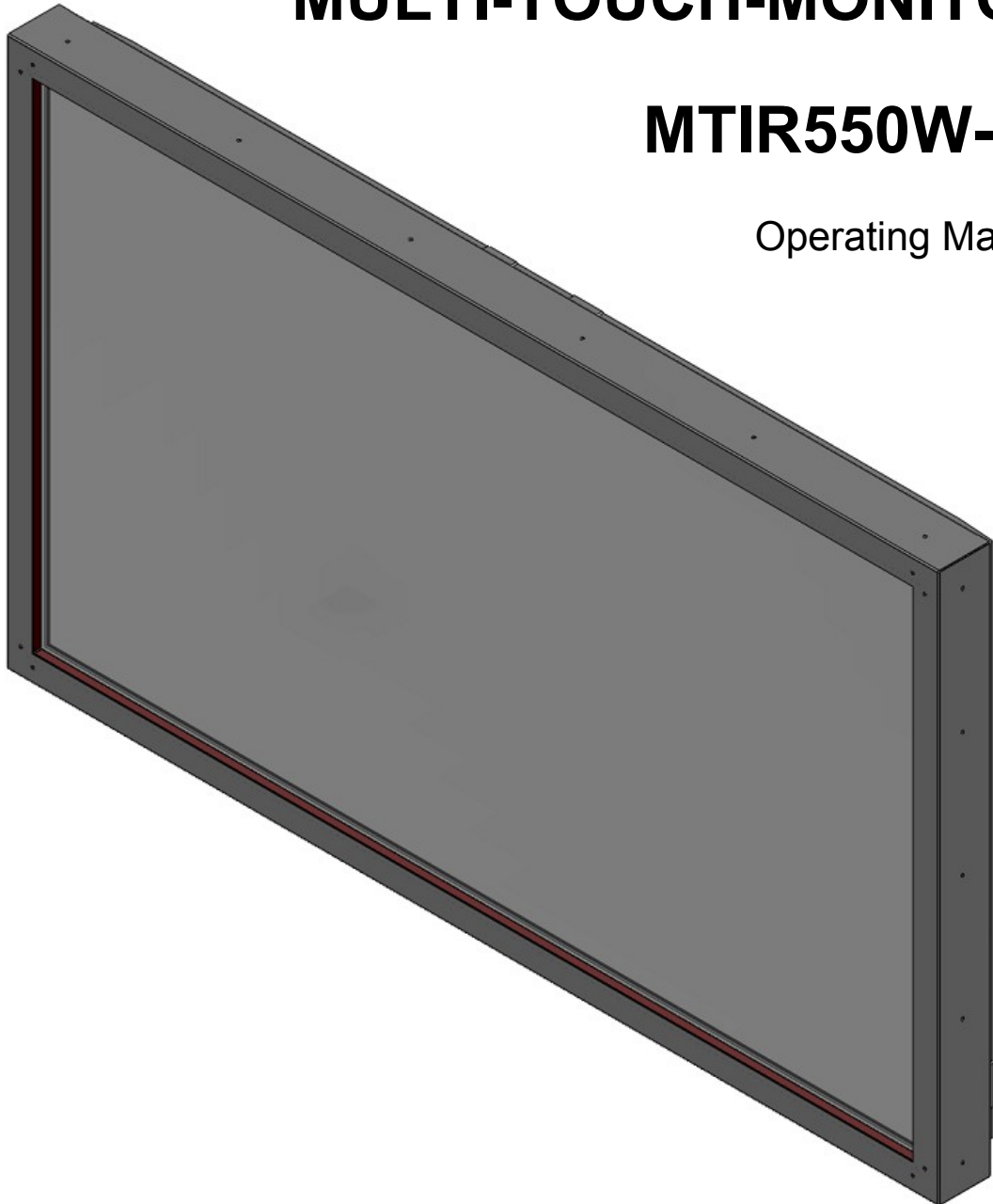


# **MULTI-TOUCH-MONITOR**

## **MTIR550W-V2**

Operating Manual



## Revision

Rev.	Description	Author	Date
1	Initial version	KBRO	2014-05-09

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## Table of Contents

1 Safety / Sicherheit.....	5
1.1 Safety Precaution / Safety Instructions.....	5
1.2 Sicherheitsvorkehrungen und -hinweise.....	9
2 Description.....	13
3 Scope of delivery.....	13
4 Installation.....	14
4.1 Connecting the monitor.....	14
4.2 Basic operation.....	14
4.3 dreaMTouch touchscreen driver (citmuto03).....	14
5 Rear View.....	15
6 Connectors.....	16
7 Controls.....	17
8 IR-Remote control.....	18
8.1 Remote controller.....	18
8.2 Action radius of the remote controller.....	19
8.3 Keylock.....	19
8.3.1 Locking.....	19
8.3.2 Unlocking.....	19
9 OSD Menu.....	20
9.1 MTIR550W-V2.x-A01.....	20
9.1.1 Graphics Mode.....	20
9.1.2 Video Mode.....	22
9.2 MTIR550W-V2.x-A02.....	24
9.2.1 Graphics Mode.....	24
9.2.2 Video Mode.....	25
10 Video resolutions.....	28
10.1 MTIR550W-V2.x-A01.....	28
10.2 MTIR550W-V2.x-A02.....	29
11 Cleaning the front glass.....	30
12 Troubleshooting.....	31
13 Specification.....	32
13.1 Electrical.....	32
13.2 Touchscreen.....	32
13.3 Environmental.....	32
13.4 Mechanical.....	32
13.5 I/O.....	33
13.6 LCD panel.....	33
14 Identification label.....	34
15 Order - Information.....	34
16 Appendix.....	35
16.1 Package Handling.....	35
16.2 Evaluation of visual range.....	36
16.2.1 Failure of pixel.....	36
16.2.2 Pollutions.....	36
16.2.3 Chronological effects.....	37
16.3 Remote control of the monitor via RS232.....	38
17 WARRANTY TERMS AND CONDITIONS.....	42
17.1 Duration and Validity of Warranty.....	42
17.2 Proof of Purchase.....	42
17.3 Warranty Service During Warranty Period.....	42
17.3.1 Temporary Exchange Equipment During Repair Time of Warranted Products.....	42
17.3.2 Warranty on Repairs.....	42

17.4 Warranty Exclusions and Limitations.....	43
17.4.1 General Exclusions.....	43
17.4.2 Accessories.....	43
17.4.3 Image retention effects.....	43
17.4.4 Failure of Pixels / Pollutions.....	43
17.4.5 Serial number sticker.....	43
17.5 Reaction Time.....	43
17.6 Advised Procedure for Raising a Claim.....	44
17.6.1 Consider the manual before raising a claim.....	44
17.6.2 Prepare necessary Information.....	44
17.6.3 Approval by Citron GmbH / RMA.....	44
17.6.4 Packing.....	44
17.6.5 Transport.....	44
17.6.6 Costs not covered by warranty.....	44
17.7 Legal and other claims.....	44
17.8 Limitations of Liability.....	45
18 Disposal.....	45

# 1 Safety / Sicherheit

## 1.1 Safety Precaution / Safety Instructions

- **Read instructions** – All operating instructions must be read and understood before the monitor is operated
- **Keep this manual in a safe place** – These safety and operating instructions must be kept in a safe place for future reference.
- **Observe warnings** – All warnings on the monitor and in the instructions must be observed closely.
- **Follow instructions** – All operating instructions must be followed.
- **Cleaning** – Unplug the power cord from the AC outlet before cleaning the monitor. Use a dry cloth or a vacuum cleaner to clean the monitor. Do not use liquid or aerosol cleaners.
- **Accessory** – Do not use accessory not recommended by the manufacturer. Use of inadequate accessory can result in accidents / injury / damage.
- **Water and moisture** – Do not use the monitor near water or in humid environment. Do not install the monitor in a place where water may splash onto or into it. Be careful with other equipment which drains water such as air-conditioners. Do not expose the monitor to steam, fumes or oil.
- **Dust** – Do not use the monitor in environments where it is exposed to excessive dust. Please regularly remove dust or garbage that has attached to the monitors air vents.
- **Ingress of objects and liquids** - Never insert any (metallic) object or spill any liquid into the monitor through vents or openings. High voltage is contained inside of the monitor, inserting an object or liquid can cause electric shock, fire and/or short-circuit on internal parts.
- **Ventilation** – The vents and other openings in the monitor's cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the monitor. Do not place the monitor on rugs, carpets or similar surfaces, since they can block ventilation openings. Do not place the monitor in an enclosed place such as a bookcase, rack or table, unless proper ventilation is provided or the manufacturer's instructions are followed.
- **Power/signal cord protection** – All power and signal cords (Video, USB, etc.) must be routed properly to prevent people from stepping or tripping on them or objects from resting on them or the monitor being pulled from its location. Please make sure that the socket-outlet is installed near the monitor and is easily accessible. The power supply cord serves as a disconnect device.
- **Power cord / Overloading** – Do not overload AC outlets or extension cords as this may cause fire or electric shock. Do not use the power cord with a power tap or extension cord. Only use the power cord supplied with the monitor. Do not damage the power cord nor place heavy objects on it, stretch it or over-bend it. Do not attempt to repair a damaged or malfunctioning power cord. Refer the servicing to an authorized service person. Unplug the power cord from the mains outlet if the monitor is not used for a long period of time.

- **Electrical Safety** – The monitor must be supplied with the correct voltage. When operated, the monitor must always be connected to protective ground. No safety arrangements must be removed, circumvented or taken out of effect.
- **Caution, glass !** - The LCD panel and front window used in this monitor are made of glass which can break if the monitor is dropped or hit. Take care not to be injured by glass shards (e.g. by wearing cut-proof gloves) when handling a damaged monitor.
- **Manual handling / Transportation** – Due to its weight, the monitor always must be carried / handled by two persons in order to prevent injury by strain or falling. Please observe all current local accident prevention regulations. The monitor must be transported in its original cardboard box standing upright. Do not transport the monitor lying flat as this might cause breaking the front window and/or the display panel glass.
- **Servicing** – The monitor does not contain any user serviceable parts. Do not attempt to service the monitor or its accessory yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing or address yourself to the distributor / manufacturer.
- **Repair** – If any of the following conditions occur, unplug the power cord from the AC outlet and request a qualified service person to perform repairs:
  - The power cord or plug is damaged.
  - Liquid was spilled on the monitor or objects have fallen into the monitor.
  - The monitor has been exposed to rain or water.
  - The monitor has been dropped or damaged.
  - The monitor does not operate properly as described in the operation instructions.
  - The monitor displays an abnormal condition. Any noticeable abnormality in the monitor indicates that it needs servicing.
  - Do not adjust controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive re-adjustment work by a qualified technician.
- **Replacement parts** – In case parts of the monitors need to be replaced during repair, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electrical shock and/or other danger.
- **Safety checks** – Upon completion of service or repair work, request the service person to perform safety checks to ensure that the monitor is in proper and safe operating condition.
- **Modifications** – Do not alter or modify the monitor in any way without written consent of the manufacturer.
- **Batteries** – Incorrect use of batteries may cause them to burst or ignite. A leaky battery may corrode equipment, dirty your hands or spoil your clothing. In order to avoid problems, observe the following precautions:
  - Only use specified batteries.
  - Install the batteries with due attention to their polarities according to the instructions in the compartment.
  - Do not mix old and new batteries.
  - Do not mix batteries of different types. Voltage specifications of batteries of the same size and shape may vary.

