

Transceiver Unit

The TU-100-02 Transceiver Unit is an Infra-Red light transmitter and receiver unit.

Designed for ceiling flush mounting it acts like an Infra-Red antenna, receiving the signals sent from the Delegate Units and transmitting the signals to the Delegate Units.

Twenty-four transmitter LED's are used for two outgoing channels, one audio and one data. Eight photodetectors converts the received IR signals into an electric signal that is sent to the controller.

TU-100-02 is connected to the system using an industry standard CAT. 6, S-STP grade cable with quick-connect RJ-45 connectors.

The unit is self-powered via the cable and can accept cable segments of up to 30 metres using a standard AWG26 cable.

Low power consumption and weight makes safe and easy ceiling positioning easy.

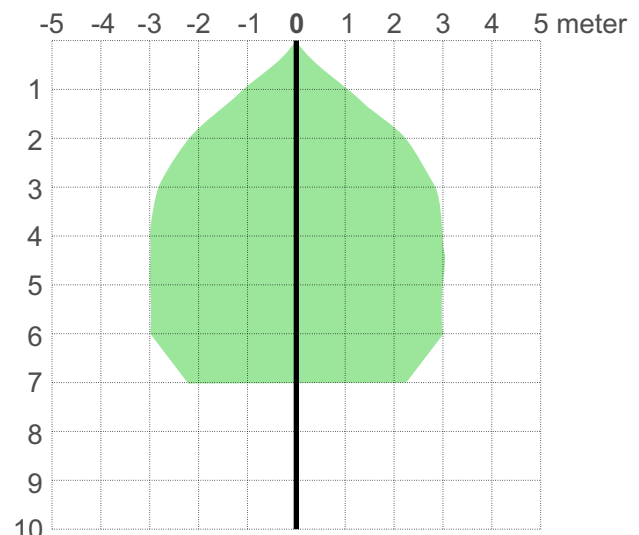
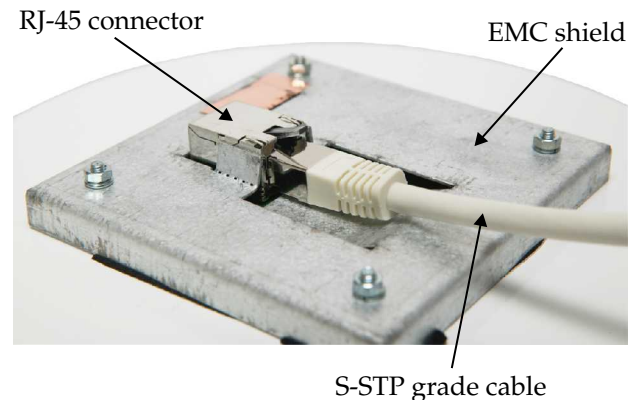
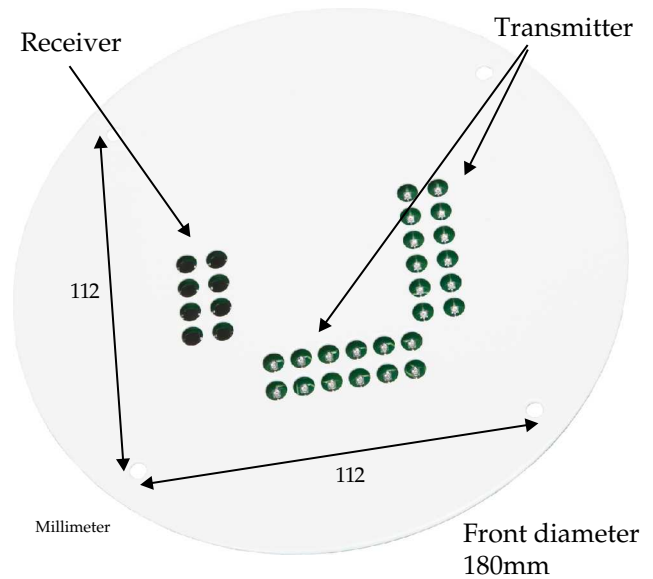
Several Transceiver Units can be placed in a grid pattern on the ceiling to cover all common room types.

Emits safe and harmless Infra-Red light with an 875nm wavelength.

Standard front plate colour is white, other colours available at request.

Mounting is by four screws, standard BOSE™ ceiling speaker pattern.

Designed for the 2-6MHz signal range makes it insensitive to visible and fluorescent light.



Operating range is equipment dependent. The figure above shows a radiation diagram together with the DU-111-02 Delegate Unit where the horizontal axis shows radiation diameter at ceiling heights up to seven metres.

Technical Data

Power:

- 10.3- 13VDC operation
- Power consumption 3.6W at 12VDC
- Powered through cable

Transmission:

- Broadband receiver and two channel transmitter
- Receiver frequency range 2.4 - 5.6MHz
- Infra-Red light wavelength 875nm
- Operating range is equipment dependent, see diagram on other side
- Minimum distance to reflective object including a Delegate Unit is two metres vertically

Physical:

- EMC shield box size 92x92x8mm (wxdxh), front plate diameter 180mm
- Weight approx. 0.32kg
- White steel front plate
- Flush mounted, four screws fastener, (wall mounting not supported)
- To avoid excessive safety ground currents to enter the system, do not connect case to or mount on a grounded surface

Environment:

- Indoor home or office use only
- Temperature +10-35 deg. celsius
- Recycle case and contents according to local laws and regulations
- Clean using soap-water damped cloth only. Avoid moisture to enter the unit.

Approvals:

- CE approval

Tender Specification

The Transceiver Unit is to comply with all relevant CE regulations.

The unit is intended for vertical transmission and reception of Infra-Red light with an 875nm wavelength. Emission power shall be of harmless nature.

The unit shall transmit two channels and have a broadband receiver for analog, FM modulated signals in the 2 - 6MHz carrier frequency range.

The unit shall be connected to the system using industry standard CAT.6, S-STP grade network cables.

Operating power shall be provided via the cable at up 30 metre segment lengths.

Operating power voltage levels and power consumption shall provide for safe mounting without special cooling arrangements.

The unit shall be flush mounted face-down in a standard BOSE™ 112x112mm ceiling speaker pattern using four screws for fastening.

The unit is to be of round front plate design. Front plate material is to be steel and be of white colour. At request, other colours can be provided.

Transceiver Unit model Close Talk, type TU-100-02 or equivalent.