

Quick Reference Guide D110lite and D110lite GPS

Safety Instructions

For a secure operation of the device the user should read and hold on all safety instructions before the first operation.

- Any changes on the device or operation of the parts not having been proved and released by the manufacturer can lead to unforeseen damage.
- If you sell the device or give it to another person, attach this information sheet to the device.
- Never repair the device by yourself. If there are any damages in the device, send it immediately to 2wcom Systems for maintenance or dispose it professionally according to the regional disposal regulations.
- Keep the device away from unauthorized persons.

DANGER

DANGER of electrical shock

Plug the device into a grounded power socket only. Never remove the grounding wire/contact.

Never open the housing of the device by yourself. Never touch open electrical parts.



Dangerously high voltages are present inside the housing. Even after disconnecting the mains supply, dangerously high voltage levels may be present for a certain time.

Do not touch the device with wet hands.

Never expose the device to liquids. If any liquid comes inside the housing, immediately disconnect the device completely from the power supply. Do not continue operating the device.

NOTICE

CAUTION: Risk of equipment damage

Before the first operation:

Check the housing, the front panel, the supply cord and the plug for visible damage (e.g. scratches, cracks, damaged isolation and abrasion)

In case of damage, unplug immediately the supply cord. Never operate device with a damaged supply cord.

All damaged components must be replaced immediately.

Installation:

Choose a rack location that permits a clear view of the indicators on the device and ensure a sufficient heat dissipation of the device.

Use only a grounded three-wire power supply cord and -plug that complies with the national regulations.

If necessary, use another than the supplied supply cord in compliance with the regulations of the country where the device is operated,

Make sure that the AC power outlet is next to the device and readily accessible to the user.

Installation of other devices:

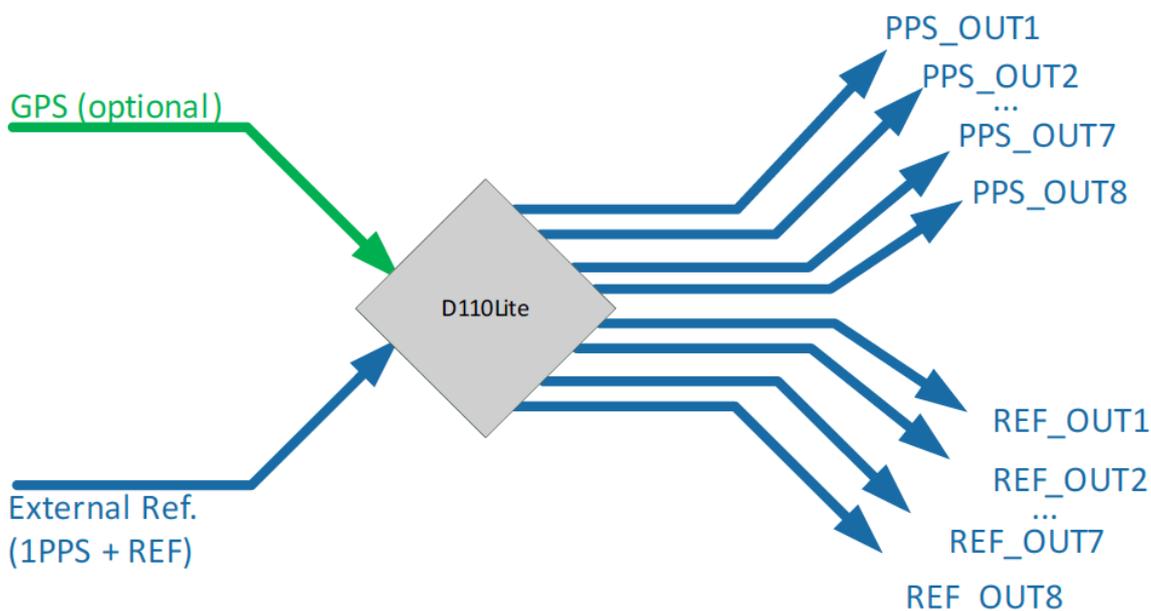
External devices which are connected to the device could be damaged by the device or damage the device itself, if the output levels exceed the specified limits.