- Immediately remove or replace exhausted batteries.
- Remove the batteries if the remote control is not going to be used for a longer period of time.
- If leaked battery fluid comes in contact with your skin or clothing, rinse immediately and thoroughly with water. Upon contact of battery fluid with your eyes, immediately rinse thoroughly with water and seek medical treatment. Leaked battery fluid that gets on your clothing or into your eye may cause skin irritation or damage to your eye.
- **Usage** – Usage of the monitor must not be accompanied by fatal risks or dangers that could directly lead to death, injury, severe physical damage or loss, including nuclear reaction control in nuclear facilities, medical life support systems, and missile launch control in weapon systems.
- **Mounting** – Always make sure that the monitor is mounted in an appropriate way. Do not place the monitor on top of unstable objects or in unsafe places. Do not allow the monitor to receive strong shocks, to strongly vibrate or to be knocked over. When mounting the monitor on a wall, be sure to use an appropriate wall-mount being able to carry the monitor's weight. Closely follow the wall-mount manufacturer's instructions.
- **Heat and light sources** – Keep the monitor away from heat sources such as radiators, heaters, stoves and other heat-generating monitors (including amplifiers and spotlights). Do not place the monitor in direct sunlight.
- **Thermal injury** – Do not touch parts of the monitor that become hot for long periods of time, as this may result in low-temperature skin burns.

## NOTICE

This is a class A product according to EN 55022:2010. In a domestic environment this product may cause radio interference where the user may be required to take adequate counter measures.

To maintain compliance with EMC regulations, use shielded cables to connect to the following terminals: PC/AV DVI-D input, PC/AV DVI-D output, PC/AV HDMI input, PC D-SUB input, PC RGB input, RS-232C input/output, USB output.

## WARNING

If the monitor is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, especially to children can be avoided by taking simple precautions such as:

- Using fixing devices like wall mount brackets recommended by the manufacturer
- Only using furniture that can safely support the monitor
- Ensuring that the monitor is not overhanging the edge of the supporting furniture
- Not placing the monitor on tall furniture (e.g. cupboards or bookcases) without anchoring both the furniture and the monitor to a suitable support.
- Not placing the monitor on cloth or other slippery material.
- Educating children about the dangers of climbing on furniture to reach the monitor or its controls.

Especially for safety of children consider the following:

- Do not allow children to climb on or play with the monitor.
- Do not place the monitor on furniture that can easily be used as steps, such as a chest of drawers.
- Always keep in mind, that children easily can become overly excited while watching a programme especially on a „larger than life“ monitor. Care should be taken to place or install the monitor where it cannot be pushed, pulled over or knocked down.
- Care should be taken to route all cords and cables connected to the monitor so they cannot be pulled or grabbed by children.



## 1.2 Sicherheitsvorkehrungen und -hinweise

- **Bedienungsanleitungen lesen** – Nehmen Sie den Monitor erst in Betrieb, nachdem Sie alle diesbezüglichen Hinweise gelesen und verstanden haben.
- **Bedienungsanleitung aufbewahren** – Bewahren Sie diese Bedienungsanleitung mit den Sicherheits- und Bedienungshinweisen an einem sicheren Ort auf, damit Sie im Bedarfsfall jederzeit darauf zurückgreifen können.
- **Warnungen beachten** – Alle Warnungen auf dem Gerät und in den Bedienungsanleitungen sind genauestens zu beachten.
- **Anleitungen befolgen** – Alle Anleitungen zur Bedienung müssen befolgt werden.
- **Reinigung** – Ziehen Sie vor dem Reinigen des Geräts das Netzkabel aus der Steckdose. Reinigen Sie das Gerät mit einem trockenen Tuch oder einem Staubsauger. Verwenden Sie keine flüssigen Reiniger oder Aerosol-Sprays.
- **Zusatzgeräte und Zubehör** – Verwenden Sie ausschliesslich vom Hersteller empfohlenes Zubehör. Bei Verwendung anderer Zusatzgeräte oder -teile besteht evtl. Unfall- / Verletzungsgefahr oder das Gerät kann möglicherweise Schaden nehmen.
- **Wasser und Feuchtigkeit** – Verwenden Sie den Monitor nicht in der Nähe von Wasser oder in feuchten Umgebungen. Montieren und Betreiben Sie das Gerät unter keinen Umständen an einem Ort, an dem Wasser darauf tropfen oder spritzen kann. Achten Sie dabei besonders auf Geräte, aus denen zuweilen Wasser tropft, wie etwa Klimaanlage. Setzen Sie den Monitor weder Dampf noch Rauch oder Öl aus.
- **Staub** – Verwenden Sie den Monitor nicht in übermässig staubigen Umgebungen. Bitte entfernen Sie regelmässig Staub oder Verschmutzungen die sich an den Lüftungsöffnungen des Geräts angesammelt haben.
- **Eindringen von Gegenständen oder Flüssigkeiten** – Schieben Sie niemals irgendwelche (metallischen) Gegenstände durch die Gehäuseöffnungen in das Innere des Geräts. Im Gerät liegen hohe elektrische Spannungen an. Durch Einschieben von Gegenständen oder Einschütten von Flüssigkeiten besteht akute Brand- und Stromschlaggefahr bzw. die Gefahr von Kurzschlüssen im Gerät.
- **Belüftung** – Die Belüftungsschlitze und andere Öffnungen im Gehäuse dienen der Belüftung des Geräts. Verdecken oder Blockieren Sie diese Öffnungen niemals, da unzureichende Belüftung zur Überhitzung führen und/oder eine Verkürzung der Lebensdauer des Geräts verursachen kann. Platzieren Sie das Gerät nicht auf Tücher, Teppichen oder ähnlichen Oberflächen, da diese die Belüftung behindern könnten. Betreiben Sie das Gerät nicht in einem umschliessenden Gehäuse, wie z.B. einem Bücherregal, Schrank oder Tischmöbel, sofern dort nicht für eine ausreichende Belüftung gesorgt ist oder die Anweisungen des Herstellers befolgt werden.
- **Kabelschutz** – Alle Netz- und Anschlußkabel (Video, USB, usw.) sind so zu verlegen, dass sie vor Tritten geschützt sind, Personen nicht darüber stolpern können, keine schweren Gegenstände darauf abgestellt werden können oder der Monitor daran von seinem Stellplatz weggezogen werden kann. Bitte achten Sie darauf, dass sich die Steckdose in der Nähe des Geräts befindet und leicht zugänglich ist. Das Netzkabel dient als Trennvorrichtung.

- **Netzanschluß / Überlastung** – Vermeiden Sie eine Überlastung von Netzsteckdosen und Verlängerungskabeln, da in diesem Fall Brand- und Stromschlaggefahr besteht. Verwenden Sie das Netzkabel nicht mit einer Mehrfachsteckdose oder einem Verlängerungskabel. Verwenden Sie nur das mit dem Monitor gelieferte Netzkabel. Beschädigen Sie das Netzkabel nicht, stellen Sie keine schweren Gegenstände darauf und überdehnen oder knicken Sie es nicht. Versuchen Sie nicht ein beschädigtes oder defektes Netzkabel zu reparieren. Überlassen Sie Reparaturarbeiten ausschliesslich Fachpersonal. Ziehen Sie das Netzkabel aus der Steckdose, wenn das Gerät für längere Zeit nicht verwendet wird.
- **Elektrische Sicherheit** – Der Monitor muss mit der korrekten Spannung versorgt werden. Im Betrieb muss der Monitor immer sicher mit dem Schutzleiter verbunden sein. Es dürfen keine Sicherungseinrichtungen entfernt, umgangen oder unbrauchbar gemacht werden.
- **Achtung, Glas !** - Das LCD-Panel und die Frontabdeckscheibe sind Glasprodukte. Sie können zerbrechen, wenn der Monitor fallen gelassen wird oder einen Schlag/Stoß erhält. Treffen Sie Vorsichtsmaßnahmen (z.B. Tragen von schnittfesten Handschuhen) um nicht durch Glasscherben verletzt zu werden, wenn Sie mit einem zerbrochenen Gerät hantieren.
- **Handhabung / Transport** – Aufgrund seines Gewichts darf der Monitor nur immer von zwei Personen gleichzeitig getragen oder gehandhabt werden. Bitte beachten Sie auch örtlich geltende Unfallverhütungsvorschriften. Der Monitor muß immer im Originalkarton aufrecht stehend transportiert werden. Transportieren Sie das Gerät niemals flach liegend, da dadurch die Frontabdeckscheibe und/oder das Displayglas zerbrechen könnten.
- **Wartung** – Der Monitor enthält keine durch den Benutzer zugänglichen wartbaren Teile. Versuchen Sie auf keinen Fall, selbst Wartungsarbeiten am Gerät durchzuführen. Durch das Entfernen von Abdeckungen setzen Sie sich möglicherweise hohen elektrischen Spannungen und anderen Gefahren aus. Beauftragen Sie ausschließlich qualifiziertes Servicepersonal mit der Wartung des Geräts oder wenden Sie sich an den Händler / Hersteller.
- **Reparaturen** – Trennen Sie in den folgenden Situationen das Gerät sofort vom Stromnetz und lassen Sie es durch qualifiziertes Servicepersonal reparieren:
  - Wenn das Netzkabel oder der Netzstecker beschädigt ist.
  - Wenn Flüssigkeit in das Gerät eingedrungen ist oder Gegenstände in das Gerät gefallen sind.
  - Wenn das Gerät nass geworden ist (z.B. durch Regen).
  - Wenn das Gerät fallen gelassen oder beschädigt wurde.
  - Wenn das Gerät nicht, wie in der Bedienungsanleitung beschrieben, funktioniert.
  - Wenn das Gerät einen anormalen Zustand aufweist. Jedes erkennbare anormale Verhalten zeigt an, dass der Kundendienst erforderlich ist.
  - Nehmen Sie nur die in den Bedienungsanleitungen beschriebenen Einstellungen vor. Unsachgemäße Einstellungen an anderen Reglern können zu einer Beschädigung führen und machen häufig umfangreiche Einstellarbeiten durch qualifiziertes Servicepersonal erforderlich.
- **Ersatzteile** – Wenn im Rahmen einer Reparatur Ersatzteile benötigt werden, stellen Sie bitte sicher, dass das Servicepersonal nur die vom Hersteller bezeichneten Teile oder Teile mit gleichen Eigenschaften und gleichem Leistungsvermögen wie die Originalteile verwendet. Die Verwendung anderer Teile kann zu einem Brand, Stromschlag oder anderen Gefahren führen.
- **Sicherheitsüberprüfungen** – Lassen Sie vom Servicepersonal nach erfolgten Service- oder Reparaturarbeiten eine Sicherheitsüberprüfung vornehmen, um sicherzustellen, dass das Gerät in einem einwandfreien, sicheren Betriebszustand ist.

