

CLAS-0, CLAS-1, CLAS-3, CLAS-5 and CLAS-F

The **CLAS** mobile laser system is a precision alignment solution for patient setup and marking in the field of radiation therapy. The system creates a manual or remotely adjustable 3D reference in the Cartesian space by means of 5 high quality laser planes.

Features

- Five laser planes
- High-accuracy positioning
- 550 mm travel distance for the long-range units
- Dual laser: two laser lines modules of any color
- Radio or cabled PC remote control (CLAS-0/1/3/5)
- Easy by-screw adjustment from the outside (CLAS-F)
- Flexible on-wall, in ceiling or on post mounting
- MR conditional (CLAS-F)

Technical specifications

Power supply	100 ÷ 240 V _{AC} @ 50/60 Hz
Power consumption	49 W max
Internal voltage	12 V _{DC}
Operating humidity	≤ 80%, non-condensing
Operating temperature	15 ÷ 30 °C
Dimensions (AXE900, H×W×D)	98×920×102 mm
Dimensions (AXE20, H×W×D)	205×220×107 mm
Dimensions (AXE20F, H×W×D)	205×220×97 mm
Weight (AXE900)	5.3 kg
Weight (AXE20-X)	4.5 kg
Weight (AXE20-XY)	4.7 kg
Weight (AXE20F-X)	3.9 kg
Weight (AXE20F-XY)	4.0 kg

Laser output

Laser class	2
Output power *	< 1 mW
Focus range	1.5 ÷ 7 m
Line width	≤ 1 mm @ 4 m
Line length	≥ 4 m @ 4 m

* measured on a 7 mm aperture at 100 mm

Mechanical

Adjustment accuracy	±0.1 mm @ 3 m
Translation range (AXE900)	0 ÷ 550 mm
Translation range (AXE20)	0 ÷ 20 mm
Translation range (AXE20F)	0 ÷ 18 mm
Translation resolution (AXE900)	15 µm/step
Translation resolution (AXE20)	2.5 µm/step
Translation resolution (AXE20F)	0.5 mm/turn
Tilt range (AXE900, AXE20)	±2.2 deg
Tilt range (AXE20F)	±3.6 deg
Tilt resolution (AXE900, AXE20)	25 µm/m
Tilt resolution (AXE20F)	30 µm/m
Rotation range	±3.5 deg
Rotation resolution (AXE900, AXE20)	40 µm/m
Rotation resolution (AXE20F)	50 µm/m

Connectivity*

Physical layer	RS485 or radio **
Data rate	115200 Baud
Protocol	proprietary
5 V _{DC} output	100 mA max.

* only for AXE900, AXE20-X and AXE20-XY

** with the RDB9-2.4G external adapter

Ordering code^{1, 2, 3}

CLAS-F	1 manual X unit + 2 manual XY units + accessories
CLAS-0	1 short-range X unit + 2 short-range XY units + accessories
CLAS-1	1 long-range unit + 2 short-range XY units + accessories
CLAS-3	3 long-range units + 2 short-range X units + accessories
CLAS-5	5 long-range units + accessories

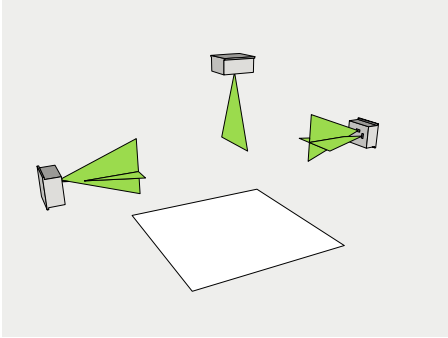
¹ The power cord must be provided by the local distributor.

² The focal length of the laser modules must be provided according to their datasheets.

³ These are base configurations that can be customized according to the installation requirements.

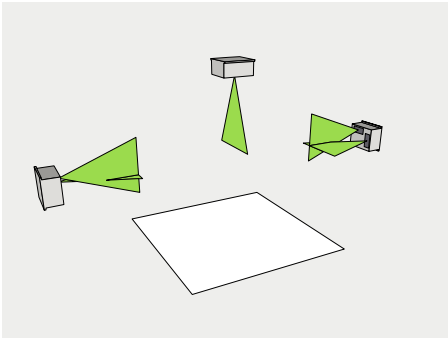
Configurations

The **CLAS** system is delivered in several customizable configurations composed by a combination of short and long-range manual or motorized laser units:



