taara

Wireless Optical Communication

# Taara Lightbridge

## Datasheet

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## Wireless Optical Communication

# Overview

Taara uses Wireless Optical Communication (WOC), a line-of-sight technology, to transmit video, voice and data at high speeds of up to 20 Gbps. A single link can cover distances up to 20 km. The effective range may be increased by relaying links.

Taara's wireless links can be used to provide fiber backhaul, rapidly extend existing architecture, and create local area networks. Key advantages include:

01

## Quick deployment

- Can be installed and uninstalled in less than a day
- Easy to transport and require limited support equipment
- May be mounted on poles, towers, or rooftops

02

## Connectivity across difficult terrain

- Sites located around water bodies
- Forested regions
- Railway tracks and dense urban areas

03

## No right of way permits

- No right of way permits or spectrum licenses
- Data is transmitted wirelessly with Class 1M eye-safe lasers in the unlicensed infrared band (193 THz)

04

## Cost competitive & easy to integrate

- Significantly favorable economics on a cost per GB/km compared to traditional alternatives
- Based on open standards to work with existing infrastructure

If you require further information, please contact info@taaraconnect.com.
For media inquiries, please contact press@taaraconnect.com.

# Data sheet

## Terminal specifications

| PARAMETER | VALUE |
|---|---|
| Throughput | 20 Gbps full-duplex |
| Range | 400 m to 20 km |
| Latency | Minimum latency (processing delay) < 160 µs<br>Mean latency < 5 ms |
| Dimensions | 220 mm x 240 mm x 750 mm |
| Weight | 13 kg |
| Regulatory compliance | IEC 62368-1, 60950-22, FCC 15.b, EN 300 386 |

## Power specifications

| PARAMETER | VALUE |
|---|---|
| Power consumption | 40 W typical; 60 W maximum |
| Power connections | ± 38 to ± 58 V<br>± 48 V DC (nominal) or PoE++ (UPoE) |
| Maximum current drawn | 1.25 A |

## Environmental specifications

| PARAMETER | VALUE | |
|---|---|---|
| Operating temperature range (ambient) | -20 to 55°C | Can operate at up to 65° solar loading |
| Storage temperature range (ambient) | -40 to 85°C | |
| Relative humidity | 5 – 100 % | |
| Enclosure rating | IP 65 | |