- **Modifikationen** – Verändern oder modifizieren Sie das Gerät in keinster Weise ohne die schriftliche Bestätigung des Herstellers.
- **Batterien** – Durch falsche Anwendung können Batterien explodieren oder sich entzünden. Auslaufende Batterien können Korrosion am Gerät verursachen sowie Hände und Kleidung verschmutzen. Um Probleme zu vermeiden, beachten Sie bitte die folgenden Sicherheitshinweise:
  - Verwenden Sie nur empfohlene Batterietypen
  - Achten Sie beim Einlegen der Batterien, dass sie mit ihrer Polarität gemäß den Anweisungen im Batteriefach richtig ausgerichtet sind.
  - Verwenden Sie nicht alte und neue Batterien gemeinsam.
  - Verwenden Sie keine Batterien unterschiedlichen Typs. Batterien derselben Form und Größe können unterschiedliche Spannungswerte aufweisen.
  - Ersetzen Sie eine verbrauchte Batterie umgehend durch eine neue.
  - Wenn ausgetretene Batterieflüssigkeit auf Haut oder Kleidung gelangt, müssen Sie betroffenen Stellen sofort gründlich mit Wasser spülen. Wenn Batterieflüssigkeit in die Augen gelangt, dürfen Sie die Augen auf keinen Fall reiben, sondern am besten mit viel Wasser ausspülen und sofort einen Arzt aufsuchen. Batterieflüssigkeit kann Hautreizungen hervorrufen oder Augen schädigen.
- **Verwendung** – Bei der Verwendung des Monitors ist darauf zu achten, dass Gefahren für Leib und Leben, Schäden an Gebäuden und anderen Gegenständen, sowie eine Beeinflussung von wichtigen oder gefährlichen Geräten, wie z.B. der Nuklearreaktionssteuerung in Atomanlagen, lebenserhaltenden Geräten in medizinischen Einrichtungen oder Raketenabschusssteuerungen in Waffensystemen vermieden werden.
- **Montage** – Stellen Sie immer sicher dass der Monitor auf geeignete Weise sicher montiert ist. Stellen Sie den Monitor niemals auf instabile Gegenstände oder an unsicheren Orten auf. Halten Sie den Monitor von Schocks und Vibrationen fern und verhindern Sie dass das Gerät umgestoßen werden kann. Bei Montage des Geräts an einer Wand ist sicherzustellen, dass die Befestigungsvorrichtung ausreichend stabil ist und das Gewicht des Monitors tragen kann. Befolgen Sie strikt die Anweisungen des Herstellers der Befestigungsvorrichtung.
- **Wärme- und Lichtquellen** – Halten Sie den Monitor fern von Wärmequellen wie z.B. Heizkörpern, Heizgeräten, Öfen oder anderen Geräten (wie z.B. Verstärkern oder Flutlichtstrahlern). Setzen Sie das Gerät nicht der prallen Sonne aus.
- **Verbrennungsgefahr** – Vermeiden Sie es, Teile des Geräts, die sich erwärmen, über längere Zeit hinweg zu berühren. Dies könnte zu leichten Verbrennungen führen.

## HINWEIS

Dieses Gerät ist ein Produkt der Klasse A gemäß EN 55022:2010. In Wohnräumen kann dieses Gerät Störsignale erzeugen, die durch entsprechende Abhilfemaßnahmen durch den Benutzer beseitigt werden müssen.

Verwenden Sie EMV-gerechte, abgeschirmte Kabel, um die folgenden Anschlüsse zu verbinden: PC/AV DVI-D Eingang, PC/AV DVI-D Ausgang, PC/AV HDMI Eingang, PC D-SUB Eingang, PC RGB Eingang, RS-232C Eingang/Ausgang, USB Ausgang.

## WARNUNG

Wenn der Monitor nicht auf einer stabilen Unterlage aufgestellt wird, besteht die Gefahr, dass er kippt oder fällt. Zahlreiche Verletzungen, besonders bei Kindern, können durch einfache Vorsichtsmaßnahmen vermieden werden:

- Verwenden Sie die vom Hersteller empfohlenen Befestigungsvorrichtungen, wie z.B. Wandhalterungen.
- Stellen Sie den Monitor nur auf Möbelstücke, die ausreichend stark sind.
- Achten Sie darauf, dass der Monitor nicht über den Rand des Möbelstücks, auf dem er steht, hervorsteht.
- Stellen Sie den Monitor niemals auf ein großes Möbelstück (z.B. einen Schrank oder in ein Bücherregal), ohne sowohl das Möbelstück, als auch den Monitor an einem geeigneten Element sicher zu verankern.
- Stellen Sie den Monitor niemals auf eine rutschige Unterlage (z.B. Tuch, Decke o.ä.).
- Weisen Sie Kinder eindringlich darauf hin, dass es gefährlich ist, auf ein Möbelstück zu klettern, um an den Monitor oder dessen Bedienelemente zu gelangen

Wichtige Hinweise für die Sicherheit von Kindern:

- Lassen Sie Kinder niemals auf den Monitor klettern oder am Monitor spielen.
- Stellen Sie den Monitor nicht auf Möbelstücke, die leicht als Stufen verwendet werden können, wie zum Beispiel eine Truhe oder Kommode
- Bedenken Sie, dass Kinder bei Betrachtung eines Fernsehprogramms – und ganz besonders auf einem „überlebensgroßen“ Monitor – leicht in starke Aufregung verfallen können. Der Monitor sollte so aufgestellt werden, dass er nicht umgestoßen oder gekippt werden kann.
- Alle am Monitor angeschlossenen Kabel sollten so verlegt werden, dass Kinder nicht daran ziehen oder sie ergreifen können.

## 2 Description

The MTIR550W-V2.x is a 55" Full-HD LCD monitor with LED backlight and integrated multitouch infrared sensor frame. By using Citron dreaMTouch technology the sensor frame is able to distinguish up to 32 simultaneous touch events and is connected via USB to an external host computer (not part of MTIR550W-V2.x). The MTIR550W-V2.x-A01 (Standard) model features a display panel with a maximum brightness of 450 cd/m<sup>2</sup> (Nits) and provides current digital input ports (DisplayPort, DVI, HDMI) and an VGA analog port. The MTIR550W-V2.x-A02 (Professional) model features a display panel with a maximum brightness of 700 cd/m<sup>2</sup> (Nits) and provides all the input ports of the -A01 model plus additional input ports mostly used by video professionals.

This operating manual describes bringing the multi-touch monitor into service and operating it.

**Contempt of this operating manual leads to warranty becoming void.**

## 3 Scope of delivery

The cardboard box contains the following items:

Identification	Amount
multi-touch monitor MITR550W-V2.x-A01/-A02	1

Accessory :

remote control	1
batteries (AAA)	2
VGA cable	1
IEC power cable	1
Cable USB-A / USB-B 3m	1
CD (Citron Drivers & Tools)	1
external IR receiver	1

Please check the completeness and integrity of the received goods. Damages or reclamations should immediately be reported to the dealer or carrier.

## 4 Installation

### 4.1 Connecting the monitor

- Plug the provided IEC cable to the mains jack of the monitor and to the AC mains outlet.
- Connect the output of your graphics card via a suitable interface (HDMI, DVI-D or DisplayPort recommended) and cable with the monitor.
- Connect the USB port of the monitor via the provided USB cable with an USB port of the computer.

### 4.2 Basic operation

- Set the monitor mains switch to “I” position.
- Power on the monitor by either pressing the power key on the remote control. or on the control panel on the rear of the monitor.
- Select the input source by either pressing the SOURCE button on the control panel on the rear of the monitor or the corresponding key on the remote control.

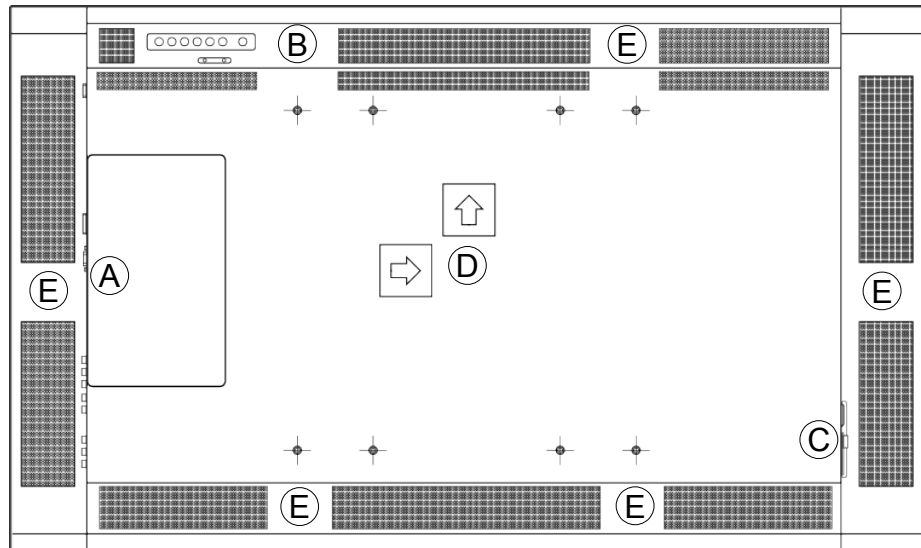
### 4.3 dreaMTouch touchscreen driver (citmuto03)

Prior to first use on the computer, which is to be controlled by the touchscreen, a corresponding device driver must be downloaded and installed. Instructions and further details on this can be found in the “dreaMTouch Installation and Usage Guide”.

Current versions of both the driver and the “dreaMTouch Installation and Usage Guide” are located on <http://www.citron.de> in the “Downloads”, “dreaMTouch” section.

## 5 Rear View

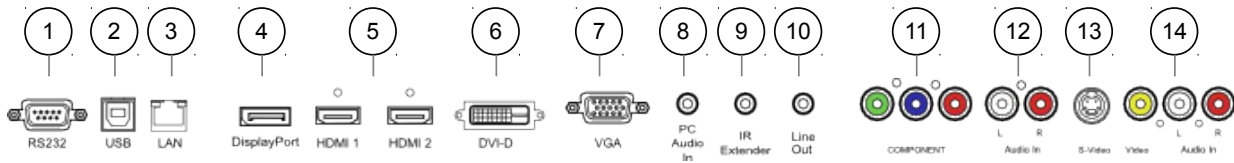
A	connectors
B	controls
C	mains connector / power switch
D	VESA mounting
E	air vents



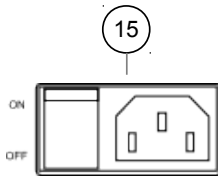
## 6 Connectors

All connectors are positioned on the rear of the monitor (position A and C in the rear view).

left (viewed from the rear):



right (viewed from the rear):



Connector	Function
1	RS232 monitor control interface
2	USB interface touchscreen
3	LAN monitor control interface ***
4	Videoinput DisplayPort
5	Videoinput HDMI1 and HDMI2 ( <b>HDMI2 not available on MTIR550W-V2.x-A01</b> )
6	Videoinput DVI-D
7	Videoinput VGA (analog)
8	Audioinput 3,6mm phone jack (PC,analog)
9	IR remote control extender (external)
10	Audiooutput 3,6mm phone jack (analog)
11	Videoinput Component RCA/Cinch (analog) *
12	Audioinput Component RCA/Cinch (analog) *
13	Videoinput S-Video Hosiden (analog) *
14	Videoinput Composite (analog), Audioinput RCA/Cinch (analog) *
15	Mains switch, IEC socket (C13)

\* not available on MTIR550W-V2.x-A01

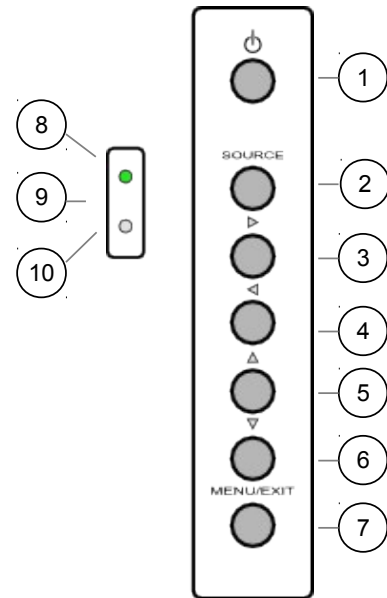
\*\*\* not available on MTIR550W-V2.x-A01/-A02; option for future model variants



## 7 Controls

The monitor controls are located on the top right corner on the rear side (position B in rear view).

