional video-in/out functionality provided through articles #15601 and #15604.
- In-wall mounting of main display for superior hygiene and ergonomics. PC location flexibility depending upon OR workflow or space constraints, PC can be located either inside or outside the OR.
- Includes mounting frame optimized for easy installation and servicing
- Includes transfer lines for connection between the PC unit and Buzz touch display
- CD/DVD drive and USB 3.0 ports at PC and additional USB ports at display for import of medical image data stored on external media
- Seamless extension to fully integrated IGS operating room with next-generation Brainlab IGS, e.g. Curve and Curve ceiling-mounted
- Full integration with databases such as PACS and web-based HIS and documentation such as HD streams and recordings for easy data access
- Fast simultaneous access to e.g. PACS/hospital network and integration with e.g. IGS C-Arms via 2x high-speed network connection (up to 1 Gbit/s each)
• Brainlab Session Sharing: Viewing and control of Buzz from Digital Lightbox or Curve
• Brainlab Session Sharing: Viewing and control of Curve from Buzz
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• Central "Home Button" ensures intuitive system control
• Intuitive content management of available displays via "drag & drop" functionality
• Streamlined patient-centric access to DICOM and Brainlab xBrain image data from multiple sources (PACS, CD/DVD, USB, Network) - DICOM functionality requires article #30038
• Unified search and load of patient image data from all available sources with optimized usability, including intelligent pre-fetching and buffering of patient image data for increased performance
• Ability to merge different patient data sets
• Export of treatment documentation (e.g. screenshots) and plans to network storage or USB
• HIPAA-compliant feature set including authentication, accountability log and automatic log-off
• Video- and audio-conferencing-ready through built-in webcam and microphone
• Future-proof and scalable solution through modular software concept
• Built-in power supplies for fibre-optical transfer lines
• Requires external power switch for display (not included)

<table>
<thead>
<tr>
<th>Power Input</th>
<th>Touch Display (incl. transfer lines)</th>
<th>Workstation (incl. transfer lines)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-240V; 50/60Hz</td>
<td>Max. 350W</td>
<td>Max. 600W</td>
</tr>
</tbody>
</table>

Certificates and Classifications (Workstation and Touch Display)
- ETL
- IEC 60601-1-2005 (3rd edition)
- ANSI/AAMI ES 60601-1:2005 /A2:2010
- CAN/CSA-C22.2 No. 60601-1:08
- SN EN60601-1:2006
- IEC 60601-1-2
- JIS T 0601-1-2
- IP 20 (touch area designed according IP 54 requirements)
- CE, RoHS

I/O connections (total, available with article #15601 and #15604)
- Total of up to 6 Full HD video outputs
- Up to 4 video signals with up to Full HD resolution can be displayed simultaneously
- 2x USB 2.0 and 2x USB 3.0

ENVIRONMENTAL REQUIREMENTS

| Temperature (Operation)      | 10°C to 35°C [50°F to 95°F] |
| Temperature (Storage)        | -10°C to 50°C [-14°F to 122°F] |
| Humidity (Operation)         | 20% to 80%. (non-condensing) |
| Humidity (Storage)           | 10% to 90% (non-condensing) |
| MR compatibility (only in-wall version) | MR conditional - mounting outside 5 Gauss line |

TOUCH DISPLAY

Cleanability
- Alcohol-based (e.g. Meliseptol, Mikrozid AF Liquid)
Alkylamine-based (e.g. Incidin Plus 2%)
Active oxygen-based (e.g. Perform)
Aldehyde/chloride-based (e.g. Antiseptica Kombi – Flächendesinfektion)

Panel Size
Resolution Full HD (1920x1080)
White Luminance 450cd/m²
Viewing Angle 178° horizontal, 178° vertical
Contrast Ratio Typ. 1200:1
Color Depth 10bit, 1.06 Billion colors
Technology Active Matrix TFT, IPS panel
DICOM DICOM preset, re-adjustable in field by Brainlab support
Touch Screen Infrared based multi-touch panel
Glass Tempered safety glass with antireflection
I/O connections 2x USB 2.0 input
Audio Control Direct volume control via touch panel

Dimensions touch display incl. frame
Height 648mm
Width 1148mm
Depth total 154mm
Depth in-wall 137mm
Depth of the frame protruding on the wall
Weight 52kg

Dimensions in-wall mounting
Height 620mm
frame for touch display Width 1140mm
incl. service mechanism Depth in-wall 137mm

WORKSTATION
Recommended placement Outside of OR in 19" rack / technical room (in MR environment mandatory)
Processor Intel Xeon W3680 (3.33 GHz, 6 cores, 12MB cache)
RAM 6 GB DDR3
Hard disk 320 GB
Operating system Windows 7 64-bit (Embedded Standard)
Graphics Nvidia Quadro 2000 (PCI Express 2.0, 1 GB RAM)
I/O connections:
2 x LAN 10/100/1000 (galvanically isolated)
2 x USB 3.0
1 x CD/DVD writer
Video Output (incl. Main display) 4 x Full HD DVI output (with article #15601)
2 x Full HD DVI output (without article #15601)
Video Input (with article #15601) Formats: S-Video, Composite, HD-SDI, DVI, RGB/VGA
Two of the connected video signals can be displayed simultaneously
Audio Line-Out - for external audio system (e.g. speakers)
Line-In - for external audio sources
Microphone-In - for external microphone
Power output for transfer lines: All galvanically isolated
5V DC

