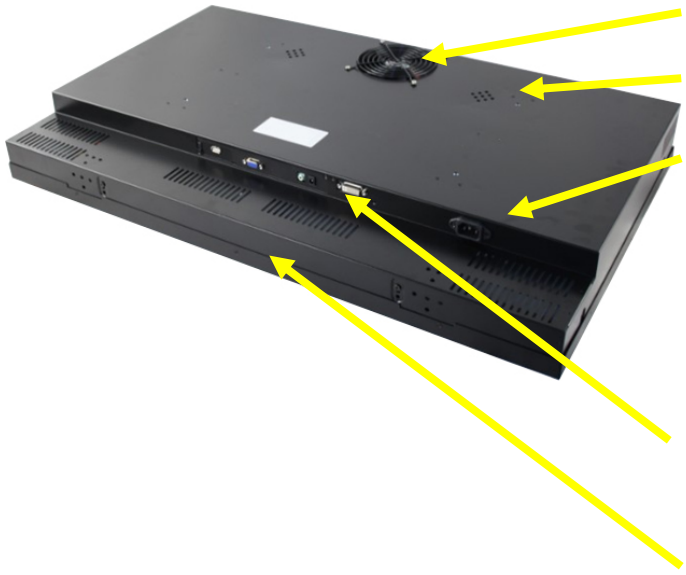
# Model: ECH2000-SW

## 20.1" Chassis Mount LCD Monitor with SAW Touch

**ECH Series:** **Industrial Chassis Wall/Surface Mount Metal Housing LCD Monitor**
**(Optional Integrated Touch Screen/PC/ DC Input/Front NEMA4x/Front Stainless steel bezel and more…**

### Feature Highlights:

- **Metal Chassis/Housing for higher Impact protection.**
  **(Optional for Front AR Glass or Vandal Resistant glass)**
- **Built-in speak built-in speakers that allow the convenience Audio output.**
- **Side OSD buttons can prevent unnecessary setting changes.**
- **Above 24" LCD will include Front IR Sensor and Remote controller.**
- **Auto Video Signal ON / OFF**
  **Auto Always Power On**



- **Ultra low speed/Noise fan for extra cooling (24" LCD or above)**
- **VESA Mounting Hole Pattern**
- **Reliable built-in Power supply for 15" or above**
  **(Optional for 9-36V DC input)**

- **Standard VGA Input**
  **(Optional for DVI. HDMI, AV, BNC, AV looping and SDI)**
- **Optional for RS232 Remote Control Protocol: Command Code to set system**