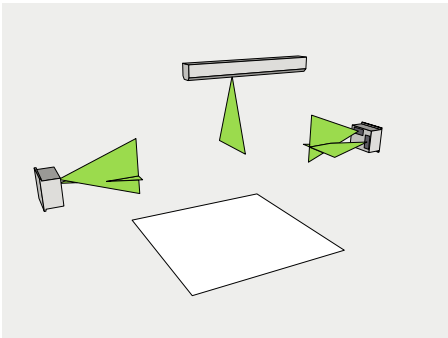
CLAS-F — 1 manual X unit + 2 manual XY units + accessories

- one **AXE20F-X** manual unit for the sagittal (longitudinal) plane
- one **AXE20F-XY** manual crosshair unit for the left coronal (transverse) and axial (horizontal) planes
- one **AXE20F-XY** manual crosshair unit for the right coronal (transverse) and axial (horizontal) planes
- five **WLC635-5-LGCP** red line laser modules
- five **WLC532-5-LGCP** green line laser modules



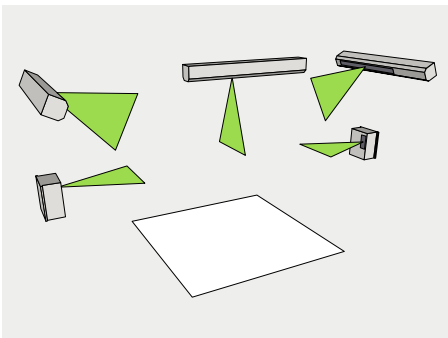
CLAS-0 — 1 short-range X unit + 2 short-range XY units + accessories

- one **AXE20-X** short-range unit for the sagittal (longitudinal) plane
- one **AXE20-XY** short-range crosshair unit for the left coronal (transverse) and axial (horizontal) planes
- one **AXE20-XY** short-range crosshair unit for the right coronal (transverse) and axial (horizontal) planes
- three **RDB9-2.4G** radio modules, one for each unit
- one **USBRF-2.4G** radio module for the PC
- five **WLC635-5-LGCP** red line laser modules
- five **WLC532-5-LGCP** green line laser modules



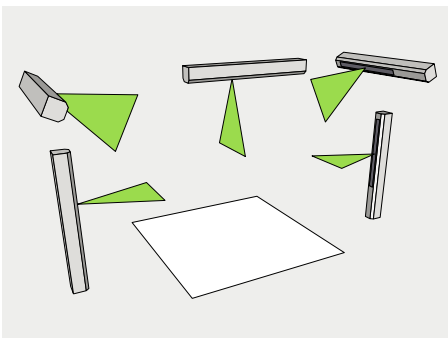
CLAS-1 — 1 long-range unit + 2 short-range XY units + accessories

- one **AXE900** long-range unit for the sagittal (longitudinal) plane
- one **AXE20-XY** short-range crosshair unit for the left coronal (transverse) and axial (horizontal) planes
- one **AXE20-XY** short-range crosshair unit for the right coronal (transverse) and axial (horizontal) planes
- three **RDB9-2.4G** radio modules, one for each unit
- one **USBRF-2.4G** radio module for the PC
- five **WLC635-5-LGCP** red line laser modules
- five **WLC532-5-LGCP** green line laser modules



CLAS-3 — 3 long-range units + 2 short-range X units + accessories

- one **AXE900** long-range unit for the sagittal (longitudinal) plane
- one **AXE900** long-range unit for the left coronal (transverse) plane
- one **AXE900** long-range unit for the right coronal (transverse) plane
- one **AXE20-X** short-range unit for the left axial (horizontal) plane
- one **AXE20-X** short-range unit for the right axial (horizontal) plane
- five **RDB9-2.4G** radio modules, one for each unit
- one **USBRF-2.4G** radio module for the PC
- five **WLC635-5-LGCP** red line laser modules
- five **WLC532-5-LGCP** green line laser modules



CLAS-5 — 5 long-range units + accessories

- one **AXE900** long-range unit for the sagittal (longitudinal) plane
- one **AXE900** long-range unit for the left coronal (transverse) plane
- one **AXE900** long-range unit for the right coronal (transverse) plane
- one **AXE900** long-range unit for the left axial (horizontal) plane
- one **AXE900** long-range unit for the right axial (horizontal) plane
- five **RDB9-2.4G** radio modules, one for each unit
- one **USBRF-2.4G** radio module for the PC
- five **WLC635-5-LGCP** red line laser modules
- five **WLC532-5-LGCP** green line laser modules