Dimensions horizontal placement:
- Height: 160mm
- Width: 440mm
- Depth: 415mm

Dimensions vertical placement:
- Height: 440mm
- Width: 160mm
- Depth: 415mm
- Weight: 15kg
- Add 14mm in height with attachable feet

TRANSFER LINE BOX FROM WORKSTATION TO TOUCH DISPLAY

<table>
<thead>
<tr>
<th>Physical Characteristics</th>
<th>Height</th>
<th>46mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>(add 5mm in height with attachable feet)</td>
<td>Width</td>
<td>440mm</td>
</tr>
<tr>
<td></td>
<td>Depth</td>
<td>230mm</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>2kg</td>
</tr>
</tbody>
</table>

Type of transmission: Galvanic Isolation with Fiber Optic
Transmission distance: 50m
Max. distance from transfer line kit to touch display: 2.70m
Signal types: HDMI, USB
Mounting: Ceiling- or wall-mountable

Touch display with frame:
- Height: 648mm
- Width: 1148mm
- Depth total: 154mm
- Depth in-wall: 137mm
- Depth of the frame protruding on the wall: 17mm
- Weight: 52kg

In-wall mounting frame for touch display including service mechanism:
- Height: 620mm
- Width: 1140mm
- Depth in-wall: 137mm

BUZZ HARDWARE OPTIONS

15601 | VIDEO INPUTS: TWO CHANNELS UP TO FULL HD
High-end dual-channel framegrabber enables connection and display of external medical video sources in full HD resolution.
- Supports two external digital or analog inputs to PC with up to full HD resolution
- Adds another two video outputs from PC with up to full HD resolution
- Video input formats: S-video, Composite, HD-SDI, DVI, RGB/VGA
- Video output format: DVI

15604 | VIDEO EXTENSION UNIT INCL TRANSFER LINES
The Video Extension Unit allows to extend the video management capabilities of Buzz by adding input and output channels. It also serves as an additional connection panel (Buzz workstation is the standard connection panel) to plug in video sources. This is particularly relevant when the Buzz workstation is located outside the OR.
- Video input formats: S-video, Composite, 3G-SDI, DVI, VGA, SOG/RGsB, RGBS, YPbPr
- Video output formats (up to full HD resolution): DVI and SDI
- Allows Buzz to display up to five video signals simultaneously
- Allows the connection of up to five external displays to Buzz (or four external displays if a second Buzz touch display is connected, #15605)
- Includes transfer lines for the connection between the Video Extension Unit and Buzz
Includes control software for routing of content to connected displays from Buzz touch display

Recommended placement: ceiling-supply unit

Requires the following articles:

- Buzz on-wall or in-wall (#B44000 or #B44010)
- Video Inputs: Two channels up to full HD (#15601)

<table>
<thead>
<tr>
<th>Placement</th>
<th>Ceiling-supply unit close to sterile field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>89mm</td>
</tr>
<tr>
<td>Width</td>
<td>381mm</td>
</tr>
<tr>
<td>Depth</td>
<td>395mm</td>
</tr>
<tr>
<td>Weight</td>
<td>4.5kg</td>
</tr>
<tr>
<td>Video input Formats</td>
<td>S-video, Composite, 3G-SDI, DVI, VGA, SOG/RGBa, RGBS, YPbPr</td>
</tr>
<tr>
<td>Buzz with Video Extension Unit (and # 15601):</td>
<td>Up to 5 video signals with up to full HD resolution can be displayed simultaneously</td>
</tr>
<tr>
<td>Video output</td>
<td>2x DVI outputs with up to Full HD resolution (optical)</td>
</tr>
<tr>
<td>Total of 6 Full HD outputs</td>
<td></td>
</tr>
<tr>
<td>Resolution: Full HD (1920x1080)</td>
<td></td>
</tr>
<tr>
<td>Power output for NDS displays up to 32&quot;</td>
<td>24V DC</td>
</tr>
</tbody>
</table>

15605 | SECONDARY IN-WALL TOUCH DISPLAY INCL TRANSFER LINES

- Allows for controlling of Buzz in-wall from an additional point in the OR
- Offers the same range of control functionality as the primary display
- Serves as display and control point simultaneously
- Allows for designing an OR that fulfills high demands regarding look-and-feel
- Brilliant 42" full HD (1920x1080 pixels) multi-touch display
- Ultra-slim infrared touch control replacing mouse and keyboard
- Includes transfer lines for connection between the PC unit and Buzz touch display

15606 | SECONDARY ON-WALL TOUCH DISPLAY

- Allows for controlling of Buzz on-wall from an additional point in the OR
- Offers the same range of control functionality as the primary display
- Serves as display and control point simultaneously
- Allows for designing an OR that fulfills high demands regarding look-and-feel
- Brilliant 42" full HD (1920x1080 pixels) multi-touch display
- Ultra-slim infrared touch control replacing mouse and keyboard
- Primary and secondary displays need to be placed next to each other
- Article only available with Buzz On-wall