## Features:

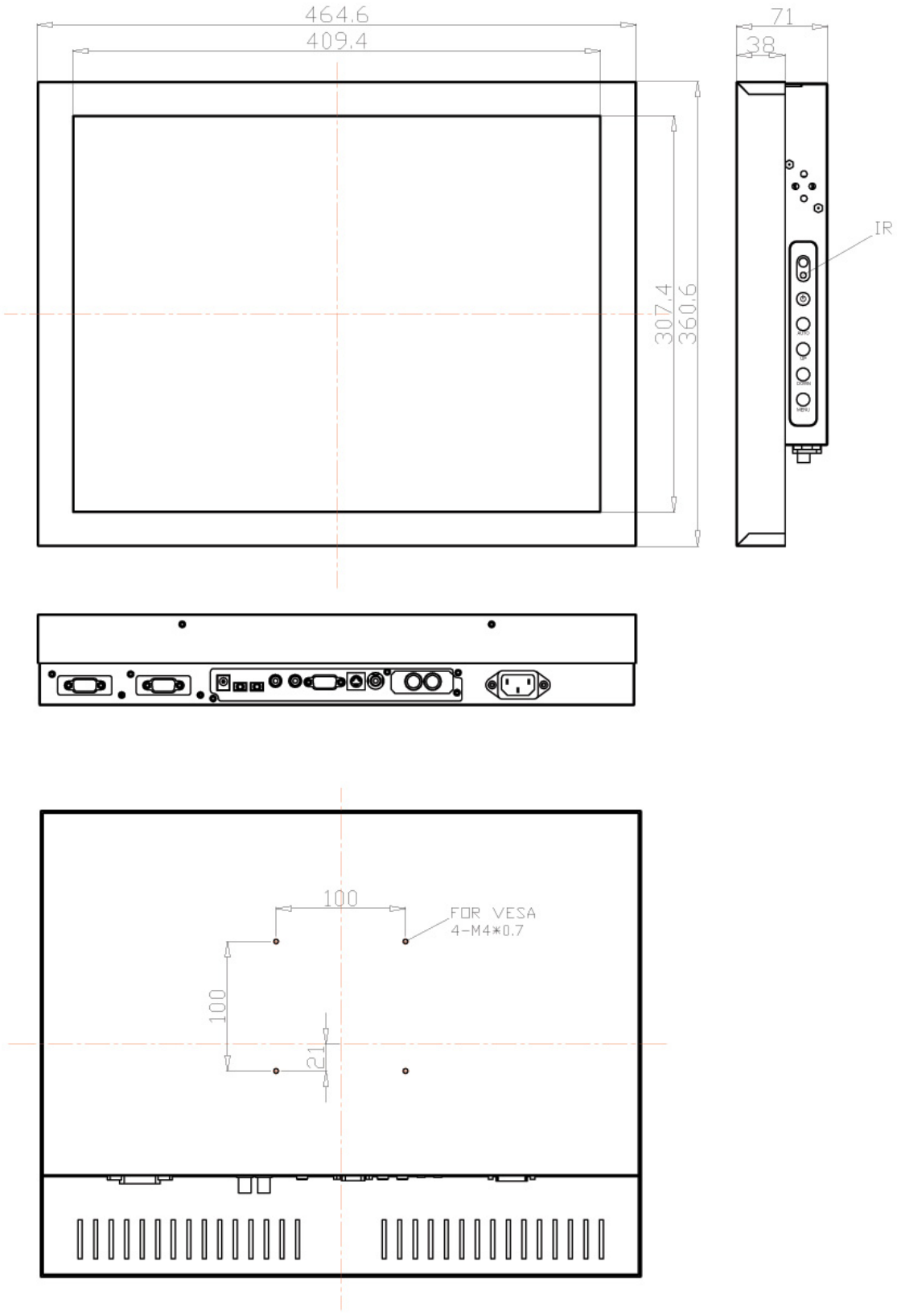
- 1400 x 1050 Native resolution, 300 cd/m2 brightness, 160° horizontal/vertical viewing angles.
- Modular mechanism design provides flexible product configuration and easy maintenance.
- Optional to built-in touch screen for interactive application.

## Specification:

| | | | |
|---|---|---|---|
| **Panel** | Cell Type / Glass Surface | TFT LCD / Black Anti-Glare, low reflection coating | |
| | Aspect Ratio / Size | 4 : 3 / 20.1" viewable diagonal area | |
| | Active Area / Pixel Pitch | 408.0(H) x 306.0(V) mm / 0.255(H) x 0.255(V) mm | |
| | Native Resolution / Colors | 1400(H) x 1050(V) / 16.7 Million | |
| | Brightness / Contrast | 300 cd/$m^2$ (typ) / 1000 :1 | |
| | Response Time | ^ 8 ms | |
| | Viewing Angle (typical) | H. 160° (- 80° ~ + 80°) , V 160°(- 80° ~ + 80°) | |
| | Light Source | CCFL , Long life, 50,000 hrs (typ) | |
| **Input Sources** | PC System | Signal | Analog RGB (0.7/1.0 $V_{p\text{-}p}$, 75 ohms) |
| | | Sync | Separate Sync, Composite Sync, Sync On Green |
| | | Frequency | $F_h$: 30 - 82Khz , $F_v$: 50 -75Hz |
| | Audio System | 2W speaker x 2 | |
| **Input Terminals** | 1 x VGA (15 Pin Female D-Sub), 1 x PC Audio (Stereo Headphone Jack), 1 x AC Inlet | | |
| **Convenient Features** | Auto Calibration , Back Light Adjustment, Plug&Play (VESA DDC/CI, DDC 2B) | | |
| | OSD Multi-Languages , Wall Mount Ready (VESA 100 x 100 mm) | | |
| **Power** | Internal power supply with universal / Auto-Sensing, AC 90 to 260V, 50 / 60 Hz | | |
| **Power Consumption** | Operation / Power Saving | 40 watt, < 5 watt (Support DPMS) | |
| **Operating Condition** | Temperature / Humidity | 0°C ~ 50°C (32°F ~ 122°F), 10% ~ 90% (no condensation) | |
| **Storage Condition** | Temperature / Humidity | - 20°C ~ 60°C (- 4°F ~ 140°F), 10% ~ 90% (no condensation) | |
| **Certification** | | FCC,CE | |
| **Dimensions** | Physical | With Base(W x H x D): TBD | |
| | | Without Base(W x H x D): 464.6 x 360.6 x 71.0 (mm) | |
| | Carton | W x H x D = 560 x 463 x 205 (mm) | |
| **Weight** | N.W. / G.W. | 6.7 Kgs / 7.7 Kgs | |
| **Container Loaded** | 20ft / 40ft / 40ft HQ | TBD (Sets , By pallet) | |