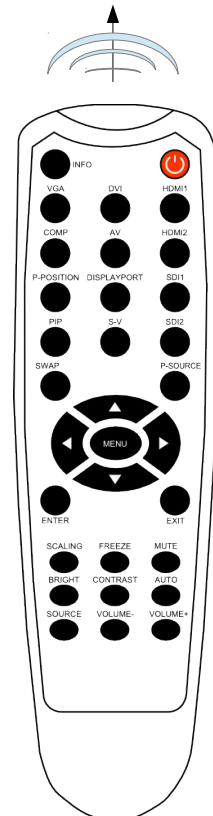
Item	Function
1	Power / Standby
2	Source Selection
3	Cursor right / Value +
4	Cursor left / Value -
5	Cursor up
6	Cursor down
7	MENU/EXIT
8	Power-Status LED green = regular operation orange blinking = no Signal orange lit = Standby off = monitor is switched off
9	IR sensor for remote control
10	Ambient brightness sensor



## 8 IR-Remote control

### 8.1 Remote controller

Key	Function
Power	Turn monitor on and off
INFO	Show information on picture source and resolution
VGA	Direct source selection „VGA“ input
DVI	Direct source selection „DVI“ input
HDMI1	Direct source selection „HDMI1“ input
HDMI2	Direct source selection „HDMI2“ input *
COMP	Direct source selection „Composite“ input *
AV	Direct source selection „AV“ input *
DISPLAYPORT	Direct source selection „DisplayPort“ input
S-V	Direct source selection „S-Video“ input *
SDI1	Direct source selection „SDI1“ input ***
SDI2	Direct source selection „SDI2“ input ***
P-POSITION	Selection of picture-in-picture (PIP) overlay position *
PIP	Activate/deactivate picture-in-picture (PIP)
SWAP	Switch picture of PIP overlay and main screen *
P-SOURCE	Source selection for PIP overlay *
MENU	Show onscreen menu
←	Cursor left
↑	Cursor up
→	Cursor right / Value +
↓	Cursor down / Value -
ENTER	Enter / select highlighted menu item
EXIT	Exit menu / menu item
SCALING	Set screen scaling / aspect ratio
FREEZE	Freeze frame
MUTE	Mute Audio
BRIGHT	Screen Brightness
CONTRAST	Screen Contrast
AUTO	Auto adjustment of VGA source
SOURCE	Browse video sources
Volume -	Decrease audio volume
Volume +	Increase audio volume

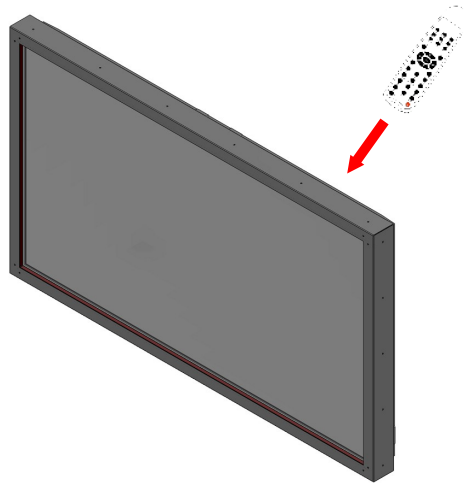


\* not available on MTIR550W-V2.x-A01

\*\*\* not available on MTIR550W-V2.x-A01/-A02; option for future model variants

## 8.2 Action radius of the remote controller

The internal IR receiver is positioned at the right top corner on the rear side of the monitor, beside the OSD control keys. The reception area can be extended by the supplied external IR receiver. Plug in the jack of the receiver into the plug marked "IR Extender" at the connector field on the rear side of the monitor. Place the external receiver to the area of your choice.



## 8.3 Keylock

To prevent misuse or unintentional reconfiguration of the monitor the keys on the remote controller and the control panel on the monitor can be locked.

### 8.3.1 Locking

Sequentially press the keys <ENTER>, <ENTER>, <EXIT>, <EXIT>, <ENTER> and <EXIT> on the remote controller. After that all but the <ENTER> and <EXIT> keys are locked.

### 8.3.2 Unlocking

Sequentially press the keys <ENTER>, <ENTER>, <EXIT>, <EXIT>, <ENTER> and <EXIT> again to revoke key locking.

## 9 OSD Menu

### 9.1 MTIR550W-V2.x-A01

#### 9.1.1 Graphics Mode

Main menu	Sub-Menu	Description	Settings	
Video	Scheme	Deactivated in Graphics Mode		
	Brightness	Picture Brightness	0 ~ 100 <b>[50]</b>	
	Contrast	Contrast	0 ~ 100 <b>[50]</b>	
	Sharpness	Picture Sharpness	0 ~ 24 <b>[12]</b>	
	Saturation	Deactivated in Graphics Mode		
	Hue	Deactivated in Graphics Mode		
	Backlight	Brightness of backlight	0 ~ 100 <b>[80]</b>	
	Color Temp & Gamma	Gamma	Gamma	2.2, Off
		Color Temp	Color temperature	5000K, 6500K, 7500K, <b>[9300K]</b> , User
		Red Gain	Amplification "Red"	128 ~ 384
		Green Gain	Amplification "Green"	128 ~ 384
		Blue Gain	Amplification "Blue"	128 ~ 384
		Red Offset	"Red" Shift	-50 ~ 50
		Green Offset	"Green" Shift	-50 ~ 50
Blue Offset	"Blue" Shift	-50 ~ 50		
Aspect Ratio	Adjust aspect ratio of the screen	<b>Full Screen</b> / Pillar Box / Auto		
Auto Scan	Auto select input source	<b>Off</b> / On		
Select Source	Select input source	DisplayPort / HDMI / DVI / <b>VGA</b>		
Audio	Volume	Audio Volume	0 ~ 100	
	Bass	Audio Bass	0 ~ 20	
	Treble	Audio Treble	0 ~ 20	
	Balance	Audio Balance	0 ~ 20	
	HDMI Audio Input	HDMI Audio source selection	<b>HDMI</b> / PC	
	DP Audio Input	DisplayPort Audio source selection	<b>DisplayPort</b> / PC	
	Internal Speakers	Speaker on/off	<b>Off</b> / On	
Basic	OSD Transparent	OSD menu transparency	0 ~ 12	
	OSD Location	Position of OSD overlay	→,←, ↑,↓	
	OSD Rotation	Orientation of OSD overlay	<b>Landscape</b> / Portrait	
	OSD Language	Language of OSD menu	<b>English</b> / Chinese	
	OSD Timeout	Time until OSD menu fadeout	5 ~ 120 s <b>[30s]</b>	
	Power LED	Status LED deactivate/activate	Off, <b>[On]</b>	
	Real Time Clock	Current Time	Setup Date & Time	
		Time Mode *	Select time mode	User / Work Days / All days
MON		Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59	

Main menu	Sub-Menu		Description	Settings
		TUE	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		WED	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		THU	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		FRI	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		SAT	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		SUN	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
Advanced	Auto Adjustment		Automatic picture alignment	No, Yes
	Image Position		Picture position	-50 ~ +50 corresponding to picture resolution
	Phase		Phase 0 ~ 63	corresponding to picture resolution
	Clock		Clock 0 ~ 100	corresponding to picture resolution
	IRFM		Anti-BurnIn screen saver	Off, On
	Baud rate		Set speed of RS232 interface	115200, 38400, 19200, 9600
	Smart light control		Backlight control configuration	Off, DCR, Light Sensor
	Wake Up from Sleep		Energy Function	VGA Only / VGA Digital RS232
Factory Reset		Reset settings to factory defaults	Yes, No	
System	Channel Information	Source	Show name of current video source	
		Resolution	Show current picture resolution	
		Firmware Version	Show version of monitor firmware	

\* Time Mode

- User : alarm timer is configured manually for each day
- All Days : alarm timer is configured to the same time for every day
- Work Days : alarm timer is configured to the same time on work days (Mon.~Fri.)

\*\* Wake Up from Sleep ;

- VGA Only – the monitor normally wakes up from power saving mode when it receives an active video signal from its VGA (analog) input.
- VGA, Digital, RS232 – the monitor wakes up when it receives an active signal from its VGA, HDMI, DisplayPort or DVI inputs and can be waked up by RS232 as well.

