SONAbeam 622-S from fSONA. Getting Connected was Never Easier.

SONAbeam™'s Free Space Optical (FSO) technology uses invisible light beams to deliver high-speed optical communications that offer fiber-like data rates and availability with the simplicity of a wireless solution.

SONAbeam™ eliminates the substantial costs of digging up streets and sidewalks to install a fiber link. Unlike other wireless solutions, SONAbeam™ is immune to electro-magnetic (EM) or radio-frequency (RF) interference and because it does not radiate RF energy, costly spectrum licenses are not required. Plus, SONAbeam™'s narrow, highly-directional transmission prevents eavesdropping or interception.

Utilizing advanced FSO technology at the eye-safe 1550 nm wavelength, fSONA has created the most powerful FSO technology ever brought to market. Our rugged, reliable and robust SONAbeam™ systems are uniquely able to leverage your legacy architecture investments and create vast new connectivity and revenue opportunities.

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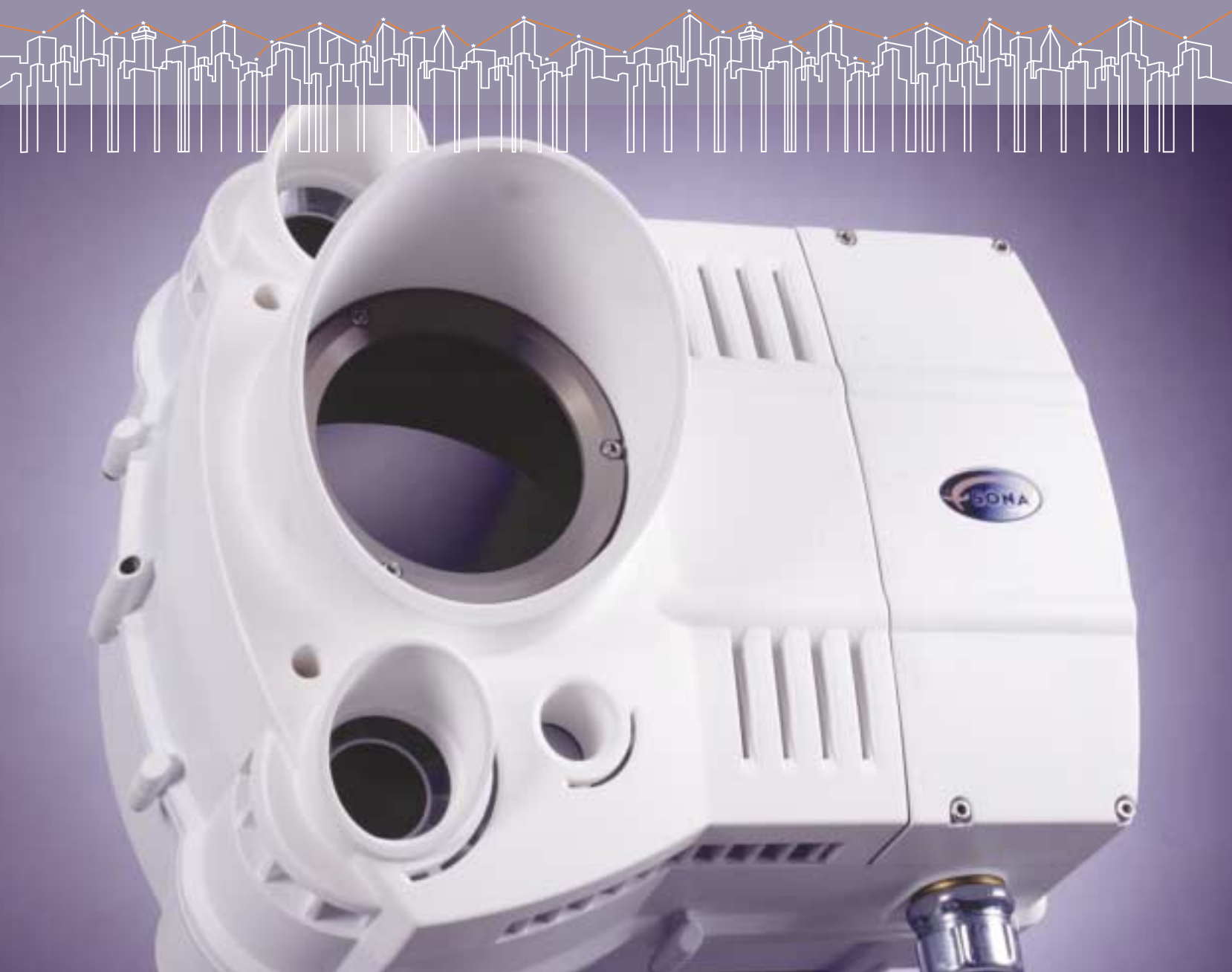
fSONA OPTICAL WIRELESS



