

# MAGEWELL

## Director Mini Technical Specifications

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### Video Input

- HDMI
  - Port: 2x HDMI 2.0 Type-A port
  - Typical resolution/frame rate:
    - 4096x2160p/3840x2160p 23.98/24/25/29.97/30/59.94/60
    - 1920x1080p 23.98/24/25/29.97/30/50/59.94/60
    - 1920x1080i 25/29.97/30
    - 1280x720p 23.98/24/25/29.97/30/50/59.94/60
    - 720x576p 50/100
    - 720x576i 25/50
    - 720x480p 59.94/60
    - 720x480i 29.97/30
  - Color depth: 8/10/12-bit
  - Color sampling: RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2
- USB
  - Port: 2x USB 3.0 Type-A port
  - Resolution/frame rate: Up to 1920x1080p, 60fps
  - Format: YUYV, MJPG, NV12
- Phone Camera
  - Connection mode: LAN
  - Resolution/frame rate: Up to 1080p, 60fps
- SRT stream
  - Codec: H.264, H.265
  - Resolution/frame rate: Up to 1080p, 60fps
- RTMP pull
  - Codec: H.264, H.265
  - Resolution/frame rate: Up to 1080p, 60fps
- RTMP push
  - Codec: H.264, H.265
  - Resolution/frame rate: Up to 1080p, 60fps
- NDI<sup>®</sup> stream
  - NDI|HX, NDI|HX2, NDI|HX3, Full NDI
  - Codec: H.264, H.265
  - Resolution/frame rate: Up to 1080p, 60fps
- Video
  - Resolution: Up to 4K
  - Codec: H.264, H.265
  - Format: MOV/MP4
- Picture
  - Format: JPEG/PNG/BMP

### Audio Input

- Mic/line in: 1x 3.5mm jack, 2-channel, 48 KHz, 16-bit
- Audio input from HDMI port: 2-channel, 48 KHz, 16-bit
- Audio input from USB port: 2-channel, 48 KHz, 16-bit
- Audio input from Bluetooth device: 2-channel, 48 KHz, 16-bit
- Audio input from phone microphone
- Audio from SRT stream
- Audio from RTMP stream

- Audio from NDI stream
- Audio embedded in video files
- Background music (BGM): MP3, M4A, WAV files

## Video Output

- Streaming and recording
  - Codec: H.264, H.265
  - Resolution: 1080p, 720p, 540p, 360p (only for NDI)
  - Frame rate: 60/59.94/50/30/29.97/25/24/23.98/15 fps (Encoding options change along with the frame rate of the show.)
  - Bitrate:
    - NDI® HX3: up to 62.0Mbps, down to 1.5Mbps
    - Others: up to 30.0Mbps, down to 256kpbs
  - Key frame interval: customizable
  - Profile: High profile, Main profile, Baseline profile
  - Bitrate mode: VBR, CBR
- USB-C
  - Port: 1\* USB 3.0 Type-C port
  - Output mode : DP-OUT, UVC/UAC
  - Resolution: 1920x1080
  - Frame rate: 60fps, 50fps
  - Sampling format: RGB 4:4:4

## Audio Output

- Streaming and recording: 2-channel, 16-bit, 48 KHz, aac, 64kbps/96kbps/128kbps
- Headphone output: 1x 3.5mm jack, 2-channel, 48 KHz, 16-bit
- Audio output via Bluetooth device: 2-channel, 48 KHz, 16-bit
- Audio output via USB-C port: 2-channel, 48 KHz, 16-bit
- Audio output via USB-A port: 2-channel, 48 KHz, 16-bit/24-bit/32-bit

## Features of USB-A Port

- Connect to a USB A/V device, such as webcam, USB microphone, USB speaker, etc.
- Connect to a USB modem
- Connect to a USB flash drive
  - To transfer video, picture, audio and other media files, firmware update files, log files, etc.
  - Supported system format: FAT32, exFAT and NTFS
- Connect to a USB keyboard for shortcuts

## Features of USB-C OUT Port

- Connect to an external screen
  - Connection mode: Connect the device to a monitor with a USB-C to HDMI/VGA/DP adapter
  - A/V display mode options: Clean Program, Preview, Multi-view, Duplicate Screen, Loop HDMI 1, Loop HDMI 2
  - Image rotation: Rotate 90° to left, or rotate 90° to right
  - Supports using an external touchscreen to control the device in the Duplicate Screen mode
- Connect to a computer
  - MTP mode: Transfer video, picture, audio and other media files, firmware update files, log files, etc.
  - UVC/UAC mode\*: Output audio and video to streaming software

\* To transfer video at full frame rate, please use a USB 3.0 cable to connect the USB 3.0 port of your computer.