### 9.1.2 Video Mode

Main menu	Sub-Menu	Description	Settings	
Video	Scheme	Select picture profile	User, Vivid, Cinema, Game, Sport	
	Brightness	Picture Brightness	0 ~ 100 <b>[50]</b>	
	Contrast	Contrast	0 ~ 100 <b>[50]</b>	
	Sharpness	Picture Sharpness	0 ~ 24 <b>[12]</b>	
	Saturation	Color Saturation	0 ~ 100	
	Hue	Color Hue	0 ~ 100	
	Backlight	Brightness of backlight	0 ~ 100 <b>[80]</b>	
	Color Temp & Gamma	Gamma	Gamma	2.2, Off
		Color Temp	Color temperature	5000K, 6500K, 7500K, <b>[9300K]</b> , User
		Red Gain	Amplification "Red"	128 ~ 384
		Green Gain	Amplification "Green"	128 ~ 384
		Blue Gain	Amplification "Blue"	128 ~ 384
		Red Offset	"Red" Shift	-50 ~ 50
		Green Offset	"Green" Shift	-50 ~ 50
Blue Offset	"Blue" Shift	-50 ~ 50		
Aspect Ratio	Adjust aspect ratio of the screen	<b>Full Screen</b> / Pillar Box / Auto		
Auto Scan	Auto select input source	<b>Off</b> / On		
Select Source	Select input source	DisplayPort / HDMI / DVI / <b>VGA</b>		
Audio	Volume	Audio Volume	0 ~ 100	
	Bass	Audio Bass	0 ~ 20	
	Treble	Audio Treble	0 ~ 20	
	Balance	Audio Balance	0 ~ 20	
	HDMI Audio Input	HDMI Audio source selection	<b>HDMI</b> / PC	
	DP Audio Input	DisplayPort Audio source selection	<b>DisplayPort</b> / PC	
	Internal Speakers	Speaker on/off	<b>Off</b> / On	
Basic	OSD Transparent	OSD menu transparency	0 ~ 12	
	OSD Location	Position of OSD overlay	→,←, ↑,↓	
	OSD Rotation	Orientation of OSD overlay	<b>Landscape</b> / Portrait	
	OSD Language	Language of OSD menu	<b>English</b> / Chinese	
	OSD Timeout	Time until OSD menu fadeout	5 ~ 120 s <b>[30s]</b>	
	Power LED	Status LED deactivate/activate	Off, <b>[On]</b>	
	Real Time Clock	Current Time	Setup Date & Time	
		Time Mode *	Select time mode	User / Work Days / All days
		MON	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		TUE	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59

Main menu	Sub-Menu		Description	Settings
		WED	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		THU	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		FRI	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		SAT	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
		SUN	Setup Disable or Enable (Power On Time & Power Off Time)	<input type="checkbox"/> <input type="checkbox"/> 00:00 ~ 23:59 / 00:00 ~ 23:59
Advanced	Auto Adjustment		Automatic picture alignment	No, Yes
	Image Position		Picture position	-50 ~ +50 corresponding to picture resolution
	Phase		Phase 0 ~ 63	corresponding to picture resolution
	Clock		Clock 0 ~ 100	corresponding to picture resolution
	IRFM		Anti-BurnIn screen saver	Off, On
	Baud rate		Set speed of RS232 interface	115200, 38400, 19200, 9600
	Smart light control		Backlight control configuration	Off, DCR, Light Sensor
	Wake Up from Sleep		Energy Function	VGA Only / VGA Digital RS232
	Factory Reset		Reset settings to factory defaults	Yes, No
System	Channel Information	Source	Show name of current video source	
		Resolution	Show current picture resolution	
		Firmware Version	Show version of monitor firmware	

\* Time Mode

- User : alarm timer is configured manually for each day
- All Days : alarm timer is configured to the same time for every day
- Work Days : alarm timer is configured to the same time on work days (Mon.~Fri.)

\*\* Wake Up from Sleep ;

- VGA Only – the monitor normally wakes up from power saving mode when it receives an active video signal from its VGA (analog) input.
- VGA, Digital, RS232 – the monitor wakes up when it receives an active signal from its VGA, HDMI, DisplayPort or DVI inputs and can be waked up by RS232 as well.

## 9.2 MTIR550W-V2.x-A02

### 9.2.1 Graphics Mode

Main menu	Sub-Menu	Description	Settings	
Image Settings	Scheme	Deactivated in Graphics Mode		
	Brightness	Picture Brightness	0 ~ 100 <b>[50]</b>	
	Contrast	Contrast	0 ~ 100 <b>[50]</b>	
	Sharpness	Picture Sharpness	0 ~ 24 <b>[12]</b>	
	Saturation	Deactivated in Graphics Mode		
	Hue	Deactivated in Graphics Mode		
	Backlight	Brightness of backlight	0 ~ 100 <b>[80]</b>	
	Color Temp & Gamma	Gamma	Gamma	2.2, Off
		Color Temp	Color temperature	5000K, 6500K, 7500K, <b>[9300K]</b> , User
		Red Gain	Amplification "Red"	128 ~ 384
Green Gain		Amplification "Green"	128 ~ 384	
Blue Gain		Amplification "Blue"	128 ~ 384	
Red Offset		"Red" Shift	-50 ~ 50	
Green Offset		"Green" Shift	-50 ~ 50	
Blue Offset	"Blue" Shift	-50 ~ 50		
Display Settings	Main	Aspect Ratio	Aspect Ratio	Full screen, Pillar Box, Letter Box, Native
		Zoom	Picture Zoom in/out	→,←
		Auto Scan	Automatic source selection	<b>[Off]</b> , On
		Select Source	Select source for main picture	VGA, HDMI1/2, Video, S-V, Comp, DVI, DP
	PIP	PIP mode	picture-in-picture mode	Off, Large PIP, Medium PIP, Small PIP, Side by Side
		PIP Position	Position of picture-in-picture overlay	Bottom-Right, Top-Left, Top-Right, Bottom-Left
		Aspect ratio	Aspect ratio of picture-in-picture overlay	Full screen, Pillar Box, Letter Box
		Side by Side Scale		→ PIP
				← Main
				↑ Zoom In
				↓ Zoom Out
				Enter: Default Menu: Return
	Auto Scan	Automatic source selection for picture-in-picture overlay	<b>[Off]</b> , On	
	Select Source	Select source for picture-in-picture overlay	VGA, HDMI1/2, Video, S-V, Comp, DVI, DP	
Audio Settings	Volume	Audio Volume	0 ~ 100	
	Bass	Audio Bass	0 ~ 20	



Main menu	Sub-Menu	Description	Settings
	Treble	Audio Treble	0 ~ 20
	Balance	Audio Balance	0 ~ 20
	HDMI Audio Input	HDMI Audio source selection	HDMI/PC
Basic Settings	OSD Transparent	OSD menu transparency	0 ~ 100
	OSD Location	Position of OSD overlay	→,←, ↑,↓
	OSD Zoom	Size of OSD overlay	Off, On
	OSD Rotation	Orientation of OSD overlay	0/90/80/270
	OSD Language	Language of OSD menu	English / Chinese
	OSD Timeout	Time until OSD menu fadeout	5 ~ 120 s
	Sleep Timer	Timer until Standby Mode is activated	<b>[Off]</b> , 15,30,60,90,120 Min
	Power LED	Status LED deactivate/activate	Off, <b>[On]</b>
	Real Time Clock	Set date and time	
Advanced Settings	Auto Adjustment	Deactivated, if not VGA source	
	Image Position	Deactivated, if not VGA source	
	Phase	Deactivated, if not VGA source	
	Clock	Deactivated, if not VGA source	
	VGA ADC Settings	Deactivated, if not VGA source	
	Flesh Tone	Correction of skin tone	Off, High, Medium, Low
	IRFM	Anti-BurnIn screen saver	Off, On
	Band rate	Set speed of RS232 interface	115200, 38400, 19200, 9600
	Smart light control	Backlight control configuration	Off, DCR, Light Sensor
	Ethernet Setup	Network setup	
	Factory Reset	Reset settings to factory defaults	Yes, No
System Status	Channel Information	Source	Show name of current video source
		Resolution	Show current picture resolution
		Firmware Version	Show version of monitor firmware

### 9.2.2 Video Mode

Main menu	Sub-Menu	Description	Settings	
Image Settings	Scheme	Select picture profile	User, Vivid, Cinema, Game, Sport	
	Brightness	Picture Brightness	0 ~ 100 <b>[50]</b>	
	Contrast	Contrast	0 ~ 100 <b>[50]</b>	
	Sharpness	Picture Sharpness	0 ~ 24 <b>[12]</b>	
	Saturation	Color Saturation	0 ~ 100	
	Hue	Color Hue	0 ~ 100	
	Backlight	Brightness of backlight	0 ~ 100 <b>[80]</b>	
	Color Temp & Gamma	Gamma	Gamma	2.2, Off
		Color Temp	Color temperature	5000K, 6500K, 7500K, <b>[9300K]</b> , User
		Red Gain	Amplification "Red"	128 ~ 384

Main menu	Sub-Menu	Description	Settings	
		Green Gain	Amplification "Green"	128 ~ 384
		Blue Gain	Amplification "Blue"	128 ~ 384
		Red Offset	"Red" Shift	-50 ~ 50
		Green Offset	"Green" Shift	-50 ~ 50
		Blue Offset	"Blue" Shift	-50 ~ 50
Display Settings	Main	Aspect Ratio	Aspect Ratio	Full screen, Pillar Box, Letter Box, Native
		Zoom	Picture Zoom in/out	→,←
		Auto Scan	Automatic source selection	<b>[Off]</b> , On
		Select Source	Select source for main picture	VGA, HDMI1/2, Video, S-V, Comp, DVI, DP
	PIP	PIP mode	picture-in-picture mode	Off, Large PIP, Medium PIP, Small PIP, Side by Side
		PIP Position	Position of picture-in-picture overlay	Bottom-Right, Top-Left, Top-Right, Bottom-Left
		Aspect ratio	Aspect ratio of picture-in-picture overlay	Full screen, Pillar Box, Letter Box
		Side by Side Scale		→ PIP
				← Main
				↑ Zoom In
				↓ Zoom Out
		Enter: Default		
		Menu: Return		
Audio Settings	Volume	Audio Volume	0 ~ 100	
	Bass	Audio Bass	0 ~ 20	
	Treble	Audio Treble	0 ~ 20	
	Balance	Audio Balance	0 ~ 20	
	HDMI Audio Input	HDMI Audio source selection	HDMI/PC	
Basic Settings	OSD Transparent	OSD menu transparency	0 ~ 100	
	OSD Location	Position of OSD overlay	→,←, ↑,↓	
	OSD Zoom	Size of OSD overlay	Off, On	
	OSD Rotation	Orientation of OSD overlay	0/90/80/270	
	OSD Language	Language of OSD menu	English / Chinese	
	OSD Timeout	Time until OSD menu fadeout	5 ~ 120 s	
	Sleep Timer	Timer until Standby Mode is activated	<b>[Off]</b> , 15,30,60,90,120 Min	
	Power LED	Status LED deactivate/activate	Off, <b>[On]</b>	
Real Time Clock	Set date and time			
Advanced Settings	Auto Adjustment	Automatic picture alignment	Off, On	
	Image Position	Picture position	0 ~ 100 0 ~ 100 corresponding to picture resolution	

Main menu	Sub-Menu	Description	Settings
	Phase	Phase 0 ~ 63	corresponding to picture resolution
	Clock	Clock 0 ~ 100	corresponding to picture resolution
	VGA ADC Settings	Manual ADC calibration	
	Flesh Tone	Deactivated in Video Mode	
	IRFM	Anti-BurnIn screen saver	Off, On
	Band rate	Set speed of RS232 interface	115200, 38400, 19200, 9600
	Smart light control	Backlight control configuration	Off, DCR, Light Sensor
	Ethernet Setup	Network setup	
	Factory Reset	Reset settings to factory defaults	Yes, No
System Status	Channel Information	Source	Show name of current video source
		Resolution	Show current picture resolution
		Firmware Version	Show version of monitor firmware