| | | | | |
|---|---|---|---|---|
| **Options** | Touch | Video/TV | Enhanced Panel | Others |
| | Resistive touch | SV + AV | Panel with LED backlight | Digital Signage(Stand alone) |
| | Capacitive touch | SV + AV + AV_Looping | High brightness panel | Networking Digital Signage |
| | SAW touch | SV + AV + TV | Wide Temperature | Motion Sensor |
| | Infrared touch | | Sunlight Readable | Light Sensor |
| | Protected glass | | | Auto-Dimming |

## Mechanical Drawing:



## LCD Options:

**LED Backlight Options**
Introducing LED backlight options for monitors for energy efficiency and a brighter screen.

**TouchScreen Options**
Our LCD has a wide selection option to choose which touchscreen.technology suits for you.

| | Four-Wire Resistive | Five-Wire Resistive | Pen Touch | Capacitive | Surface Wave(Saw) | Infrared Touch (Ir) |
|---|---|---|---|---|---|---|
| PRODUCT SIZE | 1.7" - 24" | 10.4" - 24" | 15" – 19" | 12" - 24" | 10.4" - 30" | 10.4" - 42" |
| TOUCH LIFE | 1 – 2 million touches | 30 – 35million touches | 100 million touches | 100 million touches | 50 million touches | Long-term reliability |
| SCRATCH RESISTANCE | Hard Coated | Hard Coated | Hard Coated ($SiO^2$) | Hard Coated ($SiO^2$) | Glass Overlay Moh's hardness rating of 7 | Glass Overlay Moh's hardness rating of 7 |
| CONTAMINANT RESISTANCE | Resists moisture, dirt, vinegar, ammonia based food products and cleansers | Resists moisture, dirt, vinegar, ammonia based food products and cleansers | Resists moisture, dirt, vinegar, ammonia based food products and cleansers | Resists moisture, dirt, vinegar, ammonia based food products and cleansers | Resists moisture, dirt, vinegar, ammonia based food products and cleansers | Resists moisture, dirt, vinegar, ammonia based food products and cleansers |
| INPUT METHOD | Finger, Gloved Hand, Stylus | Finger, Gloved Hand, Stylus | Stylus Pen | Finger | Finger, Gloved Hand, Soft pliable stylus | Finger, Gloved Hand, Stylus |
| CONTROLLER | USB, RS232 | USB, RS232 | USB, RS232 | USB, RS232 | USB, RS232 | USB, RS232 |

**VIDEO Input Options:**
For Video inputs options:
DVI, DVI+HDMI, SVideo+AV, SVideo+AV+DVI, AV+Looping, DVI+AV+Looping, HD-SDI, BNC(PAL/NTSC)

**Optical Bonding Options**
- Optical Bonding provides the best reduction of ambient light washout of any commercially available enhancement technology.
- Optical Bonding has a lower cost than most other competing technologies.
- Optical Bonding offers superior ruggedization, enhancing the display durability under vibration, shock and other environmental extremes.

**RS-232 Remote Control Options**
**Remote Control Protocol: Command Code to set system**

**9-36V DC Input Options**
iTech offers a selection of DC input from 9V to 36V

**Light Sensor and Motion Sensor Options**
iTech LCD offers Light and Motion Sensor

**Privacy Filter**
Front Glass Options:
- Anti Reflective AR Glass 3mm
- Anti Reflective AR Glass 6mm Vandal-Resistance
- Anti Reflective AR Glass 8mm Vandal-Resistance
- Anti Glare AG Glass 3mm