# Data sheet

## Line-of-sight specifications

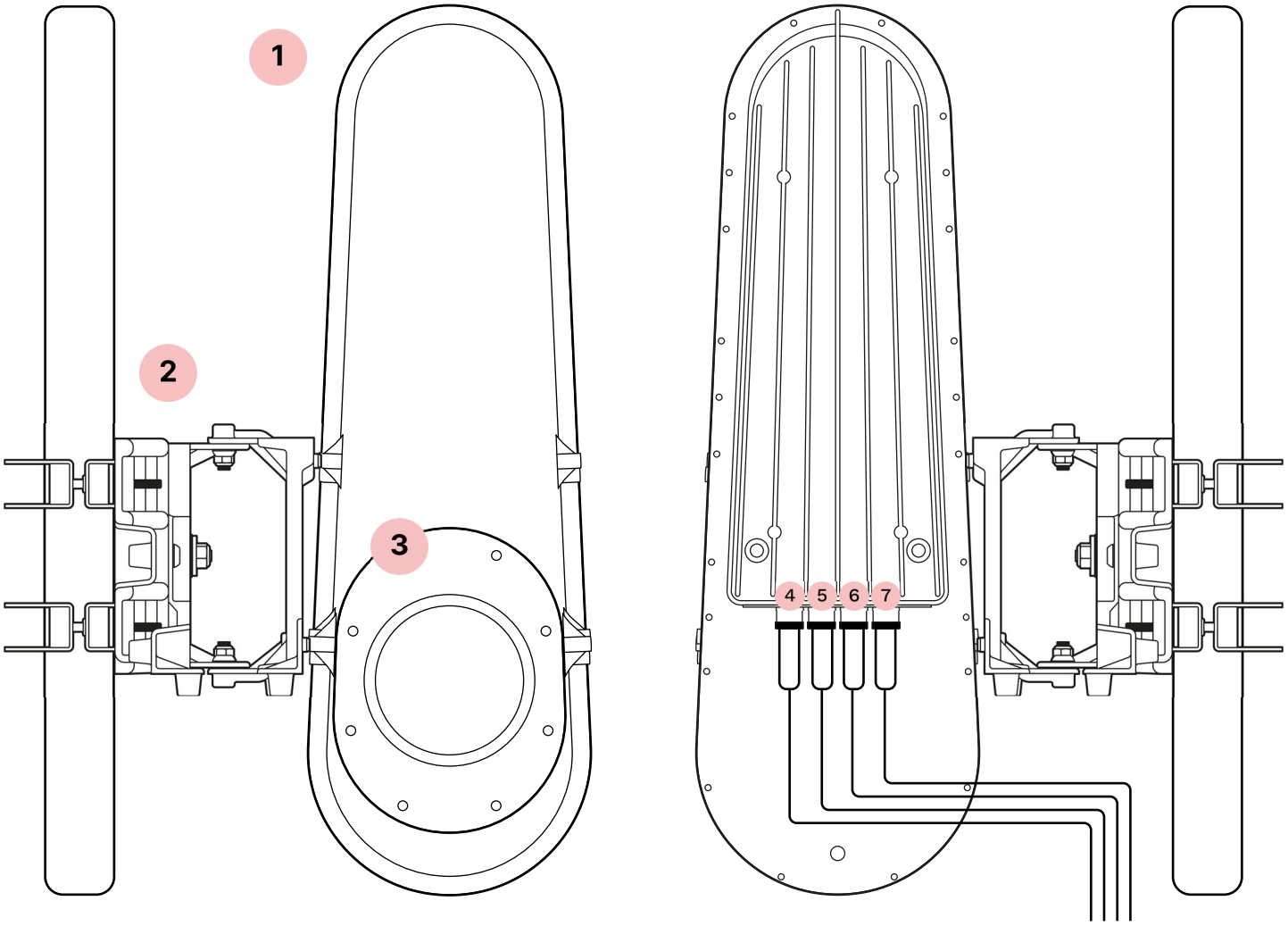
| PARAMETER | VALUE |
|---|---|
| Allowable tower twist/sway | ± 3 degrees |
| Alignment | Automated search and acquisition |
| Mounting bracket weight | 3.7 kg |
| Mounting bracket dimensions | 0.25 m x 0.2 m x 0.18 m |
| Mounting pole diameter | 63.5 mm - 101.6 mm |

## Laser specifications

| PARAMETER | VALUE |
|---|---|
| Classification | Class 1M (eye safe) |
| Maximum output power | 25 dBm<br>30 dBm for 0.5.1 or higher version software |
| Wavelength range | 1535 – 1565 nm |
| Regulatory compliance | IEC 60825-1, 60825-12, 21CFR Part 1040 |

## Interface specifications

| PARAMETER | VALUE |
|---|---|
| Network connections | Two 10 GbE optical SFP+ ports (data)<br>One 1G RJ-45 Ethernet port (management) |
| Supported SFP+ types | 10 GBASE-SR, 10 GBASE-SRL, 10 GBASE-LR,<br>10 GBASE-LRM, 10 GBASE-ER, 10 GBASE-ZR |
| Equipment management system | SNMP v3 IETF RFC 3413 customized management information base compatible with commercial SNMP software |
| Supported data protocol | IEEE 802.3 10 GbE Including jumbo ethernet frames |
| Performance monitoring | 1 Hz telemetry including:<br>• Transmit and received power<br>• System reset/alarm flags<br>• Throughput (bps)<br>• Latency<br>• Pointing system statistics |




1 Chassis

2 Mounting bracket

3 Window

4 Octis SFP connector (Channel 2)

5 Octis SFP connector (Channel 1)

6 Octis RJ45 connector

7 Octis DC connector