## 10 Video resolutions

### 10.1 MTIR550W-V2.x-A01

Timing		fH(KHz)	fV(Hz)	Pixelclock	HDMI	PC	DVI	Display Port	
VESA	VGA 640x480	31.469	59.94	25.175	●	●	●	●	
	SVGA 800x600	35.156	56.25	36	●	●	●	●	
		37.879	60.317	40	●	●	●	●	
	XGA 1024x768	48.363	60.004	65	●	●	●	●	
	WXGA 1360x768	47.712	60.015	85.5	●	●	●	●	
	1280x720	44.444	59.98	64	●	●	●	●	
		44.772	59.86	74.5	●	●	●	●	
	1280x768	47.776	59.87	79.5	●	●	●	●	
		47.396	59.995	68.25	●	●	●	●	
	1280x800	49.306	59.91	71	●	●	●	●	
		49.702	59.81	83	●	●	●	●	
	SXGA	1280x1024	63.981	60.02	108	●	●	●	●
	SXGA+	1400x1050	64.744	59.95	101	●	●	●	●
			65.317	59.98	121.75	●	●	●	●
	1440x900		55.469	59.901	88.75	●	●	●	●
			55.935	59.88	106.5	●	●	●	●
	WSXGA+ 1680x1050		64.674	59.883	119	●	-	●	●
			65.29	59.954	146.25	●	-	●	●
UXGA 1600x1200		75	60	162	●	●	●	●	
1920x1080		66.587	59.93	138.5	●	●	●	●	
EDTV	480p	31.5	60	27.03	●	-	●	●	
	576p	31.25	50	27	●	-	●	●	
HDTV	720p 1280x720	37.5	50	74.25	●	-	●	●	
		44.995	59.94	74.176	●	-	●	●	
		45	60	74.25	●	-	●	●	
	1080i 1920x1080	28.13	50	74.25	●	-	●	●	
		33.716	59.94	74.176	●	-	●	●	
		33.75	60	74.25	●	-	●	●	
	1080p 1920x1080	67.433	59.94	148.352	●	-	●	●	
		67.5	60	148.5	●	-	●	●	

10.2 MTIR550W-V2.x-A02

Timing		fH(KHz)	fV(Hz)	Pixelclock	HDMI	PC	Component	S-Video	Composite	DVI	Display Port	
VESA	VGA 640x480	31.469	59.94	25.175	●	●	-	-	-	●	●	
		37.861	72.809	31.5	●	●	-	-	-	●	●	
		37.5	75	31.5	●	●	-	-	-	●	●	
		43.269	85.008	36	●	●	-	-	-	●	●	
	SVGA 800x600	35.156	56.25	36	●	●	-	-	-	●	●	
		37.879	60.317	40	●	●	-	-	-	●	●	
		48.077	72.188	50	●	●	-	-	-	●	●	
		46.875	75	49.5	●	●	-	-	-	●	●	
	XGA 1024x768	53.674	85.06	56.25	●	●	-	-	-	●	●	
		48.363	60.004	65	●	●	-	-	-	●	●	
		56.476	70.069	75	●	●	-	-	-	●	●	
		60.023	75.029	78.75	●	●	-	-	-	●	●	
	WXGA 1360x768	68.677	84.997	94.5	●	●	-	-	-	●	●	
		47.712	60.015	85.5	●	●	-	-	-	●	●	
	1280x720	44.444	59.98	64	●	●	-	-	-	●	●	
		44.772	59.86	74.5	●	●	-	-	-	●	●	
		56.456	74.78	95.75	●	●	-	-	-	●	●	
	1280x768	47.776	59.87	79.5	●	●	-	-	-	●	●	
		47.396	59.995	68.25	●	●	-	-	-	●	●	
		68.633	84.837	117.5	●	●	-	-	-	●	●	
	1280x800	49.306	59.91	71	●	●	-	-	-	●	●	
		49.702	59.81	83	●	●	-	-	-	●	●	
	SXGA	1152x864	67.5	75	108	●	-	-	-	-	●	●
			63.981	60.02	108	●	-	-	-	-	●	●
		1280x1024	79.976	75.025	135	●	-	-	-	-	●	●
			91.146	85.024	157.5	●	-	-	-	-	●	●
SXGA]	1400x1050	64.744	59.95	101	●	-	-	-	-	●	●	
		65.317	59.98	121.75	●	-	-	-	-	●	●	
1440x900	55.469	59.901	88.75	●	●	-	-	-	●	●		
	55.935	59.88	106.5	●	●	-	-	-	●	●		
WSXGA+ 1680x1050	64.674	59.883	119	●	●	-	-	-	●	●		
	65.29	59.954	146.25	●	●	-	-	-	●	●		
UXGA 1600x1200	75	60	162	●	●	-	-	-	●	●		
1920x1080	66.587	59.93	138.5	●	●	-	-	-	●	●		
WUXA 1920x1200	74.038	59.95	154	●	●	-	-	-	●	●		
SDTV	NTSC	15.734	29.97	13.5	-	-	480i@60Hz	●	●	-	-	
	PAL	15.625	25	13.5	-	-	576i@50Hz	●	●	-	-	
EDTV	480p	31.5	60	27.03	●	-	●	-	-	●	●	
	576p	31.25	50	27	●	-	●	-	-	●	●	
HDTV	720p 1280x720	37.5	50	74.25	●	-	●	-	-	●	●	
		44.995	59.94	74.176	●	-	●	-	-	●	●	
		45	60	74.25	●	-	●	-	-	●	●	
	1080i 1920x1080	28.13	50	74.25	●	-	●	-	-	●	●	
		33.716	59.94	74.176	●	-	●	-	-	●	●	

Timing		fH(kHz)	fV(Hz)	Pixelclock	HDMI	PC	Component	S-Video	Composite	DVI	Display Port
1080p 1920x1080		33.75	60	74.25	●	-	●	-	-	●	●
		27	24	74.25	●	-	●	-	-	●	●
		28.125	25	74.25	-	-	-	-	-	-	-
		33.716	29	74.18	-	-	-	-	-	-	-
		33.75	30	74.25	-	-	-	-	-	-	-
		56.25	50	148.5	●	-	●	-	-	●	●
		67.433	59.94	148.352	●	-	●	-	-	●	●
		67.5	60	148.5	●	-	●	-	-	●	●

## 11 Cleaning the front glass

To clean the front glass of the monitor you can use any commercially available solvent-free glass cleaning agent.

**Attention:** Don't use any abrasive cleaners or any type of cleaning alcohol as this will damage the surface of the multi-touch bezel and degrade the touchscreen performance. Don't spill any liquid on the venting ports or the inside of the monitor.

## 12 Troubleshooting

Symptom	Possible Cause	Solution
No touch functionality	<ul style="list-style-type: none"> <li>A cable connection is not properly plugged in</li> <li>Device driver is not installed correctly</li> </ul>	<ul style="list-style-type: none"> <li>Check USB connection at the monitor</li> <li>Check USB connection at the computer</li> <li>switch on the monitor</li> <li>reinstall the device driver, please also refer to the „dreaMTouch Installation and Usage Guide“</li> </ul>
Touch functionality unstable / intermittent	<ul style="list-style-type: none"> <li>Poor USB cabling / connection within the computer</li> <li>USB cable is too long</li> </ul>	<ul style="list-style-type: none"> <li>Use a USB port on the rear of the computer (ATX connector field)</li> <li>please consider that the maximum length of a USB segment is 5m, the maximum length of the USB segment directly connected to the monitor is 3.5m; either use a shorter cable or add an active / self-powered USB hub</li> </ul>
Monitor does not work	<ul style="list-style-type: none"> <li>Connection plug is not fully connected</li> <li>Mains switch not in ON position</li> <li>Monitor in stand-by state</li> <li>Selected wrong video source</li> <li>Video cable defective</li> </ul>	<ul style="list-style-type: none"> <li>Check all connections of the video cable (e.g. DVI or VGA cable)</li> <li>check the power chord of the monitor</li> <li>switch on mains switch</li> <li>switch on monitor via the OSD key on the rear side or the remote controller</li> <li>select the correct video source with the remote controller or the OSD menu, enable or disable the automatic source selection</li> <li>replace cable</li> </ul>
Brightness decreases or monitor switches itself off	<ul style="list-style-type: none"> <li>The monitor is overheating</li> </ul>	<ul style="list-style-type: none"> <li>Ensure good ventilation of cool air at air in- and outlet (position E in rear-view)</li> </ul>
Monitor does not respond to remote controller	<ul style="list-style-type: none"> <li>Dead batteries</li> <li>Distance between monitor and remote controller too far or out of angle</li> </ul>	<ul style="list-style-type: none"> <li>Replace with new batteries (2x AAA)</li> <li>point the remote control to the top left corner on the rear side (view from the front) of the monitor or the external IR receiver and reduce the distance between remote controller and receiver.</li> </ul>

## 13 Specification

### 13.1 Electrical

	MTIR550W-V2.x-A01	MTIR550W-V2.x-A02
MTIR550W-V2.x-A01 Voltage:	100 – 240 V AC 50 – 60 Hz	
Power consumption (operating):	<= 183 W	<= 173 W
Power consumption (power-save):	<= 0.5 W	

### 13.2 Touchscreen

Distinguished touch-points (simultaneously):	up to 32
Size of touch-points:	> 8 mm
Resolution:	< 2.5 mm
Operating System:	Microsoft® Windows XP® - Microsoft® Windows 7® 32 Bit und 64 Bit Debian® Linux® >= 6 32/64Bit Ubuntu® Linux® >= 12.04 32/64Bit other Linux distributions on request Apple Mac OSX® >= 10.8
Communication Protocol:	<ul style="list-style-type: none"> <li>• TUIO 1.1 (2Dcur and 2Dblb Profiles)</li> <li>• Windows 7 Multitouch HID Emulation</li> <li>• Windows XP Maus Emulation</li> <li>• Linux uinput/evdev</li> </ul>
Scan speed:	15 ms / frame
Interface:	USB2.0, full speed

### 13.3 Environmental

Operating temperature:	5°C - 35°C / 41°F – 95°F
Humidity (operating)	20% to 85% RH (non-condensing)

### 13.4 Mechanical

Dimension:	1290.6 × 760.0 × 65.4 mm
Finish:	black powder-coated (RAL 9011)
Wall mount:	400x400 / 200x400 mm VESA standard
Front glass:	4 mm anti-glare, laminated security glass
Weight:	42.5 kg / 51.3 kg (packaged)
Fanless design:	yes



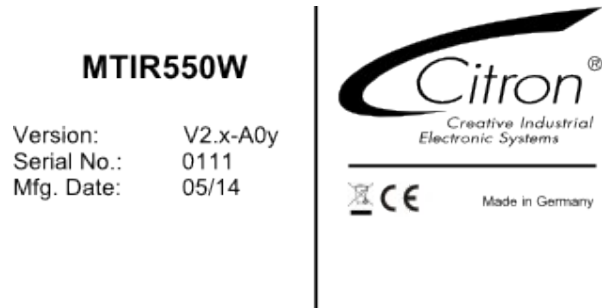
**13.5 I/O**

	<b>MTIR550W-V2.x-A01</b>	<b>MTIR550W-V2.x-A02</b>
Connectors:	DisplayPort / HDMI / VGA /DVI / PC-Audio in / IR Extender / PC-Audio Out / RS232	DisplayPort / 2x HDMI 1.3c / VGA /DVI / PC-Audio in / IR Extender / PC-Audio Out / Component / S-Video / AV / RS232