SONABEAM™ 622-S OC-12, STM-4

Free-Space Optical

Transmission rates	622 Mbps (OC-12, STM-4 compliant) 125, 155, 270, 540 Mbps
Operational range	100 m to 1550 m (320 ft to 0.9 mi)
Laser output power	280 mW peak (2 transmitters at 140 mW)
Free-space wavelength	1550 nm
Transmitter type	Directly modulated laser diode
Receive aperture	10 cm (4 in) diameter

Mechanical / Electrical / Environmental

Operating temperature	-40 to 60°C (-40 to 140°F)
Solar filters	2 spatial, 2 spectral
Pointing stability	120 km/h (75mp/h) operating > 160 km/h (100 mp/h) survivability
Environmental seal	Water-tight
Dimensions (W*H*D)	Cm: 43 x 40 x 31 (in: 17 x 16 x 12)
Weight	Optical Head: 17 kg (37 lbs); Mount: 6 kg (13 lbs)
Input Voltage	Internal 85 - 260 VAC, 50/60 Hz
Power consumption	Transceiver: 40 watts, max Heaters: 200 watts, max

Carrier-Class Reliability and Durability

Interior heating	To 30°C (86°F) prevents optics from fogging and snow/sleet accumulation
Laser cooling	Active solid state cooling to 25°C (77°F), even in desert conditions
Adaptive laser power	Adjusts laser power to weather conditions: increased laser life and dynamic range
Redundant transmitters	2 totally independent lasers, drivers, coolers and cooler controllers
Power supply	> 1 million hour MTBF
Structure	Cast aluminum housing & mount
Service life	15 years

Fiber-Optic Interface

Interface type	SM or MM fiber, SC terminated
Fiber xmtr wavelength	1310 nm nominal (1280 nm to 1335 nm)
Fiber rcvr wavelength	1310 nm nominal (1280 nm to 1335 nm)
Fiber xmtr output power	-15 dBm (min), -11 dBm (typical), -8 dBm (max)
Fiber rcvr input power	-28 dBm (min), -7 dBm (max) (Recommend -25 to -8 dBm)

Element Management and Control

Interface	RS-232 serial (DB9 or RJ-45)
SNMP	Yes: includes custom MIBs
GUI control program	SONAbeam Terminal Controller (STC 622-S)
Command line interface	Telnet interface or via STC 622-S
Key parameters monitored	Receive signal strength Adaptive power control settings Laser bias currents Laser modulation currents Laser temperatures Internal temperature and humidity Clock recovery / sync status Network interface signal status
Historical logging	Both SNMP Agent and STC 622-S offer extended term logging capability

Certifications and Classifications

	USA	*Canada*	*Europe*
Laser Safety	CDRH 21 CFR 1040 including Laser Notice 50, Class 1M ANSI Z136.1 & Z136.6, Class 1	CDRH 21 CFR 1040 including Laser Notice 50, Class 1M	IEC 60825-1, Class 1M
EMC	FCC - Part 15	ICES - 003	EN55022 - emissions EN55024 - immunity
Electrical Safety	UL 60950	CSA 60950	EN60950 (CB scheme)

Specifications are subject to change without notice. Please contact your sales representative for further information.