- Connect to other USB devices, such as USB A/V devices, USB keyboard

## Network

- Supports network bonding (not available in China Mainland)
- Supports Ethernet, WiFi and Cellular
  - Ethernet: 1x RJ45 port, 10/100/1000 Mbps Base-T
  - WiFi: 2.4G/5G, Station and Hotspot modes supported
  - Cellular: USB modem supported (not supplied)
- Supports Bluetooth for audio input or output with Bluetooth devices

- Bluetooth: BT 5.0

## Features

- Show
  - Supports creating multiple shows in landscape (16:9) or portrait (9:16) mode, and manage them
  - Supports creating a shows at 60/59.94/50/30/29.97/25/24/23.98 fps
- Scenes
  - Supports creating multiple scenes in a show, and managing them
  - Supports adding various sources, including HDMI, WEBCAM, video, picture, RTMP stream, SRT stream, phone camera, NDI stream, text and color
  - Supports multi-view composition in one scene
  - Provides lots of editing tools, including chromakey, crop, transition, etc.
  - Supports switch scenes directly or preview at first and then switch
  - Supports switching scenes with an instant cut or fade effect.
- Audio
  - Supports displaying level and peak through audio meter
  - Supports adjusting the level of each input audio, output and monitor audio
  - Supports global or scene-based settings for audio input sources
  - Supports AFV (Audio-follow-video)
  - Supports solo monitor
  - Supports switching monitor device
- GFX
  - Supports multiple GFX types, including title, lower third, animated text, digital clock, analog clock, bullet list, social media, logo, scoreboard, timer, stopwatch, custom picture and text
  - Supports HTML graphics
  - Supports displaying multiple GFXs, and managing them
  - Supports controlling scoreboard, timer and stopwatch in real time
- BGM
  - Supports adding BGM for each scene and controlling in real time
- Pen
  - Annotates on the screen in real time
- PTZ control
  - Supports controlling PTZ camera via the network, supporting Visca UDP, supported sources including HDMI, WEBCAM (UVC camera), SRT stream, RTMP stream, and NDI stream
- Phone Camera control
  - Control the phone camera to zoom or focus
- Replay
  - Capture some of greatest moments, slow down the action and save highlights.
- Live stream
  - Natively supports streaming to YouTube, Twitch and Facebook Live
  - Supports selecting RTMP or HLS protocol for streaming to YouTube
  - Supports streaming via SRT, RTMP and RTMPS protocols
  - Supports two NDI<sup>®</sup> HX3 outputs, supporting NDI Tally lights
  - Supports customizing encoding parameters and selecting the encoding source (Program, HDMI, WEBCAM) for ISO streaming
  - Supports streaming to two destinations simultaneously
  - Supports sending live comment as an overlay into the video feed when streaming to social media
- Record
  - Supports customizing encoding parameters
  - Supports ISO recording, to record two of different sources simultaneously, or record two-channel images with different quality for one source, and supported sources include Program, HDMI, WEBCAM as well as NDI|HX2 and NDI|HX3 stream
  - Supports saving recording files in MP4 or MOV format to local storage or SD card
  - Supports saving screenshot files in PNG format to local or SD card
  - Supports splitting recording files by time or size, up to 4 hours or 16G
  - Supports exporting or downloading files through computer, SD card, USB flash drive, App, or Web UI

## Director Utility App

- OS version: iOS 11 and later, Android 7.0 and later
- **Phone Camera:** Use a phone as a camera
  - Stream images taken by the phone to Director device
  - Stream images taken by the phone to a destination via SRT
- **Remote Assistant:** Control Director device remotely
  - Switch and manage scenes, set switch mode and effect, implement FTB, free scene, and control PTZ camera and phone camera

- Switch and manage GFX, edit GFX text and picture in real time, and control scoreboard, timer and stopwatch
- Control audio, including adjusting audio level, switch monitor device, mute audio and monitor audio exclusively
- Start/stop recording, take screenshots, and manage album files
- Set streaming servers, start/stop streaming, view streaming status, and send live comment as overlay
- Control and manage BGM
- Execute shortcuts functions
- View input information
- View real-time device status
- Power off the device remotely

## Web UI

- Set and manage device, view input information, configure networks, update firmware
- Preview and monitor the show, switch and manage shows, scenes, GFXs, control audio, set shortcuts, send live comment as overlay, etc.
- Set encoding parameters
- Set streaming servers, start/stop streaming, view streaming status
- Start/stop recording, take screenshots and manage album files
- Control and manage BGM
- Manage media files
- View real-time device status
- Supports registering Magewell Control Hub (V2.1.20 and later) for centralized management
- System requirement: Windows 10 19H1 and above, macOS 10.12 and above, Linux

## API

- Provides basic APIs for 3rd party control system

## OSC

- Supports OSC for 3rd part Apps to control the device

## Screen

- Size: 5.44"
- Type: AMOLED
- Aspect ratio: 16:9
- Resolution: 1920x1080
- Brightness: 350 nits
- Color depth: 8-bit
- Contrast ratio: 6000:1
- Color gamut: 105% NTSC
- Refresh rate: 60Hz
- Viewing direction: All
- PPI: 405
- Touchscreen: Capacitive
- Screen coating: Anti-fingerprint coating

## Storage

- Local storage: 64 GB
- SD card (not supplied): FAT32 (Under 128G), NTFS, exFAT

## Dimensions

- 147.2 mm x 90 mm x 28.5 mm

## Power

- AC power
  - Power input: 12V/1.5A
  - Maximum power consumption: 15W
- Battery pack
  - 2x DC 7.4V (NP-F battery packs, not supplied)
  - Hot swappable

## LED Lights

The two back LED lights can be set as battery indicators or NDI tally lights.

- Battery indicators (default)
  - Green: 50% - 100%
  - Orange: 25% - 50%
  - Red: <25%
  - Off: depleted
- NDI tally lights
  - Red: the NDI streaming signal is in PGM view.
  - Green: the NDI streaming signal is in PVW view.

## Working Environment

- Operating temperature: -10 to 50 deg C (AC power)
- Storage temperature: -20 to 70 deg C
- Relative humidity: 5% to 90% non-condensing