**13.6 LCD panel**

	<b>MTIR550W-V2.x-A01</b>	<b>MTIR550W-V2.x-A02</b>
Brightness:	450 cd/m <sup>2</sup> typ.	700 cd/m <sup>2</sup> typ.
Contrast:	4000:1	
Viewing Angle (H/V):	178° / 178°	
Response time:	6.5 ms typ.(GTG)	
Colour Resolution:	1,07 Billion (10-Bit)	
Max./native resolution / aspect ratio:	1920x1080 / 16:9	
Active Area:	1209.6 x 680.4 mm	

## 14 Identification label



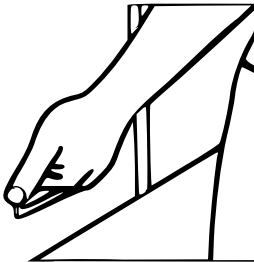
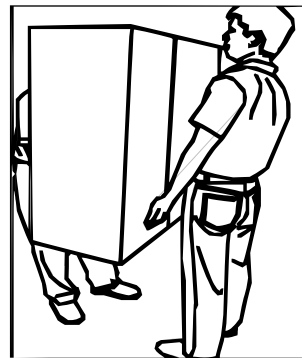
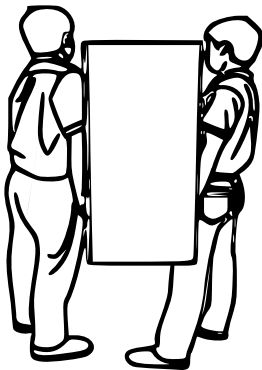
## 15 Order - Information

Order Code	Description
MTIR550W-V2.x-A01	55" dreaMTouch touchscreen LCD monitor (Standard)
MTIR550W-V2.x-A02	55" dreaMTouch touchscreen LCD monitor (Professional)

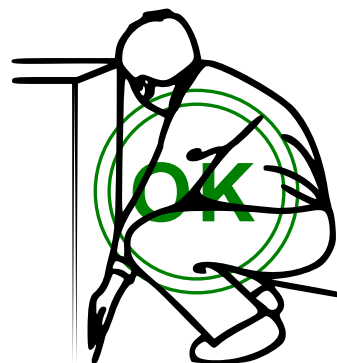
## 16 Appendix

### 16.1 Package Handling

Due to its heavy weight, the monitor always must be carried / handled by two persons in order to prevent injury by strain or falling. Please additionally observe all current local accident prevention regulations. The monitor must be transported in its original carton box standing upright. Do not transport the monitor lying flat as this might cause breaking the front window and/or the display panel glass. Carry and hold the monitor cardboard box by its white handles.



To reduce the pressure on your spine when lifting the monitor, bend from the knees, not the spine; keep your back straight; hold weights close to your body; and never lift and twist at the same time.



## 16.2 Evaluation of visual range

Although utmost care is taken while manufacturing this LCD product some slight defects can not always be avoided. Also some defects can occur when transporting or operating the monitor in an inappropriate manner.

### 16.2.1 Failure of pixel

An image point (pixel) usually consists of 3 separate sub-pixel with the basic colours red, green and blue. If a sub-pixel failure is larger than  $\frac{1}{2}$  pixel, it is counted as pixel failure according to definition. 3 kinds of pixel failures are differentiated:

- Permanent bright pixel  
The defective pixel appears permanently lit and with constant size on a black testing image
- Permanent dark pixel  
The defective pixel appears permanently dark and with constant size on a red, green, blue and white testing image.
- Cluster of defective sub-pixel  
two or more sub-pixels of directly bordering pixels show a defect.

The total number of acceptable pixel defects on this monitor is determined by ISO 9241-307 for class II display panels with a resolution of 1920 x 1080 (=2.073 million) pixel.

Resolution	Acceptable total number of defect pixel			
	Defect type 1	Defect type 2	Defect type 3	
	Bright pixel	Dark pixel	Bright sub-pixel $n^* = [0 - 11]$	Dark subpixel $n^* = [0 - 11]$
HD 1920x1080 (2.073 million pixel)	5	5	11 $11-n^*$ 0	0 $2xn^*$ 22

*Examples:*

A) Total number of defect subpixel                    11 bright sub-pixel + 0 dark sub-pixel or  
   0 bright sub-pixel + 22 dark sub-pixel

B) If the number of bright sub-pixel is  $n^*=4$ , then only  $2x(11-4) = 14$  dark sub-pixel are allowed.

### 16.2.2 Pollutions

While manufacturing and handling of the monitor (LCD panel, front cover glass, touchscreen frame) minor pollutions in the range of vision might occur which can not completely avoided.

Pollution Category	Critical Value	Acceptable total number of defects
Inclusion / Marks	$D \geq 1.5 \text{ mm}$	$N \leq 8, G \leq 12$
Depressions / Blistering	$D \geq 1.5 \text{ mm}$	
Scratch / Lints	$W \geq 0.25 \text{ mm}, L \geq 15.0\text{mm}$	

D = diameter, L = length, W = width, N = number of separate occurrences of pollution of a category, G = total number of pollutions in visual range

### 16.2.3 Chronological effects

False installation or use of the display during operating time may cause undesirable partly visible effects. The internal structure of the LCD panel may be altered by outside influences which causes these effects.

#### **„Image Retention / Image Sticking / Remanent Image / Ghosting“**

If static images are displayed for long periods of time, the liquid crystals of the display panel slightly shift their initial polarity. This results in „ghost images“ of the static content appearing after content change. Distinguished from „Burn-In“ defects known from CRT or plasma displays, „image retention“ on LCD displays is reversible and not an defect covered by warranty. Heavy „image retention“ may be reversed by switching of the display over a longer period or displaying „inverse“ content (black where previously white pixels were displayed etc.) allowing the liquid crystals to return to their initial polarity.

**Image retention of LCD / TFT panels is excluded from the warranty.**

#### **„Mura“**

The japanese term „Mura“ (unevenness) describes an effect where cloud formations are visible on LCD displays. These clouds are particularly visibel at low brightness levels. The main reason for the occurence of Mura is operating the monitor at high ambient temperature as well as poor air supply caused by wrong installation or polluted/blocked ventilation system. Mura is an irreversible defect and can only be removed by replacing the display panel.

**Mura on LCD / TFT panels is excluded from the warranty.**

#### **„Shade formation“ / „Dusting“**

When operating the monitor in environments with high ambient pollution (dust, smoke etc.) level, particles might ingress into the monitor, between the front cover glass and the display panel or the display panel itself. Pollutions may be removed by cleaning the monitor and display panel in a cleanroom.

**Shade formation inside of the panel / monitor is excluded from the warranty.**

### 16.3 Remote control of the monitor via RS232

#### RS232C (Serial Port) Setting

Item	Setting
Baud Rate	115200 [bps] (Default)
Data Bit	8
Parity Bit	none
Stop Bit	1

#### RS232 (Serial Port) cable

SUB-D 9 (female) to SUB-D 9 (male) 1:1 connection

#### RS232 Command Format

STX(1Byte) + IDT(1Byte) + Type(1Byte) + CMD(3Bytes) + [VAL/RPL(1Byte)] + ETX(1Byte)

STX: Start Byte = **07**

IDT: **01~FF** (hex) ID for single monitor control mode. **00** (hex) for broadcast mode / video wall.

Type: Command type **01** = read/action, **02** = write, **00** = response of the monitor

CMD: Command from the following table

VAL: Value for a write command

RPL: Reply of the monitor

ETX: End Byte = **08**

#### *Transmission to the monitor :*

Read/Action Command : 07 IDT 01 CMD 08 (7 Bytes)

Write/Setting Command : 07 IDT 02 CMD VAL 08 (8 Bytes)

#### *Reply of the monitor :*

(CMD of the monitor reply is of the same value as the received command. The reply is sent after the command has been executed by the monitor)

Reply Command : 07 IDT 00 CMD REP 08 (8 Bytes)

Main option	Control option	CMD	Typ	VAL	RPL	Content	CMD (hex)
Power & Source selection	Power	POW	W/R	00	00	Monitor OFF (Standby)	50 4F 57
				01	01	Monitor On	
	Source selection	MIN	W/R	00	00	VGA	4D 49 4E
				01	01	DVI-D	
				02	02	S-Video *	
				03	03	Composite 1 *	
				04	04	Component 1 *	
				05	05	HDS DI1 ***	
				06	06	HDS DI2 ***	
				09	09	HDMI1	
				10	10	HDMI2 *	
				13	13	Displayport	
	Display Settings	Display Settings	BRI	W/R	0~100	Value	Backlight Brightness
BRL			W/R	0~100	Value	Picture Brightness	42 52 4C
BLC			W/R	00	00	Backlight OFF	42 4C 43
				01	01	Backlight ON	
CON			W/R	0~100	Value	Contrast	43 4F 4E
HUE			W/R	0~100	Value	Color Hue	48 55 45
SAT			W/R	0~100	Value	Color Saturation	53 41 54
COT			W/R	00	00	User	43 4F 54
				01	01	6500K	
				02	02	9300K	
				06	06	5000K	
				07	07	7500K	
GAC		W/R	00	00	Gamma OFF	47 41 43	
			01	01	Gamma 2.2		
Settings		PHA	W/R	0~63	Value	Phase	50 48 41
		CLO	W/R	0~100	Value	Clock	43 4C 4F
		HOR	R		Value	Horizontal position	48 4F 52
		VER	R		Value	Vertical position	56 45 52
		ADJ	W	00	00	Automatic alignment	41 44 4A
Video Mode		SHA	W/R	0~24	Value	Picture Sharpness	53 48 41
Other Control	Picture-in-Picture Settings *	PSC	W/R	00	00	Picture-in-picture off *	50 53 43
				01	01	Picture-in-picture small *	
				02	02	Picture-in-picture medium *	
				03	03	Picture-in-picture large *	
				04	04	Picture-in-picture side-by-side *	
	Picture-in-Picture Source Selection *	PIN	W/R	00	00	VGA *	50 49 4E
				01	01	DVI-D *	
				02	02	S-Video *	
				03	03	Composite 1 *	

Main option	Control option	CMD	Typ	VAL	RPL	Content	CMD (hex)
				04	04	Component 1 *	
				05	05	HDSI1 ***	
				06	06	HDSI2 ***	
				09	09	HDMI1 *	
				10	10	HDMI2 *	
				13	13	Displayport *	
	Picture-in-Picture Position *	PPO	W/R	00	00	Overlay bottom left *	<b>50 50 4F</b>
				01	01	Overlay bottom right *	
				02	02	Overlay top left *	
				03	03	Overlay top right *	
	Picture-in-Picture / Main Picture Toggle *	SWA	W	00	00	Switch picture-in-picture and main picture *	<b>53 57 41</b>
	Scaling	ASP	W/R	00	00	Scaling „native“ *	<b>41 53 50</b>
				01	01	Scaling „fill“ / Full Screen	
				02	02	Scaling „pillar box“	
				03	03	Scaling „letter box“ *	
				04	04	Scaling „auto“	
		ZOM	W	00	00	Zoom in *	<b>5A 4F 4D</b>
				01	01	Zoom out *	
		Baud Rate	BRA	W/R	00	00	115200
	01				01	38400	
	02				02	19200	
	03				03	9600	
	Others	RCU	W	00	00	MENU Key	<b>52 43 55</b>
				01	01	INFO Key	
				02	02	↑ Key	
				03	03	↓ Key	
				04	04	← Key	
				05	05	→ Key	
06				06	ENTER Key		
07				07	EXIT Key		
ALL		W	00	00	Reset all	<b>41 4C 4C</b>	
KLC		W/R	00	00	Unlock keys	<b>4B 4C 43</b>	
			01	01	Lock keys		
SER		R		13 Bytes	Read serial number of monitor	<b>53 45 52</b>	
MNA		R		13 Bytes	Read model of monitor	<b>4D 4E 41</b>	
GVE		R		6 Bytes	Read firmware version of monitor	<b>47 56 45</b>	
RTV		R		Value	Read version of RS232 table	<b>52 54 56</b>	