Cleaning:

Do not use corrosive detergents on the device such as benzine, thinner, alcohol or acetone. Clean the surface of the device only with a soft dry cloth.

Device Description

The D110Lite is a cost effective clock and time distribution device to distribute externally fed 1PPS and reference (REF, i.e. 10MHz) inputs. For each input signal, there are eight BNC outputs (16 in total). Optionally the device can be equipped with an internal GPS receiver module that will source the 1PPS and a 10MHz REF signal internally.



User

Only experienced technical personal or engineers should operate the D110Lite devices. Basic knowledge about analog audio technology and IP networks is required.



NOTE: Read this Quick Reference Guide carefully before attempting to operate the unit. The graphics of the manual may differ from the supplied model or the actual appearance.
Some functions described may not be applicable to the device ordered.

Power supply

NOTICE

The device is designed for operation with a 100 to 240 VAC, 47-63 Hz power supply. Make sure that the device and the contained cords are compatible to the domestic line voltage and frequency!

No power switch is available; unplug mains supply connector to remove power. Keep the mains plug readily accessible to the user.

High Quality Clock Distribution

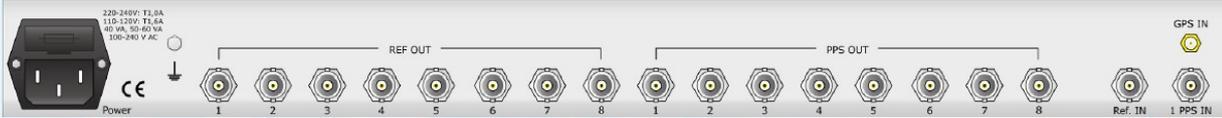
- Distribute timing information for devices and network components.
- Synchronize devices for Single Frequency Network (SFN) operation.

Optional Internal GPS Receiver

- No need for external GPS receiver, ideal for sites not yet equipped with GPS timing receivers.
- Automatic fallback to external reference inputs in case of GPS signal loss.

DIP switch matrix

DIP Position	Function	Default (D110lite GPS)	Default (D110lite)
1	0 = GPS module drives 1PPS/10MHz outputs, 1 = external REF inputs drive 1PPS/10MHz outputs	0	1
2	0 = GPS module antenna supply off, 1 = GPS module antenna supply on (voltage see DIP position 3)	0	0
3	0 = GPS antenna voltage supply 5V, 1 = GPS antenna voltage supply 3,3V (voltage present only when DIP position 2 = 1)	0	0
4	No function	0	0



Rear view D110 lite

D110Lite – Clock Distributor – Technical Details

Interfaces

Time synchronization

1PPS	Interface: BNC – female 50 Ohm Type: TTL input (1PPS)
Ref In	Interface: BNC – female 50 Ohm Type: 0 .. 5 V input, 10 kHz .. 30 MHz
1PPS OUT1-OUT8	8x BNC – female 50 Ohm Type: TTL output, 5 V
REF OUT1-OUT8	typical 6 dB, max. 12 dB Type: TTL output, 5 V Standard: Ref In Option GPS: 10 MHz

GPS

Input	Interface: F-jack, female Type: GPS antenna input
Parameters	Advanced internal GPS receiver with holdover functionality (100 ppb/24 h frequency accuracy) Time to first fix: 26 s (coldstart), 1 s (warmstart) Sensitivity: -166 dBm (Tracking) Time Pulse Accuracy: 30 ns (RMS), 60 ns (99%)
Antenna supply	Passive: 0 V Active: 3,3 V / 5 V , 20 mA

Front Panel

LEDs	4x LEDs
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General data

Power consumption	20 VA
Case dimensions	19", 1 HU depth: 310 mm width: 424 mm front panel: 484 mm
Weight	<6 kg
Cooling	passive, no fans
Housing	steel plate (aluminum-zinc coated)
Operating temp. range	0 .. +45°C
Storage temp. range	-40 .. +70°C
Power supply	1x internal, 90 .. 260 V, 47 .. 63 Hz

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These data are subject to
modifications and amendments.
Errors excepted

