

MODULATEAM

ethernudge

The transparent long-haul LAN extender for mobile or stationary communication.



ethernudge operates as a transparent LAN extender in terrestrial narrow-band mid/long distance communication systems for mobile or stationary applications.

ethernudge steps in where conventional solutions reach their limit.

ethernudge 's system design allows for velocities above 300 km/h (190 mp/h).

ethernudge's software controlled radio frequency spectrum reaches seamlessly from 20 MHz to 500 MHz with no hardware exchange. Ordering options include bandwidths up to 200 kHz and 400kHz. Unique adaptive algorithm enables automatic optimization to maximize bit rate for the given bandwidth.

ethernudge is a high-end rugged RF product for maximum reliability and quality. It is designed for rough environments and challenging RF channel conditions, with or without line-of-sight. It qualifies as a communication element in the deployment of instant infrastructure provisioning.

ethernudge transparently supports all applications. This includes i.e. video, voice, VPN, etc. Optional handheld allows for in field configuration.



ethernudge bundles over 100 man-years of development especially in OFDM, hardware and radio design.



Parameters*

* Depends on licensed functionality and are subject to change without notice.

Radio

Transmission Mode
Frequency Range
Power
External Amplifier Control
Bandwidth ordering options
Channel Spacing
Carrier frequency configuration
Receiver Sensitivity
Diversity

Frequency Division Duplex, Time Division Duplex, Simplex
20MHz-500MHz seamless
+36 dBm (peak)
External booster controlled over PTT
200 kHz
N x 6.25 kHz (N=1-64)
Configurable 1 Hz steps
>95dB
Antenna diversity x2

Modem

Topology
Modulation
Coding
TX signal synthesis, DAC
RX signal path, ADC
AGC

PtP, PtMP, MPtP, Mesh, Swarm
COFDM, QAM-4 to QAM-65536
Trellis code
Full digital signal synthesis with digital up conversion to carrier frequency
12/14-Bit ADC, RF direct sampling with 3x ADC
Direct, non-loss automatic controlled

Common

Hardware Core
Built in data interfaces (transparent cable replacement)
Built in management interface (local and remote)
GUI
Antenna Connector
Power Connector (incl. PTT)
External PPT Connector
DC input range
Typical Power consumption
Firmware Upgrade
Temperature range and environment
Storage, Transport
Mechanical Dimensions
Weight

DSP ADSP-21469
SoC SmartFusion2 M2S050
10/100-BaseT, RJ-45
10/100-BaseT, RJ-45
Web-based, SNMP optional
TNC
M8, 3-pole
M5, 4-pole
9VDC-36VDC
40W
Via web interface
Environment:
-indoor or outdoor cabinet with direct sun protection.
-Operating temperature: -30°C to +50°C
Temperature -40°C to 85°C
Humidity 95%, non condensing
200 x 170 x 73 mm
2,9 kg

Company

ModulaTeam is a German based company specializing in long-haul mobile communication for disaster recovery applications. Since 2013, ModulaTeam designs, develops and manufactures modems under its own brand name, after a long history of OEM development. ModulaTeam stands for high quality German engineering, providing products with over 100 man-years of experience in R&D.