Main option	Control option	CMD	Typ	VAL	RPL	Content	CMD (hex)
	Audio	VOL	W/R	0~100	Value	Volume	<b>56 4F 4C</b>
		MUT	W/R	00	00	Muting inactive	<b>4D 55 54</b>
				01	01	Muting active	
	Picture profile	SCM	W/R	00	00	User	<b>53 43 4D</b>
				01	01	Sport	
				02	02	Game	
				03	03	Cinema	
				04	04	Vivid	
	RS232 looping ***	SID	W	00	00	Show Monitor ID	<b>53 49 44</b>
		CID	W	1~25	00	Change Monitor ID	<b>43 49 44</b>
	Video Wall ***	VWS	W/R	00	00	Video Wall Switch Off	<b>56 57 53</b>
				01	01	Video Wall Switch On	
		VWF	W/R	00	00	Video Wall Frameless Off	<b>56 57 46</b>
				01	01	Video Wall Frameless On	
		MAT	W/R	X: 1~5 Y: 1~5	Value	Matrix size X,Y value High quarter is X: 7~4 bit Low quarter is Y: 3~0 bit	<b>4D 41 54</b>
DIV		W/R	X: 1~5 Y: 1~5	Value	Matrix position X,Y value High quarter is X: 7~4 bit Low quarter is Y: 3~0 bit	<b>44 49 56</b>	
POD		W/R	0~30	Value	Power On Delay	<b>50 4F 44</b>	
DID		W/R	00	00	DVI Indemnity Off	<b>44 49 44</b>	
	01		01	DVI Indemnity On			

\* not available on MTIR550W-V2.x-A01

\*\* not available on MTIR550W-V2.x-A02

\*\*\* not available on MTIR550W-V2.x-A01/-A02; option for future model variants

**Examples :**

Monitor (01) Power OFF [CMD: POW]

Command : PC → 07 01 02 50 4F 57 00 08 → Monitor

Response : Monitor → 07 01 00 50 4F 57 00 08 → PC

Monitor (01) Power ON [CMD: POW]

Command : PC → 07 01 02 50 4F 57 01 08 → Monitor

Response : Monitor → 07 01 00 50 4F 57 01 08 → PC

read operation state of monitor (01) [CMD: POW]

Command : PC → 07 01 01 50 4F 57 08 → Monitor

Response : Monitor → 07 01 00 50 4F 57 **XX** 08 → PC

**XX** = 0, monitor is powered off, **XX** = 1, monitor is powered on

Monitor (01) read serial number [CMD: SER]

Command : PC → 07 01 01 53 45 52 08 → Monitor

Response : Monitor → 07 01 00 53 45 52 S(0) ... S(12) 08 → PC S(0)~S(12) serial number in ASCII

## 17 WARRANTY TERMS AND CONDITIONS

Citron GmbH warrants that the specified product is free from defects in material and workmanship, according to the following terms and conditions.

### 17.1 Duration and Validity of Warranty

The specified product is under warranty for 12 months beginning from the date of delivery by the Citron GmbH. Warranty services during the warranty period do not extend the validity period of the warranty.

### 17.2 Proof of Purchase

Upon request from the Citron GmbH or an authorized service partner the sales agreement or the invoice (original invoice with serial number) of the first purchaser must be presented as proof of purchase and validity of the warranty services claim. If the customer cannot provide this evidence of purchase, the warranty period is dated back to the date of manufacturing (as stated on the serial number sticker) plus one month.

### 17.3 Warranty Service During Warranty Period

In case any fault or defect occurs during the warranty period, the Citron GmbH provides the following services in compliance with the warranty:

- **Defective on arrival**  
If the product is „dead on arrival“ (DOA), the customer has to return the product within 14 days for a new replacement. If the customer does not return the defective product within 14 days, the product will be treated under the terms of the bring-in warranty
- **Return-to-Base-Warranty (Bring-In Warranty)**  
Defective parts or products must be sent back carriage free to the Citron GmbH in their original or equivalent packaging. If the product requiring repair is under warranty the customer is responsible for the cost of transportation to the Citron GmbH. During in transit the goods are at the owner's risk.
- **Repair and Return**  
The defective product is repaired within 21 days after its arrival at the Citron GmbH. If the product is under warranty, Citron GmbH bears the cost for eventually required components and the arising working time, as well as for the cost for the reshipment to the customer.

#### 17.3.1 Temporary Exchange Equipment During Repair Time of Warranted Products

The customer can request for an temporary exchange product during repair time, if the product under warranty cannot be repaired within 30 days. In dependence of availability the Citron GmbH decides whether the equipment can be replaced. Any costs of transportation of the exchange equipment are borne by the customer.

#### 17.3.2 Warranty on Repairs

Repairs or replacements generally do not extend or restart the warranty period. The repaired or replaced parts and components will be treated under warranty for 3 months for the same kind of defects.

## **17.4 Warranty Exclusions and Limitations**

### **17.4.1 General Exclusions**

This warranty only covers malfunction due to any defect in material and/or workmanship of a product put into circulation by the Citron GmbH.

Guaranteeing is therefore excluded for any faults and defects beyond the responsibility of the Citron GmbH, particularly in cases of :

- Improper use, mechanical damages (e.g. marks caused by scratching, pressure or breaking), improper storing or cleaning, transport damages, misuse or any other reason the customer or a third party is to blame for, especially if the instructions contained in the manual are not adhered to.
- Failures or fluctuations of the electrical mains supply, air conditioning systems or other environmental conditions.
- Abnormal operating conditions, including smoke and dust.
- Act of God, fire, flood, aggressive chemical or biological activity, event of war, vandalism, accidents or similar events.
- Errors of all kind resulting from using defective or incompatible accessories.
- Attempted repair, setting, change, installation or maintenance by a person not authorized by the Citron GmbH.

### **17.4.2 Accessories**

Accessories, such as cardboard boxes, packaging, batteries and other components that are used in connection with this product and expected to be exchanged are not covered by this warranty.

### **17.4.3 Image retention effects**

Image retention effects caused by permanent representation of static (or partially static) images or high temperature are not covered by this warranty.

### **17.4.4 Failure of Pixels / Pollutions**

Failure of pixels cannot be totally avoided with LCD-technology products. They are only considered as failures covered by this warranty if their number exceeds the value determined in ISO 9241-307 for class II panel products.

### **17.4.5 Serial number sticker**

A product where the serial number sticker is damaged, changed or removed is no longer covered by this warranty.

## **17.5 Reaction Time**

The reaction time to claims of rights given by this warranty is usually two working days after the customer's announcement of the claim to the Citron GmbH. Standard service hours of the Citron GmbH are from Monday to Friday, 9.00AM to 5.00PM (CET), except German / Augsburg bank holidays.

## **17.6 Advised Procedure for Raising a Claim**

### **17.6.1 Consider the manual before raising a claim**

See the sections on „troubleshooting“ in this manual and check whether the problem might be solved on-site before raising a claim referring to this warranty.

### **17.6.2 Prepare necessary Information**

If the problem still exists the customer should try to get support from the dealership, where he bought the product. Please prepare the following information:

- Product identification and serial number of the device
- A description of the problem and the operating conditions where the problem occurs
- Pick-up address and contact information
- Date and place of purchase

### **17.6.3 Approval by Citron GmbH / RMA**

After verifying the validity of claims for warranty services, the Citron GmbH will assign an RMA (return material authorisation) number to the customer. The customer has to refer to this RMA number on the delivery note of the shipped product. Citron GmbH generally refuses reception of unsolicited goods. The customer should use the assigned RMA number in all further contacts with the Citron GmbH in connection with this warranty claim.

### **17.6.4 Packing**

Returned products must be packed and shipped in the original cardboard box or an equivalent packing. If the customer can't provide appropriate packing, the Citron GmbH can provide a suitable transport box on request. The customer is solely liable for damages caused by use of an improper or unsuitable packing by the customer. Arising costs for transportation of the transport box to the customer are borne by the customer.

### **17.6.5 Transport**

The customer arranges for the transport of the defective product to the Citron GmbH. On request the Citron GmbH can arrange pick up at the customers site. It is then the customers duty to keep the product ready for collection. Should the customer miss to deploy the defective unit for pick up, he is liable for the additional costs.

### **17.6.6 Costs not covered by warranty**

The Citron GmbH reserves the right to charge the customer for incurred costs caused by complaints concerning defects or faults not covered by this warranty.

## **17.7 Legal and other claims**

There are no expressed or implied warranties representations or conditions other than those stated in this warranty. Other legal or contractual claims, also towards the seller of the product, are excluded as far as the Citron GmbH has provided service based on this warranty.

This warranty does not affect or has influence on other legal guarantee claims or other contractual claims of the customer towards the seller of the product. These claims can be made alternatively to the claims referred to in this warranty document.

### 17.8 Limitations of Liability

In cases of slight negligent breaches of duty the liability of the Citron GmbH is limited to the direct, foreseeable and contract-typical average damage. The slightly negligent breach of minor contractual obligations excludes the liability.

The Citron GmbH will not be liable for any loss, damage or alterations to (1) third party furniture, equipment, hardware or software; or (2) programs, data or information stored on any media or any part of the product, no matter how occurring; or for any loss or damage arising from loss of use, loss of profits or revenue, or for any resulting indirect or consequential loss or damage.

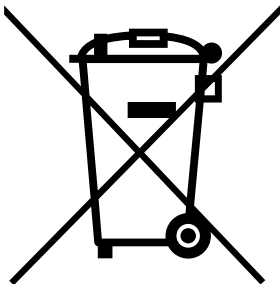
The Citron GmbH policy sum regarding all requirements of the warranty does not exceed the original purchase price of the product or alternatively on part of Citron GmbH, the costs of substitution of the product. This warranty does not cover normal wear and tear of the product or parts.

As far as the liability of the Citron GmbH is excluded or limited, this applies also to the personal compensation liability of its staff, employees, associated employees, agents and auxiliary persons. The preceding limitations of liability do not apply to the customers claims derived from the Product Liability Act.

## 18 Disposal

### Correct disposal of this product (Waste Electrical & Electronic Equipment, WEEE)

(Applicable in the European Union and other European countries with separate collection systems)



This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Please help saving valuable resources by returning consumed Citron GmbH products to the Citron GmbH for dismantling, recycling and reuse.



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